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Brown AND
Caldwell

February 2, 2011

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OHIO EPA NEDO

Mr. Jerry Parker, P.E., R.S.
Environmental Engineer
Ohio Environmental Protection Agency
Division of Solid and Infectious Waste Management
Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087

138764

Subject: **2010 GCCS – Phase 3 Construction Certification Report**
Lorain County II Landfill, Lorain County, Oberlin, Ohio

Dear Mr. Parker:

Brown and Caldwell Ohio, LLC (Brown and Caldwell), on behalf of Republic Services, Inc. (Republic), respectfully submits the 2010 GCCS – Phase 3 Construction Certification Report (Certification Report) for the Lorain County II Landfill located in Lorain County, Oberlin, Ohio. One copy of the Certification Report is enclosed for your review and comment.

Please contact me at 614-923-5006, if you have any questions concerning the Certification Report.

Very truly yours,

Brown and Caldwell



Richard A. Isaac, P.E.
Principal Engineer

Entity: LORAIN COUNTY II LANDFILL LLC
Doc Type: PERMIT LONG TERM
Doc Subtype: APPLICATION & SUPPORT
Program: MSWL
County: LORAIN
Secondary ID: MSWLO18801

Enclosure

cc: Chris Jaquet, Republic Services, Inc., Fairview Heights, OH, w/enc.
Richard Kostelnick, Republic Services, Inc., Oberlin, OH, w/enc.
John Sabo, Lorain County Health Department, Elyria, OH, w/enc.
Project File

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APR 05 2011

OHIO EPA NEDO

April 4, 2011

**Brown
AND
Caldwell**

Mr. Jerry Parker, P.E., R.S.
Environmental Engineer
Ohio Environmental Protection Agency
Division of Solid and Infectious Waste Management
Northeast District Office
2110 East Aurora Road
Twinsburg, Ohio 44087

138764

Subject: **Review Comment Responses**
2010 GCCS - Phase 3 Construction Certification Report
Lorain County II Landfill, Lorain County, Oberlin, Ohio

Dear Mr. Parker:

Brown and Caldwell (BC), on behalf of Republic Services, Inc., (Republic) respectfully submits responses to review comments received from the Ohio Environmental Protection Agency (Ohio EPA) Northeast District Office (NEDO) for the Lorain County II Landfill (Landfill) 2010 GCCS - Phase 3 Construction Certification Report (Report). The review comment responses are based on the e-mail transmittal to Chris Jaquet of Republic dated March 3, 2011. Each review comment is presented in bold followed by a response in the following narrative. BC has incorporated the "redline/strike out" format to indicate revisions made to the Report text. Following your review and concurrence with the text revisions, BC will accept the changes made to the Report text and send you copies of the Report text to insert in your copy of the Report.

I. COMMENT ONE
INTRODUCTION
DAILY FIELD LOGS

In Section 1, "Introduction", page 1-1 of the report, the text states that the daily field logs are provided in Appendix A. The log contains field notes for both Brown and Caldwell (BC) and American Environmental Group, Ltd. (AEGL). DSIWM-NEDO has two comments pertaining to the notes. First, on the first page of BC's notes, which is dated August 24, 2010, Mr. Peter Schlater was the consultant's personnel that day. In the "Summary of Work", he wrote the following: "...Attended the preconstruction meeting with Dokk Stanley (AEGL), Chris Jaquet (Republic), Rick Kostelnick (Republic) and Elena Goodhall (BC)..." In the second portion of the appendix, which contains AEGL's notes, the district office observed that Mr. Nate Given from BC signed as BC's representative on August 24, 2010. An explanation is requested as to his absence at the preconstruction meeting and/or his name not being included as one of the attendees at the meeting.

Second, BC should explain Mr. Given's signature versus other BC inspectors on all of AEGL's forms as the client representative, except for December 10 and 11, 2010, which did not include a BC signature. Third, Republic should explain the absence of the consultant's signature for December 10 and 11, 2010. Finally,

#3738

BC's report for October 16, 2010 (Saturday) indicates that Janet Todia was the "BC Personnel", however, it appears that Nate Givens signed the sheet. Since the appropriate personnel provided their individual signature on all of the other forms, an explanation is requested.

Response:

Mr. Schlater attended the Pre-Construction Meeting and served as the BC field inspector for the first three days of the project while Mr. Givens was on another work assignment. Following completion of the work assignment, Mr. Givens replaced Mr. Schlater as the field inspector for this project. This is not an uncommon practice and both Mr. Givens and Mr. Schlater are familiar with the GCCS program and work performed at the Landfill having served as the field inspector at the Landfill for past GCCS work. Mr. Schlater and Mr. Givens discussed the items addressed at the Pre-Construction Meeting to provide continuity for the field inspection.

A copy of the BC Daily Field Report for August 24, 2010 signed by Peter Schlater is included with these comment responses.

All AEGL Daily Diaries were submitted to Mr. Givens by AEGL at the end of the project. Mr. Givens signed as the client representative after a discussion of the daily activities performed with any BC field personnel at the Landfill in his absence.

A copy of the AEGL Daily Diaries for December 10 and 11, 2010 signed by Nate Givens are included with these comment responses.

The BC Daily Field Report for October 16, 2010 signed by Nate Givens was an oversight. A revised BC Daily Field Report for October 16, 2010 signed by Janet Todia is included with these comment responses.

Following a complete review of the BC Daily Field Reports and the AEGL Daily Diaries in Appendix A, the AEGL Daily Diary for October 15, 2010 was found to be missing a BC signature. A revised copy of the AEGL Daily Diary for October 15, 2010 is included with these comment responses.

**II. COMMENT TWO
INTRODUCTION
QUALIFICATIONS**

In Section 1, "Introduction", page 1-1 of the report, the text indicates that the qualifications for BC's resident inspectors are provided in Appendix C. In the appendix, Ms. Janet A. Todia's education is listed as "Past special unformatted" and her registration states "Paste special unformatted". BC is asked to clarify this information.

Response:

The "Education" and "Registration" information for Ms. Todia was inadvertently left off of the copy of her resume submitted with the Report. A revised copy of Ms. Todia's resume is included with these comment responses.

III. COMMENT THREE
INTRODUCTION
FIELD ALTERATIONS / DEVIATIONS

The sixth bullet in Section 1.1, "Field Alterations / Deviations", page 1-2, states the following: "...EW-149 and EW-150 were drilled through the stockpile. The depth to waste was recorded and this length was added to the solid pipe length for each well. The solid pipe extended 15 feet below the top of waste to maximize the perforated pipe length for these wells..." In addition to this information, the Phase 3 well schedule was provided on Drawing Number RD-2. As per the schedule, the solid pipe portion of both EW-149 and EW-150 were specified as 20 feet, which is the same length as all the other wells in the schedule. Republic is asked to clarify the inconsistent information between the well schedule and the text.

Also, the text stated that the solid pipe was extended 15 feet below the top of the waste to maximize the perforated pipe length for these wells. The company should clarify this statement by addressing the following questions: "What was the rationale for maximizing the perforated pipe length for these wells versus other wells?" and "What is the typical length of solid pipe extended into the waste?" Finally, Note 2 for Detail 1 of Drawing Number RD-2 specifies a minimum separation distance of 20 feet between the base of the boring and the top of the liner system. The following wells in the schedule reflect a distance of 10 feet: EW-301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311 and 312. The company should address this discrepancy.

Response:

The Well Schedule provided on Drawing RD-2 has been revised to include the length of solid pipe installed for EW-149 and EW-150 due to the presence of the soil stockpile. Revised Drawing RD-2 is included with these comment responses.

A large soil stockpile continues to exist in the location of EW-149 and EW-150. It is anticipated that the soil in this stockpile will be removed over time for daily cover and landfill construction activities. To account for the future removal of the soil stockpile, the solid pipe for these two wells was continued to 15 feet below the top of waste so that the well would not be pulling in air from the ground surface once the soil is removed. In addition, placing perforated pipe within the soil stockpile portion of the well would result in an increased probability of silting in the well pack and thus accelerate the failure of the well. Typically there is 20 feet of solid pipe at the top of the well including the four to five foot portion of the casing that extends above ground surface. As a result, typically there is 15 feet of solid pipe that extends into the waste mass.

The Extraction Wells installed in Cell A East, EW-301, EW-302, EW-303, EW-304, EW-305, EW-306, EW-307, EW-308, EW-309, EW-310, EW-311, and EW-312 were installed within the active area of waste filling in advance of NSPS requirements (i.e., five years after waste placement) to aid in controlling potential odor issues associated with the landfill gas. The installation of odor control wells in this area at a relatively early point in waste placement resulted in a reduced boring depth. In order to maximize the boring depth of these wells, Republic made the decision to change the separation distance between the base (bottom) of the boring and

the top of the liner in this area from 20 feet to 10 feet. The facility's November 2010 GCCS Design Plan currently indicates a minimum distance of 15 feet will be maintained between the cell liner and the bottom of the well.

IV. COMMENT FOUR
LANDFILL GAS EXTRACTION WELLS
FINAL COVER AREA

Section 2, "Landfill Gas Extraction Wells", page 2-2, states "...Fifteen of the extraction wells installed for the 2010 GCCS - Phase 3 program were installed within the area of the Landfill with final cover present (location of these extraction wells is shown on the Project Record Drawings in Appendix D)..." Upon review of Drawing Number RD-1, Ohio EPA counted the following thirteen, "new" wells in the final cover area: EW-73R, EW-166R, EW-165R, EW-142R, EW-144R, EW-148, EW-82R, EW-87R, EW-100R, EW-28R, EW-26R, EW-35R and EW-155. Republic is asked to explain the discrepancy between the text and the information provided on the drawing.

Response:

Following a review of Drawing RD-1, it was determined that nine new or replacement wells were installed in the final cover system. The replacement extraction wells were: EW-2BR, EW-73R, EW-82R, EW-100R, EW-142R, EW-144R, EW-165R and EW-166R. The new extraction well was EW-148. EW-35R and EW-87R were existing extraction wells modified to include pumps. EW-26R and EW-155 were installed outside of the final cover system and prior to the expansion of said final cover system, which occurred concurrently with, but not as a component of, the Phase 3 GCCS construction. The final cover construction is being documented under a separate report. The revised page 2.2, indicating that nine of the extraction wells were installed within the area of the Landfill with final cover present at the time of installation, is included with these comment responses.

V. COMMENT FIVE
LANDFILL GAS EXTRACTION WELLS
VACUUM BOX TESTING

Although the procedures for the vacuum box testing are provided in Section 2.3, "Inspection/Tests", page 2-5, the text should indicate that the results are provided in Appendix G. Also, the appendix provided vacuum test results for nine wells when it appears that at least thirteen wells were installed in final cover areas. The revised report should address this issue.

Response:

The Report text has been modified to state that the results of the vacuum box testing are included in Appendix G. As discussed in the response to Comment 4, nine wells were installed within the final cover system, as described in the previous comment response. The revised page 2.5 is included with these comment responses.

**VI. COMMENT SIX
LANDFILL GAS COLLECTION SYSTEM
PEEL AND SHEAR RESULTS**

In Section 3.2.2, "Horizontal Collector Construction/Installation Methods", page 3-2, it is written that the 60 -mil HDPE FML riser sleeve was extrusion welded to the FML component of the horizontal collector. Since there was no reference to any peel and shear tests being conducted for this activity, it is requested that this comment be addressed. In addition, a detail of a horizontal gas collector is provided on Drawing Number RD-5. Since the detail indicates a 60 mil LLDPE FML component and the riser sleeve is 60-mil HDPE, the revised report should discuss any seaming issues related to the two different types of resin.

Response:

60-mil HDPE FML was used in the construction of all horizontal collectors. The inconsistency regarding material type included in the detail on Drawing RD-5 has been corrected. No peel and shear tests were conducted for the horizontal collector construction, as the horizontal collectors are a temporary odor control measure. The geosynthetics in the horizontal collector detail is there to minimize air infiltration until final cover is installed in that area or the horizontal collector is no longer needed to control odors. Thus the geosynthetic welding for the horizontal collector is temporary. A copy of revised Drawing RD-5 is included with these comment responses.

Please feel free to contact us at 614-410-6144, if you have any additional questions or comments.

Very truly yours,

Brown and Caldwell



Richard A. Isaac, P.E.
Principal Engineer

Enclosures

cc: Chris Jaquet, Republic Services, Inc., Fairview Heights, OH, w/enc.
Richard Kostelnick, Republic Services, Inc., Oberlin, OH, w/enc.
John Szabo, Lorain County Health Department, Elyria, OH, w/enc.
Elena R. Goodhall, P.E., Brown and Caldwell, MI. w/o enc.
Project File

2010 GCCS – Phase 3 Construction Certification Report for the Lorain County II Landfill

Prepared for



Lorain County, Oberlin, Ohio

February 2011

Revised April 4, 2011

138764.013

Brown^{AND}
Caldwell

4700 Lakehurst Court, Suite 100
Columbus, Ohio 43016

Notarized Statement

"I, Chris Jaquet, certify that this 2010 GCCS - Phase 3 Construction Certification Report for the Republic Services, Inc. Lorain County II Landfill in Lorain County, Oberlin, Ohio and all attachments were prepared in accordance with the provisions and requirements of Ohio Administrative Code (OAC) Rule 3745-27-08(H) effective August 2003. Based on my inquiry of the person or persons who were directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Signature

Date

Chris Jaquet

Name

Area Environmental Manager

Title

On this, the 31st day of January, 2011, before me, a notary public, the above signed person, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

Lynn C. Williams
Notary Public



LYNN C. WILLIAMS
Notary Public, State of Ohio
My Commission Expires
August 23rd, 2011

Brown AND Caldwell

Use of contents on this sheet is subject to the limitations specified at the end of this document.

Engineer's Certification

"I, Richard A. Isaac, being a Registered Professional Engineer in the State of Ohio, PE No. E-57074, certify under penalty of law that this 2010 GCCS - Phase 3 Construction Certification Report for the Republic Services, Inc. Lorain County II Landfill in Lorain County, Oberlin, Ohio and all attachments were prepared by me or under my direction or supervision in accordance with the provisions and requirements of Ohio Administrative Code (OAC) Rule 3745-27-08(H) effective August 2003 and in accordance with good engineering practices. I have personally visited and examined the facility and am familiar with the information submitted in this document and based on my inquiry of the person or persons directly responsible for preparing this 2010 GCCS - Phase 3 Construction Certification Report, the information submitted in the 2010 GCCS - Phase 3 Construction Certification Report is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant civil and/or criminal penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Richard A. Isaac
Signature

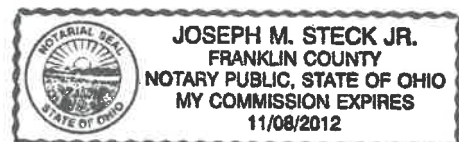
2/2/11
Date

Richard A. Isaac, P.E.
Name

On this, the 2nd day of February 2011, before me, a notary public, the above signed person, known to me to be the person whose name is subscribed to the within instrument and acknowledged that he executed the same for purposes therein contained.

In witness whereof, I hereunto set my hand and official seal.

Joseph M. Steck Jr.
Notary Public



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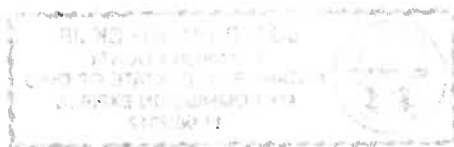


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Section 1

Introduction

The purpose of this 2010 Gas Collection and Control System (GCCS) – Phase 3 Construction Certification Report (Certification Report) is to detail the materials, construction/installation methods, and inspection activities and tests performed for the 2010 GCCS – Phase 3 Construction Project at the Lorain County II Landfill (herein after referred to as the “Landfill”), Lorain County, Oberlin, Ohio. This Certification Report was prepared in general conformance with Ohio Administrative Code (OAC) 3745-27-08(H). The owner’s Notarized Statement and the Engineer’s Certification attesting to the accuracy and compliance of this Certification Report are included as Pages ii and iii, respectively.

The Certification Report includes the following sections:

1. Introduction
2. Landfill Gas Extraction Wells
3. Landfill Gas Collection System
4. Airline and Force Main System
5. System Repairs and Maintenance

A discussion of each new or altered component of the Landfill GCCS materials, construction/installation methods, and inspections/tests performed is provided in the appropriate section. Daily field logs, photographs, project record drawings, extraction well boring logs, laboratory test results, pipe pressure test results, and additional relevant information is provided in the appendices.

Under the approval of Republic Services, Inc. (Republic), maintenance was performed on the existing Landfill GCCS. Twenty-one GCCS extraction wells were replaced (re-drilled) and 27 new GCCS extraction wells were drilled (refer to the Project Record Drawings in Appendix D for locations).

The fieldwork was performed from August 24, 2010 to January 19, 2011 by Republic’s subcontractor, American Environmental Group Ltd. (AEGL) of Richfield, Ohio. AEGL, under the supervision of Roy McMasters (Gas Extraction System Operations Manager) and Jeff Enochs (Drilling Operations Manager), performed the construction/installation of the extraction wells and pipeline components. Brown and Caldwell (BC) performed resident inspection services with Peter Schlater, Nate Givens, Janet Todia, and Julie McGowan, providing day-to-day observations and documentation. Elena Goodhall, P.E. of BC provided project management and Richard A. Isaac, P.E. of BC served as the certifying engineer. Daily field logs and construction/installation photographs are included in Appendices A and B, respectively. Qualifications for Mr. Schlater, Mr. Givens, Ms. Todia, Ms. McGowan, Ms. Goodhall, and Mr. Isaac are included in Appendix C.

For the purposes of this Certification Report, construction quality assurance (CQA) is used to refer to activities performed by BC, where quality control (QC) refers to observation and testing activities performed by the GCCS component’s installer (AEG) and manufacturer (ISCO).

1.1 Field Alterations/Deviations

During the course of the construction/installation activities, minor alterations/deviations from the construction drawings were implemented in the field. These minor alterations/deviations are listed below, and are also reflected in the Project Record Drawings included in Appendix D:

- The 24-inch header pipe that runs from west to east was air tested at 10 psi in accordance with the manufacturer's recommendations regarding pressure testing of 24-inch by 18-inch extrusion-welded, gusseted tees (approval for using 10 pounds per square inch (psi) pressure is presented in e-mail correspondence dated December 14, 2010 between Jerry Parker of the Ohio Environmental Protection Agency (Ohio EPA) Northeast Division Office [NEDO] and Elena Goodhall of BC). Due to the inclusion of additional 24-inch by 18-inch extrusion-welded, gusseted tees, the 18-inch and 24-inch headers, 6-inch laterals, and condensate pump station in Cell A were air tested as a complete system at 10 psi.
- Air and force main lines were installed along with the lateral to EW-152 for future use. Doing so eliminated the need for a road crossing in the future if a pump would be needed for EW-152.
- A new lateral was installed to serve EW-35R and EW-155 due to low available vacuum. This lateral ties into a 12-inch, above-grade header near EW-36R.
- EW-38R had low available vacuum, so a new lateral was installed to serve EW-38R. This lateral ties into the 24-inch header on the east slope near leachate riser LR5.
- EW-52R2 was drilled to a depth of 110 feet due to the presence of a sludge-like material. AEGL attempted to advance beyond this depth with no progress for over an hour before the decision was made to set the well at a depth of 110 feet.
- EW-149 and EW-150 were drilled through the soil stockpile. The depth to waste was recorded, and this length was added to the solid pipe length for each well. The solid pipe extended 15 feet below the top of waste to maximize the perforated pipe length for these wells.
- EW-311 was moved approximately 10 feet south of its original location due to an obstruction encountered during drilling.
- EW-45R and EW-146R were tied in to the Landfill GCCS with 4-inch laterals. These laterals were tied into the existing 4-inch risers at EW-45 and EW-146.
- TEW-10R2 had low available vacuum, so a new connection was made to serve TEW-10R2. The new connection tied TEW-10R2 into the new 24-inch header with a 24-inch by 6-inch tee and 6-inch riser.
- The new 24-inch header, which runs from west to east, was rerouted to the south of the "bowl area" on the upper plateau. At the time of header installation, the Landfill anticipated placing waste in the "bowl area", so the header was routed around this area and would be close to the final grades and more easily accessible for maintenance and future tie-ins.

Section 2

Landfill Gas Extraction Wells

A total of 27 new and 21 replacement extraction wells were installed at the Landfill. The new extraction wells are listed in the following Table 1:

Table 1. New Extraction Wells	
EW-112S	EW-155
EW-113S	EW-301
EW-114S	EW-302
EW-116S	EW-303
EW-117S	EW-304
EW-118S	EW-305
EW-119S	EW-306
EW-148	EW-307
EW-149	EW-308
EW-150	EW-309
EW-151	EW-310
EW-152	EW-311
EW-153	EW-312
EW-154	

Existing extraction wells that were abandoned and replaced are listed in the following Table 2:

Table 2. Existing Landfill Gas Extraction Wells	
Replacement	Abandoned
TEW-7R2	TEW-7R
TEW-10R2	TEW-10R
EW-2BR	EW-2B
EW-26R	EW-26
EW-38R	EW-38
EW-45R	EW-45
EW-47R	EW-47
EW-52R2	EW-52R
EW-58R2	EW-58R
EW-73R	EW-73
EW-82R	EW-82
EW-100R	EW-100
EW-115R	EW-115
EW-124R	EW-124
EW-125R	EW-125

Table 2. Existing Landfill Gas Extraction Wells (cont.)

Replacement	Abandoned
EW-142R	EW-142
EW-144R	EW-144
EW-146R	EW-146
EW-163R	EW-163
EW-165R	EW-165
EW-166R	EW-166

Existing extraction wells were abandoned by excavating around the existing well casing to an approximate 4-foot depth below the existing ground surface and cutting off the exposed casing. A polyvinyl chloride (PVC) slip cap, with a bead of silicone gel inside the cap, was lag-bolted on top of the cut-off well casing and the excavation was backfilled with the excavated materials and clean on-site soil, as needed.

Existing extraction wells within the final cover area were abandoned by excavating around the existing well casing to either the approximate 4-foot depth or until the geosynthetic components of the final cover system were encountered; whichever occurred first. The exposed casing was cut off at either the 4-foot depth or just above the geosynthetic components and a PVC slip cap, with a bead of silicone gel inside the cap, was lag-bolted on top of the cut-off well casing. The excavation was backfilled with the excavated materials and clean on-site soil, as needed.

The new extraction wells, listed in Table 1, were connected to the Landfill GCCS using 6-inch HDPE lateral pipelines, tees, and well risers. With the exception of TEW-10R2, EW-38R, EW-45R, EW-52R2 and EW-146R, the 21 re-drilled (replacement) extraction wells are connected to the Landfill GCCS with a 6-inch lateral that ties into the 6-inch lateral that served the associated abandoned extraction well.

TEW-10R2, EW-38R, EW-45R, EW-52R2 and EW-146R tie into the Landfill GCCS as follows:

- TEW-10R2 is tied-in to the new 24-inch header with a 24-inch by 6-inch tee and 6-inch riser.
- EW-38R is tied-in to the existing 24-inch header near leachate riser LR-5 with a 24-inch by 6-inch tee and new 6-inch lateral.
- EW-45R is tied-in to the existing 4-inch lateral that served EW-45.
- EW-52R2 is tied-in to the new 24-inch header with a 24-inch by 6-inch tee and 6-inch riser.
- EW-146R is tied-in to the existing 4-inch lateral that served EW-146.

Fifteen Nine of the extraction wells (eight replacement extraction wells and one new extraction well) installed for the 2010 GCCS – Phase 3 program were installed within the area of the Landfill with final cover present (location of these extraction wells is shown on the Project Record Drawings in Appendix D). The geosynthetic components of the final cover system were compromised as the auger advanced through the final cover system. Following installation of the casing for the above-mentioned replacement extraction wells, repair of the geosynthetic components was performed by AEGL (see Section 2.2 for a discussion of how the repairs were performed). The repairs provided a continuous and intact barrier at the replacement extraction well locations.

Periodic air monitoring was performed during the installation of the new and replacement extraction wells (see Subsection 2.4).

2.1 Materials

The materials used for the construction/installation of the new and replacement extraction wells included the following:

- 6-inch diameter solid and perforated SDR 11 HDPE pipe with HDPE butt caps and 6-inch Schedule 40 PVC end caps
- No. 4 stone (1-inch to 3-inch washed non-carbonate) backfill material
- Geonet with geofabric, which was heat-bonded to one side
- 8-mesh granulated bentonite
- Nominal 60-mil thick HDPE flexible membrane liner (FML)
- Geocomposite
- HDPE extrusion welding rod

2.2 Construction/Installation Methods

Equipment used to construct/install the extraction wells included a Soilmec SR-30 drill rig, Caterpillar 953D track loader, Caterpillar 320D excavator, JCB 718 articulated dump truck, ISCO Hotline HDPE butt-fusion pipe welding equipment, DemTech Pro-X extrusion welder and Pro-Tester, hot air machine, DemTech vacuum box, and various hand tools. The general construction/installation methods were as follows:

- A field survey was conducted by the Wellert Corporation of Medina, Ohio to stake the design location for each extraction well and the final well schedule was updated accordingly.
- Boreholes for the extraction wells were drilled into the waste in advance of installing the extraction well materials and equipment. Drilling was performed using a Soilmec SR-30 drill rig with 36-inch auger to the depth for each individual extraction well indicated in the final extraction well schedule on the Project Record Drawings (see Appendix D).
- Depth of the borehole was controlled and verified using a weighted tape measure. As the auger advanced, the cuttings were visually inspected to ensure no geosynthetics were encountered. Waste temperatures and waste composition were also recorded (see boring logs in Appendix E).
- Final borehole depth was confirmed using a weighted tape measure prior to extraction well casing placement.
- Solid wall and perforated sections of HDPE pipe were butt-fusion welded to the lengths provided in the final extraction well schedule for placement into the borehole. A typical detail for the extraction well construction is provided on the Project Record Drawings in Appendix D.
- Using the Caterpillar 953D track loader, the welded HDPE casing was raised and slipped into the borehole. A metal grate was placed around the casing to position the casing as close as possible to the middle of the borehole. The casing was secured to the metal grate to prevent the casing from sagging.
- No. 4, washed, non-carbonate stone was placed in the borehole annulus from the bottom up to a minimum of 2-feet above the top of the perforated section of the 6-inch HDPE casing. The geotechnical test results for the No. 4 stone are provided in Appendix F.
- Geonet with geofabric, which was heat-bonded to one side of the Geonet, was placed over the stone with the geonet in contact with the stone. A 1-foot clean soil plug was placed on top of the Geonet.
- A 2-foot thick (minimum) granular bentonite seal was placed on top of the clean soil plug. The granular bentonite was hydrated with water and on-site clean soil material was placed on top of the granular bentonite seal. The clean soil material varied in thickness. The 2-foot thick (minimum) granular bentonite seal was placed on top of the clean soil material so that the top of the upper granular bentonite seal extended a minimum of 6-inches into the cover soil.

- Repairs to the geosynthetic components of the final cover system consisted of installing and extrusion welding a “boot sleeve” around the new and replacement well casing and extrusion welding the boot sleeve to the FML component of the final cover system. The repair procedures included the following:
 - The excavator and hand tools were used to expose an area around the new or replacement well casing.
 - Surface of the existing FML was cleaned of debris.
 - A section of the 60-mil HDPE FML was cut to overlay the damaged area of the existing FML by a minimum of 6-inches.
 - The 60-mil HDPE FML boot sleeve was placed over the casing leaving enough material to secure the boot sleeve to the casing.
 - The 60-mil HDPE FML boot sleeve was heat bonded to the existing FML component of the final cover system and the new or replacement well casing.
 - A hand grinder (60-grit sand paper) was used to prepare the area of the existing FML component where the extrusion welding would be performed prior to initiating welding.
 - Trial welds were performed for the extrusion welders prior to performing the extrusion welding of the 60-mil HDPE FML boot sleeve to the existing FML component of the final cover system.
 - The 60-mil HDPE FML boot sleeve was extrusion welded to the existing FML component of the existing final cover system and the new well casing.
 - The geocomposite was repaired by placing a section of geocomposite material cut to overlay the damaged area by a minimum of 1 foot.
- Schedule 40 PVC temporary caps were installed using set screws and silicone sealant on top of the new well casings. Upon completion of the Landfill GCCS piping, Landtec wellheads were installed as permanent replacements for the temporary caps. All wells and associated risers were marked with reflective tape to increase visibility.
- Landtec wellheads were installed using flexible couplers secured with hose clamps.
- Waste material encountered within the borehole was placed in an articulated dump truck for transportation and disposal at the active working face of the Landfill.

2.3 Inspections/Tests

The following inspections and tests were performed during the construction/installation of the new and replacement extraction wells:

- Materials used in the construction/installation of the new and replacement extraction wells were visually inspected for conformance with the construction drawings, as well as to verify there were no signs of damage. The extraction well casing materials were determined to be in conformance with the construction drawings and no visual damage to the materials was observed.
- Perforation size (diameter) and pattern (spacing around the circumference and along the length) for the perforated portion of the extraction well casings were observed for general conformance with the construction drawings.
- Boreholes were observed during the drilling to document that the boreholes were completed to the appropriate depth as provided in the final extraction well schedule provided on the Project Record Drawings included in Appendix D.

- No. 4 washed non-carbonate stone was used to backfill the annular space between the perforated extraction well casing and the borehole. The geotechnical test results for the gradation and carbonate content of the No. 4 stone are provided in Appendix F.
- BC inspectors observed the butt-fusion welding process used to connect the HDPE pipe casing sections together to verify appropriate welding procedure guidelines were followed. The butt-fusion welding was performed according to acceptable standards.
- BC inspectors obtained and recorded measurements to verify the extraction wells were constructed according to the construction drawings as well as to create the Project Record Drawings.
- BC inspectors recorded refuse temperature, composition, and degree of moisture at approximately 5-foot intervals during drilling activities. The AEGL well logs are provided in Appendix E.

The following inspections and tests were performed during the installation of the 60-mil HDPE FML repairs:

- BC inspector performed visual observation and documentation of the repairs and vacuum box testing.
- Prior to welding of the 60-mil HDPE FML to the existing FML and new well casing, trial welds were performed using the extrusion welder. Test sections of the welds were cut and a tensiometer was used to perform three peel and three shear tests on the test weld sections. The results of the peel and shear tests are presented in Appendix G.
- Vacuum box testing was performed to verify that the 60-mil HDPE FML welds to the existing FML were free of leaks (The results of the vacuum box tests are presented in Appendix G.). The vacuum box testing was performed as follows:
 - Soapy solution was applied to the surface of the weld.
 - Vacuum box was placed over approximately 12 to 18 inches of the extrusion weld.
 - Negative pressure was applied to the vacuum box.
 - Welds passed the vacuum box test when no bubbles were observed along the length of the weld under the vacuum box. The test duration was ten seconds.
 - The 60-mil HDPE FML welds passed the vacuum box testing.

2.4 Air Monitoring

Air monitoring was performed during the drilling of the new and replacement extraction wells. A multi-gas VRAE monitoring device, manufactured by RAE Systems, was used to conduct the air monitoring. The atmospheric concentrations within the breathing zone were monitored for methane (lower explosive limit [LEL]), oxygen, carbon monoxide, and hydrogen sulfide. The air monitoring results, which were recorded by the BC inspector, are provided in Appendix H.

Section 3

Landfill Gas Collection System

AEGL installed the GCCS components required to incorporate the new extraction wells, the replacement extraction wells, and horizontal collectors into the existing GCCS. Approximately 4,356 linear feet of HDPE pipe was installed to connect the new extraction wells and the replacement extraction wells on line with the existing Landfill GCCS. Approximately 3,066 linear feet of HDPE pipe was used to construct and connect the horizontal collectors with the existing Landfill GCCS. Approximately 4,612 linear feet of HDPE pipe was used to construct new headers. The approximate linear footage of pipeline installed is included in the daily field logs for AEGL (see Appendix A).

3.1 Materials

The components used to connect the new and replacement extraction wells and the horizontal collectors into the existing Landfill GCCS included the following:

- 4-inch and 6-inch, diameter solid SDR 17 HDPE lateral pipe
- 18-inch and 24-inch diameter solid SDR 17 HDPE header pipe
- 6-inch diameter perforated SDR 11 HDPE horizontal collector pipe
- 6-inch diameter solid SDR 17 HDPE horizontal collector riser pipe
- 12-inch, 18-inch and 24-inch butterfly valves
- Landtec well heads and combination well heads
- Various sizes of HDPE tie-in couplings, reducers, tees, and other fittings and appurtenances
- Nominal 60-mil thick HDPE FML
- Geocomposite
- No. 4 stone (1-inch to 3-inch washed non-carbonate) backfill material
- Crushed brick backfill material (substituted for No. 4 stone)

3.2 Construction/Installation Methods

Equipment used to connect the new and replacement extraction wells into the existing Landfill GCCS and to construct the horizontal collectors included Caterpillar 320D track-mounted excavators, Caterpillar 725 articulated dump trucks, Caterpillar D4K and D6K track-mounted dozers, ISCO Hotline HDPE butt-fusion pipe welding equipment, and various hand tools.

3.2.1 Lateral Construction/Installation Methods

The general construction/installation methods used to connect the new and replacement extraction wells into the existing Landfill GCCS were as follows:

- HDPE pipe of various diameters was delivered to the site and stored in a clean area.
- The 4-inch, 6-inch, 18-inch, and 24-inch HDPE pipe was butt-fusion welded on-site by AEGL prior to being connected to the existing Landfill GCCS.
- HDPE pipe was placed in the trenches following completion of the excavation.

- HDPE pipe was installed to achieve the minimum design slopes of three percent within the limits of waste.
- Pipe bedding consisted of clean cover soil material removed from the trench excavation.
- Survey markers were placed at 50-foot intervals along the pipelines, at road crossings, and at fitting locations. The survey markers were removed following completion of the field survey activities.
- Installed pipelines, fittings, components, and road crossings were field surveyed after installation from a third order benchmark using global positioning system (GPS) technology.
 - Locations of the pipelines, components, and appurtenances are provided on the Project Record Drawings in Appendix D.
 - 5-mil x 3-inch underground detectable tape with the words “CAUTION BURIED GAS LINE BELOW” was placed approximately 1-foot above the HDPE pipe during backfilling activities.
- Waste material encountered within the excavated soil was separated from the soil as the trenches were backfilled. The waste material was placed in an articulated dump truck for transportation and disposal at the active working face of the Landfill.
 - Additional soil was obtained from the onsite stockpile to augment the backfill soil, if needed.

3.2.2 Horizontal Collector Construction/Installation Methods

The general methods used to install the horizontal collectors were as follows:

- HDPE pipe was butt-fusion welded on-site by AEGL.
- Trenches were excavated with a minimum width of 6 feet and a minimum depth of 4 feet.
- 6 inches of No. 4 washed non-carbonate stone bedding was placed at the bottom of the trench.
 - Crushed brick was used as an interim bedding and backfill material in place of No. 4 stone for approximately 200 linear feet for the North Slope horizontal collector. The geotechnical test results for the crushed brick are provided in Appendix F.
- 6-inch diameter SDR 11 HDPE perforated horizontal collector pipe and solid riser pipe(s) were set in the trench on the stone bedding.
- Additional No. 4 stone was placed in the trench, as needed, and graded to provide a minimum three percent slope for the 6-inch diameter lateral pipe, which was then placed in the trench.
- Backfilling was completed with No. 4 stone or crushed brick.
- One roll-width (approximately 22 feet) of 60-mil HDPE FML was placed above and centered on the trench.
- Riser pipe penetrations through the 60-mil HDPE FML were sealed using the following procedures:
 - A section of the 60-mil HDPE FML (riser sleeve) was cut to overlay the area adjacent to the riser pipe by a minimum of 6-inches.
 - The 60-mil HDPE FML riser sleeve was placed over the riser pipe leaving enough material to secure the riser sleeve to the riser pipe.
 - A hand grinder (60-grit sand paper) was used to prepare the FML area prior to extrusion welding.
 - The 60-mil HDPE FML riser sleeve was extrusion welded to the FML component of the horizontal collector and the riser pipe.
- Geocomposite material was placed above the FML.
 - Cuts were made in the geocomposite to slip the geocomposite over the riser pipe(s) at appropriate location(s).

- Clean, onsite clay material was spread in a 1-foot thick lift to completely cover the geosynthetics materials.

A detail for the horizontal collector is provided on Project Record Drawings in Appendix D.

3.3 Inspections/Tests

The following inspections and tests were performed during the connection of the new and replacement extraction wells and the horizontal collectors to the existing Landfill GCCS:

- Pipe was visually inspected for conformance with the construction drawings, as well as to verify there were no signs of damage. The pipe was determined to be in conformance with the construction drawings and no visual damage to the pipe was observed.
- Butt-fusion welds were visually inspected prior to back-filling the trenches. BC inspectors observed hot plate temperature, holding times, and welding techniques. The welds were determined to be in conformance with the specifications.
- Pipelines were pressure tested prior to being connected to the existing Landfill GCCS. With the exception of the new 24-inch header and the piping in Cell A, the pressure tests consisted of applying 25 pounds per square inch (psi) of pressure over a 4-hour period. The new 24-inch header and the piping in Cell A were tested at a pressure of 10 psi over a 4-hour period. Prior to beginning the test, during the test, and following completion of the test, the gauges were inspected for damage and proper units of measurement. The results of the pressure tests determined that the pipelines did not have any leaks. Pipe pressure test results are provided in Appendix I.
- The geotechnical results for the No. 4 stone and the on-site crushed brick were reviewed and determined to be in compliance with the gradation and carbonate residue requirements.

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Section 4

Airline and Force Main System

AEGL installed the airline and force main system components required to incorporate the new extraction well leachate pumps into the existing Landfill GCCS. A total of 16 pneumatic pumps were installed at the Landfill as listed in Table 3. An estimated 13,486 linear feet of HDPE pipe was installed to connect the new extraction well pumps with the leachate collection and compressed air system. Of that linear footage of pipeline installed, 6,743 linear feet was 2-inch diameter HDPE airline, 3,669 linear feet was 2-inch diameter HDPE leachate force main, 910 linear feet was 4-inch by 2-inch diameter HDPE dual-contained leachate force main, and 2,164 linear feet was 4-inch diameter HDPE leachate force main. The approximate linear footage of pipeline installed is included in the daily field logs for AEGL (see Appendix A).

Table 3. Extraction Well Pumps and Depths

Well	Pump Depth (ft)
TEW-5R	76
TEW-7R2	95
TEW-10R2	111
EW-34R2	105
EW-35R	75
EW-36R	51
EW-50	44
EW-53R	92
EW-58R2	80
EW-82R	48
EW-87R	47
EW-116	44
EW-124R	89
EW-125R	76
EW-133	97
EW-138	100

A 2-inch airline was installed to operate newly installed pumps and to accommodate future installation of additional pumps. The airline was connected to the existing airline located on the east side near leachate riser LR5 and runs across the top of the North Slope of the Landfill and terminates with a blind flange at a point near EW-56R. The location of the new airline is shown on the Project Record Drawings in Appendix D.

A new 4-inch HDPE leachate force main was installed in the trench alongside the new airline across the top of the North Slope. This leachate force main was installed in the area of the Landfill that was not on top of the final cover area.

New 4-inch by 2-inch dual-contained HDPE leachate force main was installed to serve new dual extraction wells and existing wells fitted with combination well heads on the west side of the Landfill. This dual-contained leachate force main was installed only where the force main was installed on top of the final cover area.

A road crossing was installed across the bench above EW-82R using 12-inch corrugated metal pipe (CMP) laid in the excavated trench. The 2-inch airline and 4-inch by 2-inch dual contained force main pipes were pulled through the 12-inch CMP. The trench was then backfilled and compacted to insure minimal settlement.

A road crossing was installed across the bench adjacent to EW-87R using 8-inch HDPE pipe laid in the excavated trench. The 2-inch airline and 4-inch by 2-inch dual contained force main pipes were pulled through the 8-inch HDPE pipe. The trench was then backfilled and compacted to ensure minimal settlement.

A road crossing was installed across the haul road at the northeast corner of the Landfill, south of Cell A, using 12-inch CMP. The 2-inch airline and 4-inch force main pipe were pulled through the 12-inch CMP. The trench was then backfilled with crushed brick and compacted to ensure minimal settlement.

4.1 Materials

The airline and force main components include the following materials:

- 2-inch diameter HDPE SDR 9 pipe (airline and force main)
- 4-inch diameter HDPE SDR 9 pipe (force main)
- 4-inch diameter HDPE SDR 11 pipe (force main outer containment)
- 8-inch diameter HDPE SDR 17 pipe (road crossing encasement)
- 12-inch diameter corrugated metal pipe (road crossing encasement)
- 36-inch diameter double-wall corrugated HDPE pipe (valve encasement)
- QED Pneumatic pumps and associated hardware
- Various sizes of HDPE tees, fittings, and appurtenances
- 2 and 4-inch diameter HDPE ball valves

4.2 Construction/Installation Methods

Equipment used to install the airline and force main system included Caterpillar 320D track-mounted excavators and CAT 725 articulated dump trucks, electro-fusion couplers and welding equipment, ISCO Hotline butt-fusion welding equipment and various hand tools. The general construction/installation methods used to install the airline and force main system were as follows:

- The HDPE pipe was butt-fusion welded on-site by AEGL.
- A trench was excavated at the specified location to a depth of approximately 36 inches below the existing ground surface.
- The leachate force main and airline piping was placed in a trench on a bed of compacted soil and backfilled with clean on-site soil.
- Waste encountered was separated from the fill as the trench was backfilled. Excavated waste was placed in an articulated dump truck for disposal at the active working face of the Landfill.
- Riser pipes at each extraction well were connected to the pumps installed in the extraction wells listed in Table 3.
- At specified locations, isolation valve assemblies were installed in line with the leachate force main and airline. Encasements for each valve were constructed from 36-inch, double-wall, corrugated

HDPE pipe placed upright around the valves and bedded in clean onsite soil material. Each encasement was equipped with a fiberglass cover and metal rod for security measures. The isolation valve assemblies are shown on the Project Record Drawings in Appendix D.

- Blind flanges were installed at the termination point of the 2-inch airline and 4-inch leachate force main southwest of EW-56R in order to accommodate future expansion of the system.
- The leachate force main serving the Cell A condensate pump station was connected to the force main control valve vault located near the tie-in points for the 24-inch headers on the East side of the Landfill. The airline serving the Cell A condensate pump station was connected to the existing airline near leachate riser LR5. The airline and leachate force main that runs along the top of the North Slope was connected to the existing airline and leachate force main near LR5. These connection points are shown on the Project Record Drawings in Appendix D.

4.3 Inspections/Tests

The following inspections and tests were performed during the installation of the leachate force main and airline:

- The HDPE pipe was visually inspected for conformance with the construction drawings, as well as to verify there were no signs of damage. The pipe was determined to be in conformance with the construction drawings and no visual damage to the pipe was observed.
- Butt-fusion welds were visually inspected and observed to be completed according to the butt-fusion welding specifications.
- Visual inspection of the isolation valve assembly was performed to assure that the equipment was installed correctly and was in working order.
- Backfilling operations were monitored to assure that there were no negative impacts on the isolation valve assemblies and no waste material was included in the backfill soil.
- Installed force main and airlines were pressure tested prior to being connected to the existing Landfill GCCS. The pressure test for the airline consisted of applying 100 psi of pressure over a 4-hour period. The pressure test for the leachate force main consisted of applying 50 psi of pressure over a 4-hour period. Prior to beginning the test, during the test, and following completion of the test, the gauges were inspected for damage and proper units of measurement. The results of the pressure tests determined that the pipelines did not have any leaks. Pipe pressure test results are provided in Appendix I.

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Section 5

System Repairs and Maintenance

Gas header line repairs/maintenance were performed by AEGL. The following repairs/maintenance activities were performed:

- A new 18-inch control valve was installed in the existing 18-inch diameter header outside the limits of waste at the northwest corner of the Landfill to allow isolation of condensate sump CS-12.
- The existing 18-inch diameter header was cut and capped outside the limits of waste at the southwest corner of the Landfill to eliminate vacuum on a previously abandoned 8-inch diameter header across the South Slope.
- Maintenance was performed on the three toe drain leachate sumps to replace pump hangers that had corroded and failed.

5.1 Materials

The materials used to install the new 18-inch control valve included the following:

- 18-inch diameter butterfly valve and associated hardware
- 18-inch diameter flanges

The materials used to cut and cap the 18-inch diameter header included the following:

- 18-inch diameter HDPE butt cap
- 18-inch diameter electro-fusion coupler

The toe drain leachate sump replacement components include the following materials:

- QED Pneumatic pumps and associated hardware
- 4-inch by 4-inch by ¼-inch stainless steel plates
- Various sizes of PVC, stainless steel and brass tees, fittings, and appurtenances

5.2 Construction/Installation Methods

Equipment used to install the new 18-inch control valve included a Caterpillar 320D track-mounted excavator; Caterpillar 725 articulated dump truck, butt-fusion welding equipment and various hand tools. The general construction/installation methods used to install the valve were as follows:

- The existing 18-inch diameter header was excavated and exposed at the location where the valve was to be installed.
- SCS Field Services (SCS) personnel closed the necessary valves to isolate the header.
- AEGL cut the header at the location for the new valve.
- 18-inch diameter flanges with backing rings were butt-fusion welded to the existing header.
- The valve assembly was lowered into place and the flanges were bolted together through the valve.
- Clean clay material was compacted around the valve assembly and under the pipe to minimize settling.
- The trench was backfilled with excavated material.

Equipment used to cut and cap the 18-inch header in the southwest corner of the Landfill included a Caterpillar 320D track-mounted excavator, electro-fusion welding equipment, and various hand tools. The general construction/installation methods used to cut and cap the header were as follows:

- The header was excavated and exposed at the location of the 18-inch tee to confirm the location to cut the existing 18-inch header.
- SCS personnel closed the necessary valves to isolate the 18-inch header.
- AEGL cut an approximate 6-foot section out of the header.
- An 18-inch diameter electro-fusion coupler was slid over the end of the 18-inch header section to be capped, and an 18-inch diameter butt cap was inserted into the end of the electro-fusion coupler.
- The cap assembly was fused in place.
- The trench was backfilled with the excavated material.

The general construction/installation methods used to replace the toe drain leachate sump pump hangers were as follows:

- ¼-inch holes were drilled in the HDPE covers for the sumps.
- 4-inch by 4-inch by ¼-inch stainless steel plates were secured to the covers for use as backing plates for the eye bolts.
- The pumps were hung at the appropriate depths from the eye bolts secured to the sump covers using the braided stainless steel cable supplied with the pumps.
- The pumps were re-connected to the existing airlines and force mains at each sump with the appropriate fittings.
- The pumps were supplied with compressed air and their operation was confirmed.

5.3 Inspections/Tests

The following inspections and tests were performed during the above detailed construction activities:

- The HDPE pipe, 18-inch diameter valve, and appurtenances were visually inspected to verify there were no signs of damage. No visual damage to the pipe, valve, and appurtenances was observed.
- Butt-fusion welding was visually inspected and observed to be completed according to the butt-fusion welding specifications.
- Electro-fusion welds were visually inspected and observed to be completed according to the electro-fusion welding specifications.
- Visual inspection of the leachate pumps was performed to assure that the pumps were installed properly and were in working order.
- Backfilling operations were monitored to assure that there were no negative impacts on the header pipelines.

Appendix A: Daily Field Logs

Brown and Caldwell

American Environmental Group, Ltd.

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Brown and Caldwell

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Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CCA

Date: Tuesday, August 24, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 11:10

BC Personnel: Peter Schlater

Weather: 65-70° Cloudy

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls R. Isaac, E. Goodhall

Summary of Work:

PKS onsite and signed in at the front office
AEGL mobilized to the site and accepted deliveries of materials
AEGL lined well casing pipe to prepare for drilling activities
Attended the preconstruction meeting with Dolk Stanley (AEGL), Chris Jaquet (Republic), Rick Kostelnick (Republic) and Elena Goodhall (BC)
AEGL constructed benches and staged the drill rig at EW-152
PKS offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

08/24/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, August 26, 2010

Location: Lorain County II Landfill

Time In: 7:05

Time Out: 15:30

BC Personnel: Peter Schiater

Weather: 65-75, P. Cloudy

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor: AEGL

Subcontractors

Visitors:

Phone Calls:

Summary of Work:

- PKS onsite and signed in at the front office
- Water truck scheduled to arrive in the early to mid afternoon
- AEGL fused well casing pipe - they plan to build all of the well casings today and stage the materials at each well location
- AEGL began constructing benches
- PKS offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other

Signature of CQA Monitor

Date

Peter Schiater

08/26/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Friday, August 27, 2010

Location: Lorain County II Landfill

Time In: 8:00

Time Out: 18:00

BC Personnel: N. Givens

Weather: 70°-90°, Mostly Sunny

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

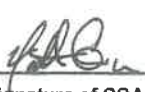
Phone Calls - R. Isaac

Summary of Work:

- Onsite/safety meeting
- Met with Pete Schlater to discuss project
- AEGL set up on EW-100R and drilled to scheduled depth of 96'; well casing set
- AEGL set up on EW-2BR and drilled to scheduled depth of 99'; well casing set
- AEGL completed EW-100R per spec
- AEGL completed EW-2BR per spec
- Drill rig set up on EW-73R
- AEGL began clean-up of work area
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:


Signature of CQA Monitor

8/27/10

Date

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, August 31, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:00

BC Personnel: Nate Givens

Weather: 70°-90°, Mostly Sunny

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors - E. Goodhall

Phone Calls - R. Isaac, E. Goodhall

Summary of Work:

0700 - Onsite/safety meeting
0720 - AEG set up on EW-73R; spoke to Dokk (AEG) and confirmed 52' depth for 73R
0800 - Drilling stops for drill rig maintenance
0813 - Drilling resumes on 73R
0916 - 73R reached design depth and set; no leachate encountered
0940 - Drill rig set up on EW-166R and drilling under way; confirmed 101' bore depth
1015 - 73R complete
1255 - Lunch and weekly progress meeting with Chris Jaquet and Elena Goodhall; air line and force main to 100R deleted from plans
1400 - Drilling on 166R resumes
1450 - 166R reaches designed depth; no leachate encountered
1518 - Pipe set at 166R
1730 - 166R complete
1735 - AEG is cleaning up the area around 166R and preparing to leave the site
1800 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, September 01, 2010

Location: Lorain County II Landfill

Time In: 7:25

Time Out: 17:40

BC Personnel: Nate Givens

Weather: 70°-90°. Mostly Sunny

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☒ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors - J. Todia

Phone Calls - R. Isaac, E. Goodhall

Summary of Work:

0725 - Onsite/safety meeting
 0800 - AEG set up on EW-144R; drilling begins; J. Todia onsite
 0820 - Began depth-to-water measurements and dummy dipping on existing wells to be converted to dual extraction
 0940 - Drill rig computer malfunction slows progress; bore at approximately 40'; continued measurements at existing wells
 1045 - Checked progress at 144R; crew diagnosing malfunction on drill rig; continued measurements at existing wells
 1230 - Checked progress at 144R; depth at approximately 65'; offsite with J. Todia for procurement of tools and lunch
 1320 - Onsite; drilling at 144R still under way; resumed measurements at existing wells
 1440 - 144R reaches design depth of 99'; pipe set
 1530 - Stone backfill in place on 144R
 1605 - 144R complete; AEG cleaning up site; continuing measurements at existing wells
 1645 - Checked with AEG; water wagon to be onsite in the morning; drill rig should be fully operational; AEG offsite
 1700 - Spoke with R. Kostelnick; delivered progress update
 to fill water truck: wants AEG to supply own pump
 1740 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/1/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, September 02, 2010

Location: Lorain County II Landfill

Time In: 7:15

Time Out: 17:40

BC Personnel: Nate Givens

Weather: 70°-90°, Mostly Sunny, Windy

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☒ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors - J. Todia

Phone Calls - R. Isaac

Summary of Work:

0715 - Onsite/safety meeting
0745 - Drill rig set up on EW-142R; drilling begins
0800 - J. Todia onsite; met at main office; checked on 142R progress and spoke to Dokk (AEG) about water pump
0810 - Offsite for tools
0835 - Onsite; checked with AEG; 142R at approximately 35'
0840 - Resumed depth-to-water measurements and dummy dipping existing wells marked for combo wellhead installation
0945 - Checked progress at 142R; depth at approximately 50'; water pump to be onsite later today
1005 - Finishing measurements
1100 - Checked with Dokk; R. Kostelnick sent e-mail to AEG notifying of drilling shutdown until arrival of pump; AEG halts activity
1145 - Offsite with J. Todia for lunch
1245 - Onsite; spoke with Dokk; 142R will have to be backfilled if pump arrives after 1400
1410 - Pump onsite; checked with R. Kostelnick about location; J. Todia offsite
1435 - AEG sets up pump at approved location; preparing to backfill 142R
1600 - 142R backfilled; AEG will resume drilling in the morning; AEG offsite
1715 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/2/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Friday, September 03, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 14:00

BC Personnel: Nate Givens

Weather: 70°-90° P. Cloudy, Windy, Rain

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors - J. Todia

Phone Calls - R. Kostelnick

Summary of Work:

0715 - Onsite/safety meeting
0725 - Drilling resumes on EW-142R; backfill material to be removed and well drilled to 99' depth
0810 - Spoke to Dokk (AEG); pipe crew mobilizing tomorrow (Sat) afternoon; equipment onsite Tuesday; precon meeting Wednesday
0815 - Called R. Kostelnick; site closed Monday for holiday; pumps for combo wells scheduled to arrive onsite today
0825 - Checked with maintenance shop; pumps have not arrived yet; informed them that pumps to be unloaded at recycling center
0930 - 142R at 74' depth
1040 - Drilling stopped for rig maintenance
1048 - Drilling resumes
1100 - Depth at 96'; rain beginning; AEG will finish 142R and leave for the day
1120 - 142R reaches designed depth of 99'
1135 - Pipe set
1235 - 142R complete
1245 - Drill rig staged at EW-165R; AEG is attempting to diagnose a computer malfunction; drilling activities suspended for the day
1400 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/3/10

Project: 2010 GCCS - Phase III CQA

Date: Saturday, September 04, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 8:00

BC Personnel: Nate Givens

Weather: 65°, Mostly Cloudy, Windy

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping Installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls -

Summary of Work:

0700 - Onsite; received call from Dokk (AEG) - AEG not working today due to high winds
0715 - Met with Dokk; weather forecast calls for increasing winds; AEG leaving site after equipment is secured
0730 - Went to maintenance building to find out about pump delivery; no one available to speak to; AEG offsite
0800 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other: _____

Signature of CQA Monitor

Date

9/4/10

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, September 07, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 17:00

BC Personnel: Nate Givens

Weather: 65°-85° P. Cloudy, Windy, PM Rain

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls -

Summary of Work:

0700 - Onsite/safety meeting
 0705 - Drill rig set up on EW-165R; drilling to begin following routine maintenance of rig
 0730 - Offsite for field supplies
 0800 - Onsite; drilling progressing without incident
 1030 - Checked depth of 165R; bore at 78'; AEG receives delivery of stone for well backfill
 1040 - Spoke to Deon at maintenance shop; pumps have not yet been delivered
 1045 - Spoke to Rich at front office; no pumps delivered to his knowledge
 1130 - Checked depth of 165R; bore at 85'; Leachate encountered
 1205 - 165R reaches designed depth of 93'; pipe set
 1300 - Drill rig is set up on EW-82R; drilling begins
 1310 - Stone backfill in place on 165R
 1340 - EW-165R complete
 1430 - 82R reaches designed depth of 49'; pipe set
 1445 - Drill rig moved to EW-148; AEG preparing to complete 82R
 1540 - Spoke to Rick Kostelnick; Rick wanted to know status of combo well pumps
 1610 - Called QED and talked to Suzanne Schmidt; pumps to ship today or tomorrow, onsite by Sept. 15th or 16th
 1615 - EW-82R complete; AEG cleaning up and proceeding offsite
 1700 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/7/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, September 08, 2010

Location: Lorain County II Landfill

Time In: 7:45

Time Out: 18:00

BC Personnel: Nate Givens

Weather: 65°-70°, Mostly Sunny, Windy

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors - C. Jaquet

Phone Calls - E. Goodhall, R. Isaac

Summary of Work:

0745 - Onsite/safety meeting
0800 - Weekly progress/precon meeting with C. Jaquet, Dokk Stanley (AEG), Billy Brown (AEG) and two add'l AEG employees; updated Jaquet on well progress and pump situation; planned order of completion of wells
0854 - Conference call with E. Goodhall and C. Jaquet; discussed the five add'l redrills originally marked for combo wellheads
0917 - Called R. Isaac to deliver update; discussed five add'l redrills; need survey data to complete well schedule
0924 - Called Wellert; surveyor to be onsite later in the morning to stake out and shoot elevations for five add'l redrills
1000 - Drilling begins on EW-148
1200 - Spoke with Jesse Delarca (Wellert); tie-in locations for air line and force main laterals will be staked out today
1220 - Offsite for lunch
1240 - Onsite; met with Billy Brown (AEG) to discuss relocation of new air line and force main; called E. Goodhall; air line and force main to be installed per plan
1420 - 148 reaches designed depth of 79'
1430 - Pipe set at 148
1600 - EW-148 complete
1800 - Tie-in locations staked out; AEG offsite; NAG offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/8/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, September 09, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:15

BC Personnel: Nate Givens

Weather: 50°-70°, P. Cloudy, Windy

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☒ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac; E. Goodhall

Summary of Work:

0700 - Onsite/safety meeting
0710 - Spoke to Shawn with EDI; notified him of plan to complete tie-ins on EW-26R and EW-115R
0745 - Drilling begins on EW-163R
0800 - Shawn (EDI) called; 115R can be tied in after 26R is complete
0840 - Called Shawn to shut valve to 26R
0845 - Valve closed; AEG cuts lateral and abandons EW-26; preparing to make tie-in for 26R
1030 - EW-163R reaches 65' depth; leachate encountered at approximately 15'
1045 - Tie-in for 26R complete; called Shawn to notify; trenching for EW-115R tie-in under way
1130 - Air line and force main exposed for EW-116 combo wellhead installation; pipe is being fused for 115R tie-in
1150 - Called Shawn to request shut-down of EW-115 for 115R tie-in
1220 - EW 163R complete
1320 - Tie-in complete; AEG used electro-fusion coupler to connect lateral to existing tee
1500 - Spoke to Shawn about shutting down gas lines for tie-ins tomorrow; was provided with a list of four wells that could be completed
1555 - Air tests begin on air and force main for EW-116; confirmed 50 psi on force main and 100 psi on air line
1600 - Spoke to R. Isaac about air tests for laterals
1815 - AEG offsite; NAG offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Friday, September 10, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:15

BC Personnel: Nate Givens

Weather: 50°-70°, P. Cloudy, Windy

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac; E. Goodhall

Summary of Work:

0700 - Onsite/safety meeting
0715 - Drilling begins on EW-38R
0730 - Checked pressure tests on air line and force main to EW-116; FM held 50 psi, air line held 95 psi; AT OK
0830 - EW-38R reaches designed depth of 52'; pipe set
0930 - Tie-in for EW-116 air line and force main complete
0900 - Drilling begins on EW-45R
1000 - Discussed air test procedure with Billy Brown
1100 - Called R. Isaac to discuss tie-ins
1130 - EW-45R reaches designed depth of 45'; pipe set
1400 - EW-45R complete; AEG Pipeline is setting up to begin air tests on fabricated laterals
1435 - Air test applied to laterals designated for EW-165R and EW-166R; p = 25 psi
1545 - Air test applied to laterals designated for EW-73R and EW-163R; p = 25 psi
1805 - Checked air test on laterals for 165R and 166R and laterals for 73R and 163R; p = 25 psi
1815 - AEG cleaning up and heading offsite; NAG offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/10/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Monday, September 13, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:00

BC Personnel: Nate Givens

Weather: 60°-75° Clear

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac

Summary of Work:

0700 - Onsite/safety meeting

0725 - Checked air tests on 2" air line and force main for EW-125R, TEW-7R and EW-133; air line p = 96 psi, force main p = 47 psi; air tests passed; L = 414'

0745 - Trenching under way for 125R, 7R and 133 air line and force main

0750 - Drilling under way on EW-124R

0800 - Spoke to Shawn and John (EDI) about tie-ins; will develop a plan for tomorrow's tie-ins; no tie-ins today

0830 - Air tests applied to air line and force main for EW-34R2 and TEW-10R; air line p = 100 psi, force main p = 50 psi

0930 - Called R. Isaac for status update

1300 - End air test for 10R and 34R2 air line and force main; air line p = 100 psi, force main p = 50 psi; AT OK

1340 - EW-124R reaches designed depth of 108'; pipe set; leachate encountered at 74'

1415 - Air line and force main laid for 125R, 7R2 and 133

1505 - EW-124R complete

1630 - Tie in for 125R, 7R and 133 air line and force main complete

1715 - Air tests applied to laterals for 124R, 125R and 7R; p = 25 psi

1745 - AEG is staging air line and force main and preparing to leave the site

1800 - AEG and NAG offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

9/13/10

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, September 14, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 19:30

BC Personnel: Nate Givens

Weather: 60°-75°, Clear

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors - E. Goodhall

Phone Calls - R. Isaac

Summary of Work:

0700 - Onsite/safety meeting
0730 - End air tests on laterals for EW-125R, TEW-7R and EW-133; air tests passed; drilling starts on EW-125R
0740 - AEG Pipeline begins locating tie-in point for EW-124R air line and force main; air test applied to air line and force main; air line p = 100 psi, FM p = 50 psi
0840 - Drilling stops for drill rig maintenance
0910 - Called R. Isaac for progress report; requested certification report template via e-mail
1000 - AEG Locates tie-in point for EW-124R air line and force main
1010 - Drilling resumes on EW-125R
1135 - Extended and reapplied air tests to air line and force main for 124R; AL p = 100 psi, FM p = 50 psi
1215 - Reapplied air test to lateral for 124R after 90° elbow was added; p = 25 psi
1325 - EW-125R at 71'; leachate encountered at 70'
1445 - E. Goodhall visited
1535 - End air test on EW-124R air line and force main; AL p = 100 psi, FM p = 50 psi, L = 75'; AT OK
1630 - EW-125R reaches depth of 103'; encountered sludge; set pipe
1650 - End air test on EW-124R lateral; p = 25 psi; AT OK
1800 - Tie-ins for EW-155 air line and force main complete
1900 - AEG is fabricating a 4" lateral for EW-38R and backfilling trenches
1930 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/14/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, September 15, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:00

BC Personnel: Nate Givens

Weather: 55°-70°, Rain

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac

Summary of Work:

0700 - Onsite/safety meeting
0730 - Begin drilling TEW-7R2
0750 - End air test on 38R lateral @ 24.5 psi
0815 - Excavated for EW-45R lateral tie-in; 4" lateral
0830 - Called R. Isaac for status report; begin air test on EW-45R lateral @ 25 psi
0840 - Begin trenching for EW-124R lateral
1045 - Spoke to R. Kostelnick about EW-129; needs to be extended 8'
1135 - EW-124R lateral tie-in complete; TEW-7R2 @ 88'; leachate encountered @ 62'
1300 - End air test on EW-45R lateral @ 25 psi
1500 - Attempted to drop dummy pump in TEW-10R; refusal @ 21.9'
1620 - EW-125R lateral tie-in complete; drilling on TEW-7R2 stopped @ 114' due to sludge; pipe set
1745 - TEW-7R2 complete
1800 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/14/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, September 16, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 8:30

BC Personnel: Nate Givens

Weather: 55°-65°, Rain

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac

Summary of Work:

0700 - Onsite/safety meeting; site is muddy from overnight storms
0730 - AEG is waiting to see what the weather does
0800 - Rain begins; AEG not working today
0830 - AEG and NAG offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other: _____


Signature of CQA Monitor

9/16/10
Date

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Friday, September 17, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:30

BC Personnel: Nate Givens

Weather: 60°-75°, Clear

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac

Summary of Work:

0700 - Onsite/safety meeting
0730 - Drilling begins on EW-152
0750 - AEG Pipeline begins extending EW-129
0800 - AEG Pipeline begins trenching for TEW-10R2 and EW-34R2 air line and force main tie-in
0950 - Shawn (EDI) closes valve to isolate EW-129 for 8' extension
1000 - Called Shawn; vacuum riser extension complete; isolation valve can be reopened
1100 - EW-129 extension complete; pump set at 116'
1230 - EW-152 is at 107' depth; designed depth is 138'
1320 - EW-152 reaches 120' depth; leachate encountered at 120'
1430 - End air test of air line and force main for EW-138; A p = 49 psi, FM p = 98 psi; AT OK
1500 - EW-152 reaches 138'; pipe set; pipe crew uncovers tie-in point for EW-155
1550 - Begin air test on laterals for TEW-10R2 and EW-155; p = 25 psi, L = 400'
1616 - EW-152 complete
1620 - Tie-in for EW-34R and TEW-10R2 air and force main complete; trenching under way for same
1700 - Called R. Isaac for status update and technical guidance for EW-155 tie-in
1830 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/17/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Saturday, September 18, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 16:00

BC Personnel: Nate Givens

Weather: 60°-75°, P. Cloudy

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls -

Summary of Work:

- 0700 - Onsite/safety meeting
- 0730 - Trenching begins for TEW-10R2 lateral, air line and force main; Shawn (EDt) calls to confirm isolation valves closed for tie-ins
- 0845 - air line and force main for EW-34R2 and TEW-10R2 tie-in complete
- 1010 - Tie-in for 10R2 lateral complete; trenching begins for EW-155 remote wellhead, air line and force main
- 1130 - Trenching for EW-155 remote wellhead complete; 6" vacuum riser cut to drop EW-35R lateral below existing grade
- 1215 - EW-35R lateral dropped below existing grade; 6" riser fused back in place to provide vacuum to EW-155
- 1400 - EW-155 remote wellhead installed; 6" tee fused into EW-155 well casing below grade
- 1530 - Air line and force main air tested and designated for EW-138 used instead for EW-155; tie-in to EW-35R air line and force main complete
- 1600 - AEG is backfilling and cleaning up; NAG offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Monday, September 20, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 16:00

BC Personnel: Nate Givens

Weather: 60°-70°, M. Cloudy

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls -

Summary of Work:

0700 - Onsite/safety meeting
0730 - Drill rig set up on EW-58R2; Dokk is waiting until clearance is given to close valve on EW-58R wellhead before beginning drilling
0800 - Spoke to Shawn (EDI) about closing EW-58R valve; permission granted
0815 - Spoke to Chris Jaquet about progress and plan for the day; Jaquet will contact EDI about concerns related to tie-ins on West side; EDI wants one of the flares shut down during tie-ins
0820 - Eric and Bernie (AEG) are trying to locate tie-in point for EW-138 and EW-36R air line and force main
1025 - Tie-in point located for EW-138 and EW-36R; location was approximately 100' from indicated on drawing; called B. Kiedrowski for consultation
1035 - EW-58R2 is at 79' depth; no leachate encountered
1240 - End air retest on EW-138 air line and force main; A p = 100 psi, FM p = 48 psi; AT OK
1340 - EW-58R2 reaches designed depth of 123'; waste contained moisture, but was not saturated; pipe set
1450 - EW-58R2 complete
1545 - Dummy dipped EW-34R2; no obstruction noted
1830 - EW-138 air line and force main tie-ins complete; AEG is backfilling trench and setting survey risers
1905 - Applied air tests to laterals, air line and force main for use on West-side wells in the morning
1915 - AEG offsite
1930 - NAG offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, September 21, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 17:30

BC Personnel: Nate Givens

Weather: 60°-70°, M. Cloudy

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Kostelnick, R. Isaac, E. Goodhall

Summary of Work:

0700 - Onsite/safety meeting
0730 - Dokk (AEG) constructs a bench for EW-151
0800 - Drill rig is set up on EW-151; drilling begins
0815 - Shawn (EDI) calls about tie-ins on West side; AEG does not have trenches open, so tie-ins may be pushed back until tomorrow morning
0830 - Checked air tests on laterals, air line and dual-contained force main; air tests passed
0845 - Progress report to R. Kostelnick
0940 - R. Kostelnick calls
0950 - Spoke to Dokk
1120 - EW-151 reaches design depth of 95'; pipe set
1330 - Air line and force main tie-in for EW-82R complete; EW-82 lateral laid over into new trench and will be shortened as needed tomorrow morning
1415 - EW-138 air line and force main installation complete; EW-151 complete
1650 - Road crossing for EW-82R air line and force main complete; air line and force main were cut at tie-in point for installation of CMP and reconnected
1730 - Pipe crew is backfilling trenches and cleaning up; NAG offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/21/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, September 22, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 17:30

BC Personnel: Nate Givens

Weather: 60°-70° P. Cloudy

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Kostelnick, R. Isaac, E. Goodhall

Summary of Work:

0800 - Onsite/safety meeting
0830 - Begin drilling on TEW-10R2
0920 - Loose flange bolts on valve ass'y tightened; begin air test on 133/7R2/125R air line and valve ass'y @ 100psi
1000 - Begin air test on 133/7R2/125R force main @ 50psi
1115 - EW-138 lateral tie-in complete
1200 - EW-82 lateral tie-in complete
1400 - End air test on 133/7R2/125R force main @ 50psi
1450 - TEW-10R2 reached design depth @ 110'; pipe set
1500 - Air valve @ 133/7R2/125R inverted; begin air test
1510 - Checked air tests on 10R2/34R air line and force main; both leaking; AEG correcting
1530 - EW-142 lateral tie-in complete
1600 - TEW-10R2 complete
1730 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other: _____

Signature of CQA Monitor

Date

9/22/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, September 23, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 19:30

BC Personnel: Nate Givens

Weather: 60°-70°, M. Cloudy

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac, E. Goodhall

Summary of Work:

0700 - Onsite/safety meeting
0730 - Begin drilling on EW-47R
0800 - Factory flanges being installed for air line and force main valves
1015 - Begin air test on 133/7R2/125R air line @ 100 psi
1030 - Begin air test 09231030050/030
1150 - Begin air test on 10R2/34R air line and force main @ 100/50 psi
1225 - EW-47R reaches design depth of 104'; pipe set
1405 - EW-47R complete
1528 - End air test on 133/7R2/125R air line @ 99 psi
1555 - End air test 09231030050/030 @ 50/30 psi
1715 - End air test on 10R2/34R air line and force main @ 99.5/50 psi
1800 - Begin air test on EW-100R lateral @ 25 psi
1900 - Begin air test 09231900050
1930 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/23/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Friday, September 24, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:45

BC Personnel: Nate Givens

Weather: 55°-70° M. Sunny

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac

Summary of Work:

- Onsite/safety meeting
- AEGL began drilling EW-154
- Air tested EW-100R/EW-2BR laterals; laterals fused together for single test; air test passed
- AEGL completed tie-ins for EW-100R and EW-2BR, placed survey risers and backfilled trenches
- AEGL drilled EW-154 to 113' depth; well casing set
- AEGL replaced leaking ball valve in airline serving EW-125R/TEW-7R2/EW-133
- EW-154 completed per spec
- Air tested 6" lateral for EW-58R2 and airlines and force mains for EW-53R and EW-58R2; air tests passed
- AEGL began cleaning up work areas
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/24/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Saturday, September 25, 2010

Location: Lorain County II Landfill

Time In: 7:30

Time Out: 15:30

BC Personnel: Nate Givens

Weather: 55°-70° M. Sunny

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☒ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEGL

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- AEGL trenched EW-58R2 lateral and completed tie-in
- Air tested EW-144R airline; air test passed
- AEGL completed tie-ins for EW-53R and EW-58R2 airlines and force mains and backfilled open trenches
- AEGL installed leachate pumps in EW-34R2, EW-53R and EW-58R2; pumps cycling
- AEGL performed maintenance on leachate discharge lines for EW-126R and EW-227; corrected improperly clamped leachate discharge lines
- AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

9/25/10

Daily Field ReportProject: 2010 GCCS - Phase III CQADate: Monday, September 27, 2010Location: Lorain County II LandfillTime In: 7:00Time Out: 9:30BC Personnel: Nate GivensWeather: 55°-70°, Rain**Items Worked On:**

- ☐ Gas Extraction Wells
- ☐ Flare/piping installation
- ☒ LFG Piping
- ☐ Pressure Testing
- ☐ Earthwork

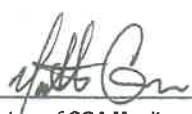
- ☐ Combo Wells
- ☐ Liner Installation
- ☐ Liner Repair
- ☒ Excavation/Trenching
- ☐ Other

Contractor/Subcontractors/Visitors:AEGLVisitors -Phone Calls -**Summary of Work:**

- Onsite/safety meeting
- Met with AEGL crews to discuss plan for the day; raining; tie-ins for EW-144R airline and force main will be completed and AEGL will stop work for the day
- AEGL tied-in airline and force main for EW-144R and backfilled trench
- AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other: _____


Signature of CQA Monitor9/27/10

Date

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, September 28, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 9:30

BC Personnel: Nate Givens

Weather: 55°-70°, Rain

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Met with AEGL crews to discuss plan for the day; raining; no work planned
- Received call from R. Kostelnick; Site hit lateral for EW-48R; AEGL will repair
- AEGL uncovered lateral for EW-48R and spliced a new section of 6" SDR 17 pipe and backfilled trench
- AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

9/28/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, September 29, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 16:00

BC Personnel: Nate Givens

Weather: 55°-70°, M. Sunny

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - E. Goodhall

Summary of Work:

- Onsite/safety meeting
- Attended weekly construction meeting with C. Jaquet, E. Goodhall and B. Brown
- AEGL set up drill rig on EW-153 and began drilling
- Air tested TEW-5R airline and force main; air test passed
- EW-153 drilled to 103'; AEGL attempted to advance beyond 103' for 1.5 hours but could go no deeper due to the presence of a sludge-like material; called E. Goodhall and was advised to set well at 103'; well casing set
- EW-153 completed per spec
- AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

9/29/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, September 30, 2010

Location: Lorain County II Landfill

Time In: 8:00

Time Out: 19:00

BC Personnel: Nate Givens

Weather: 55°-70°, Clear

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☒ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - E. Goodhall

Summary of Work:

- Onsite/safety meeting
- AEGL located tie-in point for TEW-5R airline and force main and began trenching for same
- AEGL completed tie-ins for TEW-5R airline and force main and backfilled trench
- AEGL installed leachate pump in TEW-5R; pump cycled
- AEGL began trenching for EW-87R airline and force main
- I. Delarca (Weffert) onsite for as-built survey of pipelines installed to-date
- AEGL laid airline and 4" x 2" dual-contained force main in trench and installed 8" HDPE pipe (approved by C. Jaquet) for road crossing
- Air tested airline and force main for EW-87R; air tests passed
- AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

9/30/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Friday, October 01, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 17:15

BC Personnel: Nate Givens

Weather: 50°-60°, Cloudy

Items Worked On:

- ☐ Gas Extraction Wells
- ☐ Flare/piping installation
- ☒ LFG Piping
- ☐ Pressure Testing
- ☐ Earthwork

- ☒ Combo Wells
- ☐ Liner Installation
- ☐ Liner Repair
- ☒ Excavation/Trenching
- ☐ Other

Contractor/Subcontractors/Visitors:

AEGL

Visitors -

Phone Calls - R. Isaac

Summary of Work:

- Onsite/safety meeting
- AEGL tied-in airline and force main for EW-87R, set survey risers and backfilled trench with excavated material
- AEGL fused 6" flange to EW-82R well casing for fitment of combination well head and installed leachate pump; pump cycled
- AEGL installed 2" well head for EW-146 and connected to lateral
- AEGL abandoned EW-144 and connected previously installed remote well head for EW-144R to existing 6" vacuum riser
- AEGL excavated around EW-138 and straightened well casing for pump installation; pump installed and cycled
- AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

10/1/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Saturday, October 02, 2010Location: Lorain County II LandfillTime In: 7:00BC Personnel: Nate GivensTime Out: 9:30Weather: 50°-55°, Rain

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☒ Other - Maintenance |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac

Summary of Work:

- Onsite/safety meeting
- Met with C. Jaquet; suspected gas leak around LR5
- AEGL dug around 4" gas piping at LR5 to look for broken fittings or other sources of gas leaks; none found
- Rain continued; AEGL shutting down operations for the day
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other: _____
- _____
- _____

Signature of CQA Monitor

Date

10/2/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Monday, October 04, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 10:30

BC Personnel: Nate Givens

Weather: 50°-55°, Overcast

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other - Maintenance |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac

Summary of Work:

- Onsite/safety meeting
- Site is muddy; AEGL fabricating pipe in the morning and leaving site until Thursday; notified R. Kostelnick
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

10/4/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, October 07, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:30

BC Personnel: Nate Givens

Weather: 50°-65°, Clear

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other - Maintenance |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac, E. Goodhall

Summary of Work:

- Onsite/safety meeting
- AEGL began trenching for EW-152 lateral with road crossing
- AEGL laid 6" lateral and 140' of 12" CMP for road crossing in trench
- Well log for EW-152 indicated presence of leachate; discussed addition of airline and force main for future use with E. Goodhall and R. Kostelnick; decided to add airline and force main
- AEGL removed pipe from trench to install 2" airline and 2" force main
- 2" airline and 2" force main installed; piping laid in trench
- AEGL set survey risers and backfilled trench with crushed brick over road crossing and clean onsite soil in remaining trench
- Backfilling completed; AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

10/7/10

Project: 2010 GCCS - Phase III CQA

Date: Friday, October 08, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:45

BC Personnel: Nate Givens

Weather: 55°-70°, M. Sunny

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☒ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- AEGL is preparing liner for repairs
- Looked at TEW-7R2; pump is blowing leachate through exhaust tube; Dean (AEG) will remove tube and allow pump to exhaust inside well; will check to see if this is acceptable
- Liner crew onsite
- Pulled trial welds and documented on field forms
- AEGL set four encasements for 2" ball valves for airlines and force mains installed on upper plateau
- AEGL completed liner repairs in final cover area for EW-73R, EW-82R, EW-142R, EW-148, EW-165R and EW-166R
- AEGL backfilled open excavations in final cap area where liner repairs were completed
- Air tested 6" lateral for EW-38R; air test passed
- AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other: _____

Signature of CQA Monitor

Date

10/8/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Saturday, October 09, 2010Location: Lorain County II LandfillTime In: 8:00Time Out: 12:45BC Personnel: Nate GivensWeather: 55°-70°, M. Sunny

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☒ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- AEGL begins trenching for EW-153 road crossing
- AEGL completed liner repairs in final cover area at EW-2BR, EW-100R and EW-144R
- EW-153 road crossing complete; section of 6" lateral encased in CMP stubbed out downslope for connection at a later time
- AEGL begins cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other: _____
- _____
- _____

Signature of CQA Monitor

Date

10/9/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Monday, October 11, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:00

BC Personnel: Nate Givens

Weather: 55°-70°, M. Sunny

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac, R. Kostelnick

Summary of Work:

0700 - Onsite/safety meeting
0730 - Begin trenching for EW-151/152 lateral
1040 - R. Kostelnick calls to check status of pumps for toe drain manholes
1045 - Informed B. Brown of priority status of pumps for toe drain manholes
1130 - Pipe for EW-151/152 lateral fused to pipe already installed with road crossing
1200 - Offsite for lunch
1300 - Onsite
1325 - Begin air test for EW-151/152 lateral @ 25 psi
1400 - AEG is backfilling EW-151/152 lateral trench
1725 - End air test for EW-151/152 lateral @ 25 psi
1800 - Existing pump @ MH1 set at 15' depth; pumping
1830 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

10/11/10

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, October 12, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:15

BC Personnel: Nate Givens

Weather: 55°-70°, M. Sunny

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac

Summary of Work:

0700 - Onsite/safety meeting
0730 - Begin trenching for EW-153 lateral and EW-50 air line and force main
0800 - AEG continues installation of pumps in toe drain manholes
1020 - Shawn (EDI) calls to ask whether or not AEG hit a gas line; power station is down due to oxygen
1220 - Offsite for lunch
1300 - Onsite
1400 - Begin air test on EW-153 lateral @ 25 psi
1545 - Pumps installed in toe drain manholes; air line full of water; will consult with R. Kostelnick in the morning
1600 - AEG backfilling trench for EW-153 lateral and EW-50 air line and force main
1800 - End air test on EW-153 lateral; air test passed
1815 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other: _____

Signature of CQA Monitor

Date

10/12/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, October 13, 2010Location: Lorain County II LandfillTime In: 7:00Time Out: 11:00BC Personnel: Nate GivensWeather: 50°-55°, M. Cloudy

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEGVisitors -Phone Calls -

Summary of Work:

- Onsite/safety meeting
- AEG began trenching for EW-154 lateral and airline and force main for EW-47R
- AEGL completed road crossing for EW-154 using 60' of 12" CMP; airline and force main for EW-50R laid in trench
- EW-154 tie-in complete
- EW-151/EW-152 tie-in to 12" header complete
- AEGL set survey risers and began backfilling trenches
- AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other: _____


Signature of CQA Monitor10/13/10
Date

Daily Field ReportProject: 2010 GCCS - Phase III CQADate: Thursday, October 14, 2010Location: Lorain County II LandfillTime In: 7:00BC Personnel: Nate GivensTime Out: 11:00Weather: 50°-55°, M. Cloudy**Items Worked On:**

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:AEG

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Attended weekly progress meeting with C. Jaquet, R. Kostelnick and B. Brown
- Site conditions too poor to trench due to overnight rain showers
- AEGL will stage materials for EW-38R tie-in to 24" header and leave site for the day
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other: _____
- _____
- _____

Signature of CQA Monitor

Date

10/14/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Friday, October 15, 2010

Location: Lorain County II Landfill

Time In: 7:00

BC Personnel: Nate Givens

Time Out: 17:45

Weather: 55°-65°, P. Cloudy

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - R. Isaac

Summary of Work:

0700 - Onsite/safety meeting
0800 - AEG blows water out of air line for toe drain manholes
0830 - AEG begins trenching for new EW-38R lateral
1030 - AEG hits the force main near the 24" header on the Northeast corner; trenching stops while the force main is pinched off
1230 - Spoke to R. Kostelnick to give status update
1300 - J. Mason (EDI) called; 24" tie-in can be done tomorrow; Tees fused in air line and force main for tie-in
1330 - Begin air test on replacement EW-155 and EW-35R lateral
1400 - AEG laid 2" air line and 4" force main in trench along with EW-38R lateral; begin backfilling trench
1730 - End air test on replacement EW-155 and EW-35R lateral @ 25 psi; AT OK
1745 - Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

10/15/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Saturday, October 16, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 0:00

BC Personnel: Janet Todia

Weather: 40°-60°, Clear

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - Nate Givens

Summary of Work:

- Onsite/safety meeting
- AEGL exposed 24" header at tie-in point for EW-38R
- EDI isolated header for tie-in
- Two electro-fusion couplers on each side of a nearby 24" valve were broken while the 24" x 6" tee was being installed; AEGL fused new 24" flanges in-line to replace the electro-fusion couplers
- AEGL completed tie-in, set survey risers and backfilled trench with clean onsite soil
- AEGL cleaned up work area
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

Daily Field ReportProject: 2010 GCCS - Phase III CQADate: Monday, October 18, 2010Location: Lorain County II LandfillTime In: 7:00Time Out: 19:00BC Personnel: Nate GivensWeather: 45°-55° Cloudy, L. Rain**Items Worked On:**

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:AEG

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- AEGL trenched new lateral for EW-35R and EW-155
- EDI isolated 12" above-grade header for EW-35R/EW-155 tie-in
- EW-35R/EW-155 tie-in complete
- AEGL abandoned existing 6" vacuum riser for EW-35R and EW-155 with 6" butt cap
- Notified EDI that tie-in was completed; EDI opened isolation valves to resume service
- AEGL began trenching for 2" airline and 4" force main road crossing near EW-38R
- Road crossing completed with 12" CMP
- AEGL backfilled road crossing trench with crushed brick and began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other: _____
- _____
- _____

Signature of CQA Monitor

Date

10/18/10

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, October 21, 2010

Location: Lorain County II Landfill

Time In: 8:00

Time Out: 13:00

BC Personnel: Nate Givens

Weather: 40°-55°, Clear

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- AEGL trenched from EW-50 to CS-13 for new airline and force main
- Airline and force main to CS-13 installed; AEGL set survey risers and backfilled with clean onsite soil
- Air tested new airlines and force mains on North Slope in one test; air test passed
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

10/21/10

Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, November 09, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 16:30

BC Personnel: N. Givens

Weather: 45°-65°, M. Sunny

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors - E. Goodhall

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Met with Dokk Stanley; Drillers staging tools, equipment and materials
- Spoke with Rick Kostelnick for updates; discussed points of concern and items to be mindful of
- Met with Rick Kostelnick and Elena Goodhall to discuss design details and alterations
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:


Signature of CQA Monitor

11/9/10
Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, November 10, 2010

Location: Lorain County II Landfill

Time In: 7:45

Time Out: 14:00

BC Personnel: N. Givens

Weather: 45°-65°, M. Sunny

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

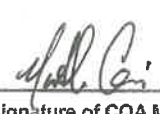
Phone Calls - E. Goodhall, R. Isaac, B. Kiedrowski

Summary of Work:

- Onsite/safety meeting
- Precon meeting with D. Stanley, B. Brown, Z. Maurer, R. Kostelnick, C. Jaquet and E. Goodhall
- Pipe crew staging tools, equipment and materials and fusing 6" stringers; no trenching today
- Spoke to Dokk Stanley; no drilling today; will begin tomorrow
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:


Signature of CQA Monitor

11 / 10 / 10

Date

Project: 2010 GCCS - Phase III CQADate: Thursday, November 11, 2010Location: Lorain County II LandfillTime In: 7:00Time Out: 17:00BC Personnel: N. GivensWeather: 45°-65°, Sunny

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Pipe crew is fabricating 6" and 24" stringers today; no trenching until tomorrow
- Drilled and completed EW-112S, EW-113S, EW-114S and EW-116S per spec; no leachate encountered
- Drillers set up drill rig on EW-117S
- Air tested 200' of 6" stringer, designated AT1; AT1 passed
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

11/11/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Friday, November 12, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 16:00

BC Personnel: N. Givens

Weather: 40°-65°, Sunny

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Pipe crew fabricated 6" and 24" stringers
- Met with John Mason (EDI) to discuss tie-ins for shallow wells
- Drilled and completed EW-117S, EW-118S and EW-119S per spec; no leachate encountered
- Drillers set up drill rig on EW-146R
- Ran and completed air test, designated AT-2, on 200' stringer of 6" SDR-17 pipe; AT-2 failed; found faulty butt-fusion weld, repaired and reapplied air test; AT-2A passed
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:


Signature of CQA Monitor

11/12/10
Date

Project: 2010 GCCS - Phase III CQADate: Monday, November 15, 2010Location: Lorain County II LandfillTime In: 7:00Time Out: 17:30BC Personnel: N. GivensWeather: 40°-50°, Sunny

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Pipe crew began trenching for 24" header beginning at Western terminus
- Drilled and completed EW-146R per spec; leachate encountered at approximately 83'
- Drillers set up drill rig on EW-150
- Pipe crew hit existing 6" lateral; EDI isolated and repair made with short section of 6" pipe and two EFCs
- Pipe crew installed approximately 360' of 24" header; backfilled trench per spec
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

11/15/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, November 16, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 17:00

BC Personnel: N. Givens

Weather: 30°-50°, Cloudy, PM Showers

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Pipe crew resumed trenching for 24" header
- Drilled and completed EW-150 per spec; solid pipe length adjusted for 30' of soil cover due to stockpile; leachate encountered at approximately 100'
- Drillers set up drill rig on EW-149
- Afternoon rain at approximately 14:00 caused early shutdown of construction activities; 24" header trench backfilled per spec
- I. Delarca (Wellert) onsite; staked out remaining wells in A East and shot new ground elevation for EW-149
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

11/16/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, November 17, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 11:30

BC Personnel: N. Givens

Weather: 30°-50°, Cloudy, Windy

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Weekly progress meeting; C. Jaquet, D. Stanley, Darren Goodheart in attendance
- Due to high winds and poor ground conditions, AEGL used the day to fuse pipe in preparation for the morning
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:


Signature of CQA Monitor

11/17/10
Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, November 18, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 16:30

BC Personnel: N. Givens

Weather: 35°-50°, AM Rain, Cloudy

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Drilled and completed EW-149; all wells on top of the hill completed
- Drill rig moved to Cell A East to begin drilling final twelve wells in the morning
- Pipe crew completed tie-ins for EW-112S, EW-113S and EW-114S
- Delivered status update to R. Kostelnick; Site will be constructing a road crossing on Saturday, limiting access to top of hill
- Pipe crew is waiting on delivery of 36" CMP before resuming installation of 24" header; delivery expected tomorrow or Saturday
- AEGL crews completed construction activities for the day and began preparing to leave site
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:


Signature of CQA Monitor

11/18/10
Date

Project: 2010 GCCS - Phase III CQA

Date: Friday, November 19, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 18:30

BC Personnel: N. Givens

Weather: 35°-50°, M. Sunny

Items Worked On:

- ☒ Gas Extraction Wells
- ☐ Flare/piping installation
- ☒ LFG Piping
- ☐ Pressure Testing
- ☐ Earthwork

- ☐ Combo Wells
- ☐ Liner Installation
- ☐ Liner Repair
- ☒ Excavation/Trenching
- ☐ Other

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Drilled and completed EW-307 and EW-308
- Began drilling EW-311 but encountered refusal at 32'; well bore backfilled with clean soil and compacted in lifts with drilling equipment; new bore location to be resurveyed at earliest convenient time
- Pipe crew completed tie-ins for EW-116S, EW-117S and EW-118S
- Completed road crossing at NW corner of clay stockpile
- Called I. Delarca (Wellert) and scheduled him for Monday for stakeout
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

11/19/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Monday, November 22, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 8:00

BC Personnel: N. Givens

Weather: 50°, Rain

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Began raining; forecast to rain all morning; AEGL crews offsite for the day
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

N. Givens

11/22/10

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, November 23, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 16:00

BC Personnel: N. Givens

Weather: 35°-45°, M. Sunny

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Site conditions poor due to overnight rainfall; pipe crew fused 24" pipe; no drilling
- I. Delarca onsite; staked out EW-52R2, EW-311, horizontal collector and headers around perimeter of cell A East
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

11/23/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, November 24, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 14:00

BC Personnel: N. Given

Weather: 35°-45°, M. Sunny

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Pipe crew continued trenching for new 24" header
- Drillers set up on EW-52R2 and began drilling
- Leachate encountered at 70' depth at EW-52R2
- Drill bit broken at 77' depth on EW-52R2; well bore backfilled to surface with clean fill; drilling activities suspended until Monday
- Pipe crew began backfilling trench; trenching suspended until Monday
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

11/24/10

Project: 2010 GCCS - Phase III CQA

Date: Monday, November 29, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 22:30

BC Personnel: N. Givens

Weather: 35°-45°, M. Sunny

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Pipe crew continued trenching for new 24" header and horizontal collector SW of haul road
- Drillers set up on EW-52R2 and resumed drilling after drill rig repairs
- Spoke to R. Kostelnick about design of horizontal collector SW of haul road; vacuum riser to be installed at point where collector crosses 6" lateral for EW-35R and EW-155
- At 3% grade, 24" header runs above ground; consulted with R. Kostelnick; Site will provide cover material after pipe is installed
- 40' of 36" CMP for road crossing installed adjacent to EW-152
- EW-52R2 drilled to depth of 110'; pipe set after consultation with C. Jaquet due to sludge
- Horizontal collector installed in trench 6' W x 4' D on 6" of stone bedding; stockpile of stone exhausted with 230' of trench backfilled; trench to be covered with 60-mil FML and geocomposite; FML and geocomposite temporarily placed over open section of trench until more stone is delivered
- Pipe crew began hauling and spreading clay in 1' lift for cover over FML and geocomposite
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

11/29/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, November 30, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 10:00

BC Personnel: N. Givens

Weather: 35°-45°, M. Cloudy, Windy

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls - C. Jaquet

Summary of Work:

- Onsite/safety meeting
- Site was muddy due to overnight rainfall; 100% chance of rain for the rest of the day; no drilling or trenching today
- Received a phone call from Chris Jaquet; sample ports for LR-5 must be installed today
- Spoke to R. Kostelnick about sample ports and horizontal collector progress
- Pipe crew installed sample ports for LR-5 and left the site
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:


Signature of CQA Monitor

11/30/10
Date

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, December 01, 2010

Location: Lorain County II Landfill

Time In: 7:30

Time Out: 14:30

BC Personnel: N. Givens

Weather: 30°-35°, M. Cloudy, Windy, Snow

Items Worked On:

- | | |
|--|---|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Weekly progress meeting with C. Jaquet, D. Stanley and B. Brown
- Pipe crew left site due to poor ground conditions
- Drilled EW-304, set and completed to surface per spec
- Drilled EW-312, set and completed to surface per spec
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:


Signature of CQA Monitor

12/1/10
Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, December 02, 2010

Location: Lorain County II Landfill

Time In: 8:00

Time Out: 18:30

BC Personnel: N. Givens

Weather: 25°-30°, Cloudy, Windy

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls - D. Brotherton, C. Jaquet

Summary of Work:

- Onsite/safety meeting
- Spoke to Dan Brotherton about condition of slope near 24" header trench on west side; requested that AEG repair erosion
- All remaining stakes for unconstructed wells destroyed; no drilling
- Pipe crew resumed installation of 24" header to the east of the high point and tie-in for East Slope horizontal collector (H5)
- I. Delarca arrived onsite and staked out EW-301, EW-302, EW-305, EW-310 and EW-311, and the locations for H6, H7 and H8
- Spoke to C. Jaquet about sample ports on piping at the flares; AEG pipe crew installed ports
- Pipe crew completed tie-in for East Slope horizontal collector and backfilled remaining open trench with stone, covered with FML, geocomposite and 1' of clay
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

12/2/10

Project: 2010 GCCS - Phase III CQA

Date: Friday, December 03, 2010

Location: Lorain County II Landfill

Time In: 7:30

Time Out: 17:30

BC Personnel: N. Givens

Weather: 25°-30°, Cloudy, Snow

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Pipe crew resumed trenching for 24" header Eastward from high point and East Slope horizontal collector north of haul road
- Drillers set up on EW-305, drilled and completed per spec
- Drillers constructed benches for multiple wells and set up on EW-302; drilling will resume Monday, Dec. 6th
- Pipe crew installed approximately 100' each of perforated horizontal collector pipe and accompanying 6" vacuum pipe and backfilled with gravel
- Pipe crews began backfilling and cleaning up work area
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

12/3/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Saturday, December 04, 2010

Location: Lorain County II Landfill

Time In: 7:30

Time Out: 11:00

BC Personnel: N. Givens

Weather: 25°-30°, Cloudy, Snow

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Pipe crews resumed trenching for 24" header and horizontal collector on East Slope
- 6" collector and vacuum pipes fused to previously installed sections in horizontal collector trench; trench backfilled with gravel
- Pipe crews began backfilling open trenches
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:


Signature of CQA Monitor

12/4/10
Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Monday, December 06, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 17:00

BC Personnel: N. Givens

Weather: 25°-30°, Cloudy, Snow

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls - C. Jaquet

Summary of Work:

- Onsite/safety meeting
- Pipe crews resumed trenching for 24" header and East Slope horizontal collector north of the haul road
- Drillers set up on EW-302 and began drilling
- Received call from Chris Jaquet; vacuum pipe for horizontal collector will be installed on top of liner and embedded in clay cover to gain fall to header per his conversation with Joey Cantwell (AEGL Pipeline)
- EW-302 drilled to depth of 84' and completed per spec
- Drillers set up on EW-303 and began drilling
- EW-303 drilled to depth of 57' and completed per spec
- Pipe crew placed 6" of gravel bedding in horizontal collector trench, fused segment of collector pipe to previously installed pipe, laid in trench and backfilled with gravel to 1' below grade and topped with compacted clay
- Pipe crew fused segment of 24" header pipe to previously installed pipe, laid in trench, set survey risers and backfilled with clean soil
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:


Signature of CQA Monitor

12/6/10
Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, December 07, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 16:00

BC Personnel: N. Givens

Weather: 25°-30°, Cloudy, Snow

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls - C. Jaquet

Summary of Work:

- Onsite/safety meeting
- Pipe crews resumed trenching for 24" header and East Slope horizontal collector north of the haul road
- Drillers set up on EW-306 and began drilling
- EW-306 drilled to depth of 88' and completed per spec
- Drillers set up on EW-311; drilling will resume tomorrow, Dec. 8th
- Pipe crew placed 6" of gravel bedding in horizontal collector trench, fused segment of collector pipe to previously installed pipe, laid in trench and backfilled with gravel to 1' below grade and topped with compacted clay
- Pipe crew fused segment of 24" header pipe to previously installed pipe, installed eastern access riser and vacuum riser for TEW-10R2, laid pipe in trench, set survey risers and backfilled with clean soil
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

12/7/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, December 08, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 17:30

BC Personnel: N. Givens

Weather: 25°-30°, M. Sunny

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Pipe crews resumed trenching for 24" header and East Slope horizontal collector north of the haul road
- Weekly progress meeting with C. Jaquet, B. Brown, R. McMasters, J. Cantwell, D. Brotherton and R. Kostelnick
- Drillers began drilling EW-311
- EW-311 drilled to depth of 64' and completed per spec
- Pipe crew placed 6" of gravel bedding in horizontal collector trench, fused segment of collector pipe to previously installed pipe, laid in trench and backfilled with gravel to 1' below grade and topped with compacted clay
- Pipe crew fused segment of 24" header pipe to previously installed pipe, laid pipe in trench and backfilled with clean soil; 24" header installed up to point of main haul road crossing
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:


Signature of CQA Monitor

12/8/10
Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, December 09, 2010

Location: Lorain County II Landfill

Time In: 7:30

Time Out: 17:30

BC Personnel: N. Givens

Weather: 15°-30°, Clear

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- AEGL continued work on East Slope horizontal collector and 24" header and installed 24" x 6" tee near west end to connect 6" lateral for EW-62R, EW-146R, EW-147R and EW-167
- AEGL drilled EW-301 to scheduled depth of 69'; well casing set and EW-301 completed per spec
- AEGL backfilled horizontal collector trench with No. 4 washed non-carbonate stone
- AEGL installed FML above horizontal collector trench, covered with geocomposite and covered with clean clay
- AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

12/9/10

Project: 2010 GCCS - Phase III CQA

Date: Friday, December 10, 2010

Location: Lorain County II Landfill

Time In: 7:30

Time Out: 17:30

BC Personnel: N. Givens

Weather: 30°-35°, AM Snow, Clear PM

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- AEGL continued work on East Slope horizontal collector
- AEGL trenched lateral for EW-146R and abandoned EW-146 below grade; existing vacuum riser was 4" diameter; new 6" lateral reduced to 4" at tie-in point and EW-146R tie-in completed
- AEGL drilled EW-310 to scheduled depth of 67'; well casing set and EW-310 completed per spec
- AEGL trenched lateral for EW-119S and completed 6" tie-in to lateral at EW-119
- AEGL backfilled open trenches and covered East Slope horizontal collector tie-in point at 24" header with plastic and FML and sealed edges with clean onsite clay
- AEGL began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

12/10/10

Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Saturday, December 11, 2010

Location: Lorain County II Landfill

Time In: 7:30

Time Out: 14:00

BC Personnel: N. Givens

Weather: 30°-40°, Clear

Items Worked On:

- | | |
|--|--|
| ☒ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- AEGL began tie-in for East Slope horizontal collector to existing 24" header near LR5
- AEGL drilled EW-309 to scheduled depth of 55'; well casing set and EW-309 completed per spec
- AEGL trenched for 24" road crossing at northeast corner of haul road and completed with 60' of 36" CMP; trench backfilled with crushed brick
- Air tested lateral for East Slope horizontal collector; air test passed
- Horizontal collector tie-in to 24" header completed; 4" vacuum line for LR5 tied in to lateral for horizontal collector near tie-in to 24" header
- AEGL backfilled open trenches and began cleanup of work areas
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:

Signature of CQA Monitor

Date

12/11/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, December 16, 2010

Location: Lorain County II Landfill

Time In: 8:30

Time Out: 15:30

BC Personnel: N. Givens

Weather: 10°-20°, Clear

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☒ Pressure Testing | ☒ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

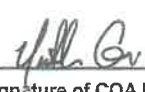
Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Met with J. Parker (OEPA) for air test of 24" header and tour of site
- AEGL began preparations for tie-in of 24" header on west side
- AEGL resumed construction of North Slope horizontal collector
- Air tested 24" header at 10 psi; air test passed
- Air tested three 6" SDR 17 stringers for use as laterals for North Slope horizontal collector; air tests passed
- AEGL laid pipe for horizontal collector and backfilled completed section of collector trench with No. 4 washed non-carbonate stone, covered with FML, geocomposite and clean onsite clay
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:


Signature of CQA Monitor

12/16/10
Date

Project: 2010 GCCS - Phase III CQA

Date: Friday, December 17, 2010

Location: Lorain County II Landfill

Time In: 7:00

Time Out: 17:00

BC Personnel: Julie McGowan

Weather: 20°-30°F, Snow

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

AEG

Visitors -

Phone Calls - Nate Givens

Summary of Work:

- Onsite
- Attended safety meeting
- AEG installed two new sections of 24" header pipe at the header tie in point on the East Slope near LR5 to complete the tie-ins for the header across the top of the old cell and the new 24" header in Cell A and installed two new 24" control valves for each of the new headers near the tie in points
- AEG backfilled the open trenches with excavated material and clean onsite clay
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Julie McGowan
Signature of CQA Monitor

12-17-10
Date

Project: 2010 GCCS - Phase III CQA

Date: Tuesday, December 21, 2010

Location: Lorain County II Landfill

Time In: 7:30

Time Out: 17:30

BC Personnel: N. Givens

Weather: 20°-30° Overcast

Items Worked On:

- ☐ Gas Extraction Wells
- ☐ Flare/piping installation
- ☒ LFG Piping
- ☒ Pressure Testing
- ☐ Earthwork

- ☐ Combo Wells
- ☐ Liner Installation
- ☐ Liner Repair
- ☒ Excavation/Trenching
- ☐ Other

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Met with C. Jaquet, D. Vladic and R. McMasters to discuss 24" header tie-ins on east side near LR5
- AEGL continued construction of North Slope horizontal collector
- Received a call from C. Jaquet regarding survey risers; all risers must be removed by the end of the day
- Called I. Delarca and scheduled as-built survey for this afternoon
- Air tested laterals for EW-149 and EW-150; air test passed
- I. Delarca arrived onsite and completed as-built survey at all remaining survey risers; AEGL began removing risers and backfilling holes with clean onsite clay
- AEGL installed horizontal collector pipe in open trench, backfilled with No. 4 washed non-carbonate stone and covered with FML, geocomposite and clean onsite clay
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date



12/21/10

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Wednesday, January 12, 2011

Location: Lorain County II Landfill

Time In: 8:20

Time Out: 17:45

BC Personnel: N. Givens

Weather: 25°, Snow

Items Worked On:

- | | |
|--|---|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☒ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☐ Other |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Attended weekly progress meeting with C. Jaquet, R. Isaac, J. Cantwell and D. Goodhart
- 18" header at southwest corner of site isolated; AEGL cut a section out and fused an 18" butt cap with an electro-fusion coupler to cap the header and abandon the old 8" header along the South Slope
- Air tested headers and laterals in Cell A as a complete system; leaks found and corrected; air test passed
- AEGL began cleanup of site
- Offsite

Attachments:

- ☐ Contractor Report
☐ Field Notes
☐ Other:


Signature of CQA Monitor

1/12/11
Date

Brown AND Caldwell

Daily Field Report

Project: 2010 GCCS - Phase III CQA

Date: Thursday, January 13, 2011

Location: Lorain County II Landfill

Time In: 8:00

Time Out: 17:30

BC Personnel: N. Givens

Weather: 15°-25°, Overcast

Items Worked On:

- | | |
|--|--|
| ☐ Gas Extraction Wells | ☐ Combo Wells |
| ☐ Flare/piping installation | ☐ Liner Installation |
| ☐ LFG Piping | ☐ Liner Repair |
| ☐ Pressure Testing | ☐ Excavation/Trenching |
| ☐ Earthwork | ☒ Other - Finish Grading |

Contractor/Subcontractors/Visitors:

Contractor - AEGL

Subcontractors -

Visitors -

Phone Calls -

Summary of Work:

- Onsite/safety meeting
- Walked site to find punchlist items
- Found exposed waste along trench lines and areas of trench that had settled; AEGL will cover with clean clay
- AEGL is finish grading work areas
- Offsite

Attachments:

- ☐ Contractor Report
- ☐ Field Notes
- ☐ Other:

Signature of CQA Monitor

Date

[Signature]

1/13/11

American Environmental Group, Ltd

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Environmental
Group Ltd.

DAILY DIARY

DATE: 8/24/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
0' LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
0' LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
0' PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
0' SOLID PIPE -DIA.			LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

COMMENTS:

Arrived on site got rig ready to go rigged up on first well made up wells cleaned up off site.

BROWN AND CALDWELL 8/24/10
CLIENT REPRESENTATIVE DATE

NATHAN GILKUS ENGINEER I
NAME & TITLE

Dokk 8/24/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 8/25/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
136'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION	LINEAR FT.
136'	LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
94'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
48'	SOLID PIPE -DIA.	STATION	LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
EW 26 R TD 36'		SUBHEADER #	PIPE DIA.
EW 115 R TD 100'		STATION #	LINEAR FT.
		STATION	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

COMMENTS:

Arrived on site drilled 0' to 36' TD on EW 26 R set and completed to surface moved rig to EW 115 R drilled 0' to 100' TD set and completed to surface moved rig to EW 100 R cleaned up off site. Also told bye site no more drilling until we got a water truck for dust control on site

BROWN AND CALDWELL 8/25/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 8/25/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 8/26/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
0' LINEAR FEET OF DRILLING		HEADER # _____	PIPE DIA. _____
0' LINEAR FEET OF DRILLING-ABANDONMENT		STATION _____	LINEAR FT. _____
0' LINEAR FEET OF WELL COMPLETION		STATION _____	TRENCH DEPTH _____
0' PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
0' SOLID PIPE -DIA.		STATION _____	LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
		STATION # _____	LINEAR FT. _____
		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

COMMENTS:

Arrived on site waited for water truck to it made it to site at 2:30 pm made up wells cleaned up site 7.5 hrs standby
cleaned up off site.

BROWN AND CHOWELL 8/26/10
CLIENT REPRESENTATIVE DATE

NATHAN GIGGUS ENGINEER I
NAME & TITLE

Dokk 8/26/2010
AEG SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 8/27/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
195'	LINEAR FEET OF DRILLING	HEADER # _____	PIPE DIA. _____
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____	LINEAR FT. _____
195'	LINEAR FEET OF WELL COMPLETION	STATION _____	TRENCH DEPTH _____
153	PERFORATED PIPE-DIA.	HEADER # _____	PIPE DIA. _____
48'	SOLID PIPE -DIA.	STATION _____	LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 2BR TD 99'		STATION # _____	LINEAR FT. _____
EW 100R TD 96'		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
GENERAL INFORMATION		LATERAL: # _____	PIPE DIA. _____
WEATHER CONDITIONS		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
START TIME <u>6:00 A.M.</u>		SUMPS _____	VALVES _____
STOP TIME <u>5:00 P.M.</u>			

COMMENTS:

Arrived on site drilled 0' to 96' TD on EW 100R set and completed to surface moved rig to EW 2BR drilled 0' to 99' set and completed moved rig to EW 73R cleaned up off site

BROWN AND CUDWELL 8/27/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 8/27/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 8/28/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
0' SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
COMPLETION: (WELL NUMBERS)	STATION _____ TRENCH DEPTH _____
	SUBHEADER # _____ PIPE DIA. _____
	STATION # _____ LINEAR FT. _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
GENERAL INFORMATION	LATERAL: # _____ PIPE DIA. _____
WEATHER CONDITIONS	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
START TIME <u>6:00 A.M.</u>	LATERAL: # _____ PIPE DIA. _____
STOP TIME <u>5:00 P.M.</u>	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	SUMPS _____ VALVES _____

COMMENTS:

Arrived on site built benches for EW 73R ,163R,82R ,148 2hrs each cleaned up off site.

BROWN AND CROWELL 8/28/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 8/28/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 8/31/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

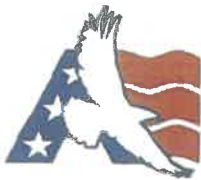
DRILLING		CONSTRUCTION	
153' LINEAR FEET OF DRILLING		HEADER # _____	PIPE DIA. _____
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT. _____
153' LINEAR FEET OF WELL COMPLETION		STATION _____	TRENCH DEPTH _____
111' PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
48' SOLID PIPE -DIA.			LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 73 R TD 52'			LINEAR FT. _____
EW 166 R TD 101'		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____
GENERAL INFORMATION			
WEATHER CONDITIONS			
START TIME <u>6:00 A.M.</u>			
STOP TIME <u>5:00 P.M.</u>			

COMMENTS:

Arrived on site drilled 0' to 52' Td on EW 73 R set and completed moved rig to EW 166 R drilled 0' to 101' TD set and completed to surface moved rig to EW 144R cleaned up off site.

BROWN AND CALDWELL 8/31/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 8/31/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9/1/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
99' LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
99' LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
78' PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
24' SOLID PIPE -DIA.			LINEAR FT.
		STATION	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
EW 144 R TD 99'			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 6:00 A.M.		SUMPS	VALVES
STOP TIME 5:00 P.M.			

COMMENTS:

Arrived on site drilled 0' to 99' TD on EW 144 R set and completed moved rig to EW 142 R worked on rig
cleaned up off site.

BROWN AND CALDWELL 9/1/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 9/1/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9/2/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
0' LINEAR FEET OF DRILLING		HEADER # _____	PIPE DIA. _____
60' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT. _____
0' LINEAR FEET OF WELL COMPLETION		STATION _____	TRENCH DEPTH _____
0' PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
0' SOLID PIPE -DIA.			LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 142 R TD'			LINEAR FT. _____
		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

COMMENTS:

Arrived on site drilled 0' to 60' on EW 142 R site shut us down until we got our own water pump it arrived at 3:30 PM
shut down at 9:30 AM rigged up pump to late to get well to depth abandoned well. 6hrs standby.

BROWN AND CALDWELL 9/2/10
CLIENT REPRESENTATIVE DATE
NATHAN GWENS ENGINEER I
NAME & TITLE

Dokk 9/2/2010
AEGL SITE SUPERVISOR DATE



American
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DAILY DIARY

DATE: 9/3/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
98' LINEAR FEET OF DRILLING		HEADER # _____	PIPE DIA. _____
0' LINEAR FEET OF DRILLING-ABANDONMENT		STATION _____	LINEAR FT. _____
98' LINEAR FEET OF WELL COMPLETION		STATION _____	TRENCH DEPTH _____
77' PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
24' SOLID PIPE -DIA.		STATION _____	LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 142 R TD 98'		STATION # _____	LINEAR FT. _____
		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

GENERAL INFORMATION	
WEATHER CONDITIONS	
START TIME <u>6:00 A.M.</u>	
STOP TIME <u>5:00 P.M.</u>	

COMMENTS:

Arrived on site drilled 0' to 98' TD on EW 142 R set and completed to surface moved rig to EW 165 R set down to work on rig cleaned up off site.

Rowin and Caldwell 9/3/10
CLIENT REPRESENTATIVE DATE
Nathan Givens ENGINEER I
NAME & TITLE

Dokk 9/3/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
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DAILY DIARY

DATE: 9/7/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
142' LINEAR FEET OF DRILLING		HEADER # _____	PIPE DIA. _____
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT. _____
142' LINEAR FEET OF WELL COMPLETION		STATION _____	TRENCH DEPTH _____
100' PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
48' SOLID PIPE -DIA.			LINEAR FT. _____
COMPLETION: (WELL NUMBERS)		STATION _____	TRENCH DEPTH _____
EW 82 R TD 49'			
EW 165 R TD 93'			
		SUBHEADER # _____	PIPE DIA. _____
			LINEAR FT. _____
		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

GENERAL INFORMATION

WEATHER CONDITIONS

START TIME 6:00 A.M.

STOP TIME 5:00 P.M.

COMMENTS:

Arrived on site drilled 0' to 93' TD on EW 165 R set and completed to surface moved rig to EW 82 R drilled 0' to 49' TD set and completed to surface moved rig to EW 148 cleaned up off site. Also rebuilt bench for EW 163 site took bench out 2 hrs.

BROWN AND CALDWELL 9/7/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 9/7/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
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DAILY DIARY

DATE: 9/8/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
79' LINEAR FEET OF DRILLING		HEADER # _____	PIPE DIA. _____
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT. _____
79' LINEAR FEET OF WELL COMPLETION		STATION _____	TRENCH DEPTH _____
58' PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
24' SOLID PIPE -DIA.			LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 148 TD 79'			LINEAR FT. _____
		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

GENERAL INFORMATION	
WEATHER CONDITIONS	
START TIME <u>6:00 A.M.</u>	
STOP TIME <u>5:00 P.M.</u>	

COMMENTS:

Arrived on site went to meeting went to rig drilled 0' to 79' TD on EW 148 set and completed to surface moved rock pile cleaned up off site.

BROWN AND CALDWELL 9/8/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER II
NAME & TITLE

Dokk 9/8/2010
AEGL SITE SUPERVISOR DATE



DATE: 9/9/2010

DRILLING		CONSTRUCTION	
65' _____	LINEAR FEET OF DRILLING	HEADER # _____	PIPE DIA. _____
0' _____	LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____	LINEAR FT. _____
65' _____	LINEAR FEET OF WELL COMPLETION	STATION _____	TRENCH DEPTH _____
44' _____	PERFORATED PIPE -DIA.	HEADER # _____	PIPE DIA. _____
24' _____	SOLID PIPE -DIA.	STATION _____	LINEAR FT. _____
COMPLETION: (WELL NUMBERS)		STATION _____	TRENCH DEPTH _____
EW 163 R TD 65'		SUBHEADER # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
GENERAL INFORMATION		LATERAL: # _____	PIPE DIA. _____
WEATHER CONDITIONS		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
START TIME _____ 6:00 A.M.		SUMPS _____	VALVES _____
STOP TIME _____ 5:00 P.M.			

Arrived on site drilled 0' to 65' TD on EW 163 R set and completed moved rig to EW 38 R built benches for EW 38r
45r and 155 also EW 151 2hrs each cleaned up off site.

BROWN AND COLDWELL	9/5/10
CLIENT REPRESENTATIVE	DATE
NATHAN GUONS	SURGEON I
NAME & TITLE	

Dokk	9/9/2010
AEGL SITE SUPERVISOR	DATE



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DAILY DIARY

DATE: 9/10/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
126'	LINEAR FEET OF DRILLING	HEADER # _____	PIPE DIA. _____
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____	LINEAR FT. _____
126'	LINEAR FEET OF WELL COMPLETION	TRENCH DEPTH _____	
63'	PERFORATED PIPE-DIA.	HEADER # _____	PIPE DIA. _____
72'	SOLID PIPE -DIA.	STATION _____	LINEAR FT. _____
		TRENCH DEPTH _____	
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 38 R TD 52'		STATION # _____	LINEAR FT. _____
EW 45 R TD 45'		TRENCH DEPTH _____	
EW 155 TD 29'			
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
GENERAL INFORMATION		LATERAL: # _____	PIPE DIA. _____
WEATHER CONDITIONS		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
START TIME 6:00 A.M.		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
STOP TIME 5:30 P.M.		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

COMMENTS:

Arrived on site drilled 0' to 52' TD on EW 38 R set and completed moved rig to EW 45 R drilled 0' to 45' TD set and completed to surface moved rig to EW 155 drilled 0' to 29' TD set and completed moved rig to EW 124 R cleaned up off site.

BROWN AND CALDWELL 9/10/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 9/10/2010
AEGL SITE SUPERVISOR DATE



American
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DAILY DIARY

DATE: 9/13/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
108'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT		LINEAR FT.
108'	LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
87'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
24'	SOLID PIPE -DIA.		LINEAR FT.
		STATION	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
EW 124R TD 108'			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES
GENERAL INFORMATION			
WEATHER CONDITIONS			
START TIME <u>6:00 A.M.</u>			
STOP TIME <u>5:30 P.M.</u>			

COMMENTS:

Arrived on site drilled 0' to 108' TD on EW 124R set and completed to surface cleaned up off site.

BROWN AND CALDWELL 9/13/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 9/13/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
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DAILY DIARY

DATE: 9/14/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
103'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION	LINEAR FT.
103'	LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
82'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
24'	SOLID PIPE -DIA.	STATION	LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
EW 125R TD 103'		SUBHEADER #	PIPE DIA.
		STATION #	LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 6:00 A.M.		SUMPS	VALVES
STOP TIME 5:30 P.M.			

COMMENTS:

Arrived on site drilled 0' to 103' TD on EW 125R set and completed to surface cleaned up off site.

BROWN AND CROWELL 9/14/10
CLIENT REPRESENTATIVE DATE
NATHAN GILLES ENGINEER I
NAME & TITLE

Dokk 9/14/2010
AEG SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9/15/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
114'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT		LINEAR FT.
114'	LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
93'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
24'	SOLID PIPE -DIA.		LINEAR FT.
		STATION	TRENCH DEPTH
		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		LATERAL: #	PIPE DIA.
TEW 7R2 TD 114'		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME <u>6:00 A.M.</u>		SUMPS	VALVES
STOP TIME <u>5:30 P.M.</u>			

COMMENTS:

Arrived on site drilled 0' to 114' TD on TEW 7 R2 set and completed to surface cleaned up off site.

BROWN AND CALDWELL 9/15/10
CLIENT REPRESENTATIVE DATE

NATHAN GINSIS ENGINEER I
NAME & TITLE

Dokk 9/15/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9/16/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
0' LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
0' LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
0' PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
0' SOLID PIPE -DIA.			LINEAR FT.
		STATION	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 6:00 A.M.		SUMPS	VALVES
STOP TIME 8:30 P.M.			

COMMENTS:

Arrived on site rained out.

BROWN AND CALDWELL 9/16/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER J.
NAME & TITLE

Dokk 9/16/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9/17/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
139'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION	LINEAR FT.
139'	LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
118'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
24'	SOLID PIPE -DIA.	STATION	LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
EW 152 TD 139'		SUBHEADER #	PIPE DIA.
		STATION #	LINEAR FT.
		LATERAL: #	TRENCH DEPTH
		STATION	PIPE DIA.
		RISER HEIGHT	LINEAR FT.
		LATERAL: #	TRENCH DEPTH
		STATION	PIPE DIA.
		RISER HEIGHT	LINEAR FT.
GENERAL INFORMATION		LATERAL: #	TRENCH DEPTH
WEATHER CONDITIONS		STATION	PIPE DIA.
		RISER HEIGHT	LINEAR FT.
		LATERAL: #	TRENCH DEPTH
		STATION	PIPE DIA.
		RISER HEIGHT	LINEAR FT.
START TIME <u>6:00 A.M.</u>		SUMPS	VALVES
STOP TIME <u>5:30 P.M.</u>			

COMMENTS:

Arrived on site drilled 0' to 139' TD on EW 152 set and completed moved rig to EW 58 R 2 cleaned up off site.

BROWN AND CRAWELL 9/17/10
CLIENT REPRESENTATIVE DATE

Dokk 9/17/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9/20/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
123' LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
123' LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
102' PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
24' SOLID PIPE -DIA.			LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
EW 58 R2 TD 123'			
		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

GENERAL INFORMATION

WEATHER CONDITIONS

START TIME 6:00 A.M.

STOP TIME 5:30 P.M.

COMMENTS:

Arrived on site drilled 0' to 123' TD on EW 58 R2 set and completed moved rig to EW 151 cleaned up off site.

BROWN AND CHADWELL 9/20/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 9/20/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9/21/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
95'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT		LINEAR FT.
95'	LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
74'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
24'	SOLID PIPE -DIA.		LINEAR FT.
		STATION	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
EW 151 TD 95'			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME <u>6:00 A.M.</u>		SUMPS	VALVES
STOP TIME <u>4:30 P.M.</u>			

COMMENTS:

Arrived on site drilled 0' to 95' TD on EW 151 set and completed moved rig to TEW 10 R2 cleaned up off site.

BROWN AND CALDWELL 9/21/10
CLIENT REPRESENTATIVE DATE
NATHAN GREGG ENGINEER I
NAME & TITLE

Dokk 9/21/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9/22/2010

PROJECT NAME Lorain County
PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
110'	LINEAR FEET OF DRILLING	HEADER # _____	PIPE DIA. _____
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____	LINEAR FT. _____
110'	LINEAR FEET OF WELL COMPLETION	STATION _____	TRENCH DEPTH _____
89'	PERFORATED PIPE-DIA.	HEADER # _____	PIPE DIA. _____
24'	SOLID PIPE -DIA.	STATION _____	LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 10R2 TD 110'		STATION # _____	LINEAR FT. _____
		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
GENERAL INFORMATION		LATERAL: # _____	PIPE DIA. _____
WEATHER CONDITIONS		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
START TIME <u>6:00 A.M.</u>		SUMPS _____	VALVES _____
STOP TIME <u>4:30 P.M.</u>			

COMMENTS:

Arrived on site drilled 0' to 110' TD on EW 10 R2 set and completed moved rig cleaned up off site.

BROWN AND CHOLKILL 9/22/10
CLIENT REPRESENTATIVE DATE
NATHAN GARENS ENGINEER I
NAME & TITLE

Dokk 9/22/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9/23/2010

PROJECT NAME Lorain County

PROJECT# 101-10-121

DRILLING		CONSTRUCTION	
104'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION	LINEAR FT.
104'	LINEAR FEET OF WELL COMPLETION	TRENCH DEPTH	
83'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
24'	SOLID PIPE -DIA.	STATION	LINEAR FT.
		TRENCH DEPTH	
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
EW 47R TD 104'		STATION #	LINEAR FT.
		TRENCH DEPTH	
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME <u>6:00 A.M.</u>		SUMPS	VALVES
STOP TIME <u>4:30 P.M.</u>			

COMMENTS:

Arrived on site drilled 0' to 104' TD on EW 47 R set and completed moved rig built bench for 47 R 2hr cleaned up off site.

BROWN AND CALDWELL 9/23/10
CLIENT REPRESENTATIVE DATE

NATHAN GIBBS ENGINEER I
NAME & TITLE

Dokk 9/23/2010
AEGLE SITE SUPERVISOR DATE

DAILY DIARY

DATE: 9/24/2010

PROJECT NAME	Lorain County
PROJECT#	101-10-121

DRILLING		CONSTRUCTION	
113'	LINEAR FEET OF DRILLING	HEADER # _____	PIPE DIA. _____
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____	LINEAR FT. _____
113'	LINEAR FEET OF WELL COMPLETION	HEADER # _____	PIPE DIA. _____
99'	PERFORATED PIPE-DIA.	STATION _____	LINEAR FT. _____
14'	SOLID PIPE -DIA.	SUBHEADER # _____	PIPE DIA. _____
COMPLETION: (WELL NUMBERS)		STATION # _____	LINEAR FT. _____
EW 154 TD 113'		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
GENERAL INFORMATION		LATERAL: # _____	PIPE DIA. _____
WEATHER CONDITIONS		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
START TIME _____ 6:00 A.M.		SUMPS _____	VALVES _____
STOP TIME _____ 4:30 P.M.			

COMMENTS:

Arrived on site drilled 0' to 113' TD on EW 154 set and completed moved rig to top of hill cleaned up off site.

BREWIN AND CROWELL 9/29/10
 CLIENT REPRESENTATIVE DATE
 NATHAN GWENS ENGINEER I
 NAME & TITLE

Dokk	9/24/2010
AEGL SITE SUPERVISOR	DATE



DATE: 9/29/2010

DRILLING		CONSTRUCTION	
103' _____	LINEAR FEET OF DRILLING	HEADER # _____	PIPE DIA. _____
0' _____	LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____	LINEAR FT. _____
103' _____	LINEAR FEET OF WELL COMPLETION	STATION _____	TRENCH DEPTH _____
82' _____	PERFORATED PIPE-DIA.	HEADER # _____	PIPE DIA. _____
24' _____	SOLID PIPE -DIA.	STATION _____	LINEAR FT. _____
COMPLETION: (WELL NUMBERS) EW 153 TD 103' 		STATION _____	TRENCH DEPTH _____
		SUBHEADER # _____	PIPE DIA. _____
		STATION # _____	LINEAR FT. _____
		LATERAL: # _____	TRENCH DEPTH _____
		STATION _____	PIPE DIA. _____
GENERAL INFORMATION WEATHER CONDITIONS _____ 		RISER HEIGHT _____	LINEAR FT. _____
		LATERAL: # _____	TRENCH DEPTH _____
		STATION _____	PIPE DIA. _____
		RISER HEIGHT _____	LINEAR FT. _____
		LATERAL: # _____	TRENCH DEPTH _____
START TIME _____ 6:00 A.M. STOP TIME _____ 4:30 P.M.		STATION _____	PIPE DIA. _____
		RISER HEIGHT _____	LINEAR FT. _____
		SUMPS _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

Arrived on site drilled 0' to 103' TD on EW 153 set and completed moved rig to top of hill cleaned up off site
project complete.

Dokk	9/29/2010
AEGL SITE SUPERVISOR	DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11/11/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
164'	LINEAR FEET OF DRILLING	HEADER # _____	PIPE DIA. _____
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____	LINEAR FT. _____
164'	LINEAR FEET OF WELL COMPLETION	STATION _____	TRENCH DEPTH _____
80'	PERFORATED PIPE-DIA.	HEADER # _____	PIPE DIA. _____
100'	SOLID PIPE -DIA.	STATION _____	LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 112s TD 41'		STATION # _____	LINEAR FT. _____
EW 113s TD 41'		STATION # _____	TRENCH DEPTH _____
EW 114s TD 41'		LATERAL: # _____	PIPE DIA. _____
EW 116s TD 41'		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____
GENERAL INFORMATION			
WEATHER CONDITIONS			
START TIME <u>7:00 A.M.</u>			
STOP TIME <u>5:30 P.M.</u>			

COMMENTS:

Arrived on site set up rig drilled 0' to 41' TD on EW 112s,113s,114s,and 116s set and completed to surface cleaned up off site.

BROWN AND OGDEN 11/11/10
CLIENT REPRESENTATIVE DATE

Dokk 11/11/2010
AEGL SITE SUPERVISOR DATE

NATHAN GURUS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11/12/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
123'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION	LINEAR FT.
123'	LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
60'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
75'	SOLID PIPE -DIA.	STATION	LINEAR FT.
		STATION	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
EW 117s TD 41'		STATION #	LINEAR FT.
EW 118s TD 41'		STATION #	TRENCH DEPTH
EW 119s TD 41'		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 7:00 A.M.		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
STOP TIME 5:30 P.M.		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

COMMENTS:

Arrived on site set up rig drilled 0' to 41' TD on EW 117s, 118s and 119s set and completed to surface cleaned up off site.

BROWN AND CALDWELL 11/12/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 11/12/2010
AEGLE SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11/15/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
104'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION	LINEAR FT.
104'	LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
83'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
23'	SOLID PIPE -DIA.	STATION	LINEAR FT.
		STATION	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
EW 146R TD 104'		STATION #	LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 7:00 A.M.		SUMPS	VALVES
STOP TIME 5:30 P.M.			

COMMENTS:

Arrived on site set up rig drilled 0' to 104' TD on EW 146 R set and completed to surface cleaned
up off site.

BROWN AND CALDWELL 11/15/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 11/15/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11/16/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
114'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT		LINEAR FT.
114'	LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
68'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
45'	SOLID PIPE -DIA.		LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
EW 150 TD 114'			
		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 7:00 A.M.		SUMPS	VALVES
STOP TIME 5:30 P.M.			

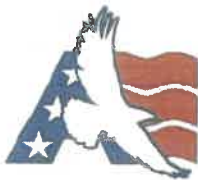
COMMENTS:

Arrived on site set up rig drilled 0' to 114' TD on EW 150 set and completed to surface cleaned
up off site.

BROWN AND CALDWELL 11/16/10
CLIENT REPRESENTATIVE DATE

Dokk 11/16/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11/18/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
132' LINEAR FEET OF DRILLING		HEADER # _____	PIPE DIA. _____
0' LINEAR FEET OF DRILLING-ABANDONMENT		STATION _____	LINEAR FT. _____
132' LINEAR FEET OF WELL COMPLETION		STATION _____	TRENCH DEPTH _____
97' PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
34' SOLID PIPE -DIA.		STATION _____	LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 149 TD 132'		STATION # _____	LINEAR FT. _____
		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

COMMENTS:

Arrived on site set up rig drilled 0' to 132' TD on EW 149 set and completed to surface cleaned
up off site.

BROWN AND CALDWELL 11/18/10
CLIENT REPRESENTATIVE DATE

Dokk 11/18/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIVONS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11/19/2010

PROJECT NAME Lorain 3.2

PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
127'	LINEAR FEET OF DRILLING	HEADER # _____	PIPE DIA. _____
31'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____	LINEAR FT. _____
127'	LINEAR FEET OF WELL COMPLETION	STATION _____	TRENCH DEPTH _____
105'	PERFORATED PIPE-DIA.	HEADER # _____	PIPE DIA. _____
28'	SOLID PIPE -DIA.	STATION _____	LINEAR FT. _____
COMPLETION: (WELL NUMBERS)		STATION _____	TRENCH DEPTH _____
EW 307 TD 64'		SUBHEADER # _____	PIPE DIA. _____
EW 308 TD 63'		STATION # _____	LINEAR FT. _____
		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
GENERAL INFORMATION		LATERAL: # _____	PIPE DIA. _____
WEATHER CONDITIONS		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
START TIME <u>7:00 A.M.</u>		SUMPS _____	VALVES _____
STOP TIME <u>4:30 P.M.</u>			

COMMENTS:

Arrived on site set up rig drilled 0' to 63' TD on EW 308 set and completed to surface moved rig to EW 307
drilled 0' to 64' TD set and completed to surface moved rig to EW 311 drilled 0' to 31' hit obstruction abandoned well cleaned up off site.

BROWN AND CALDWELL 11/19/10
CLIENT REPRESENTATIVE DATE

Dokk 11/19/2010
AEGL SITE SUPERVISOR DATE

NATHAN GUENS ENGINEER
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11/29/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
110'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION	LINEAR FT.
110'	LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
89'	PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
23'	SOLID PIPE -DIA.	STATION	LINEAR FT.
		STATION	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
EW 52R2 TD 110'		STATION #	LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 7:00 A.M.		SUMPS	VALVES
STOP TIME 5:30 P.M.			

COMMENTS:

Arrived on site set up rig drilled 0' to 110' TD on EW 52 R 2 set and completed to surface moved rig to EW 304
hit obstruction on EW 52 R 2 set at 110' cleaned up off site.

BROWN AND CALDWELL 12/29/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER 2
NAME & TITLE

Dokk 11/29/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11/30/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
0' LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
0' LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
0' PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
0' SOLID PIPE -DIA.			LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

COMMENTS:

Arrived on site rained out.

BROWN AND CALDWELL 11/30/10
CLIENT REPRESENTATIVE DATE
NATHAN GIENS ENGINEER I
NAME & TITLE

Dokk 11/30/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12/1/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
111'	LINEAR FEET OF DRILLING	HEADER # _____	PIPE DIA. _____
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____	LINEAR FT. _____
111'	LINEAR FEET OF WELL COMPLETION	STATION _____	TRENCH DEPTH _____
89'	PERFORATED PIPE-DIA.	HEADER # _____	PIPE DIA. _____
28'	SOLID PIPE -DIA.	STATION _____	LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 304 TD 48'		STATION # _____	LINEAR FT. _____
EW 312 TD 63'		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
GENERAL INFORMATION		LATERAL: # _____	PIPE DIA. _____
WEATHER CONDITIONS		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
START TIME <u>7:00 A.M.</u>		LATERAL: # _____	PIPE DIA. _____
STOP TIME <u>5:30 P.M.</u>		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

COMMENTS:

Arrived on site rigged up on EW 304 drilled 0' to 48' set and completed moved rig to EW 312 drilled 0' to 63' TD set and completed to surface moved rig done drilling at 1:00 no wells stacked out 2.5 hours lost.

BROWN AND CROWELL 12/1/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS INTEGRITY
NAME & TITLE

Dokk 12/1/2010
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12/2/2010

PROJECT NAME Lorain 3.2

PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
0' LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
0' LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
0' PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
0' SOLID PIPE -DIA.			LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 7:00 A.M.		SUMPS	VALVES
STOP TIME 5:30 P.M.			

COMMENTS:

Arrived on site no wells staked out 8 hrs cleaned up laydown off site.

BROWN AND CALDWELL 12/2/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 12/2/2010
AEGLE SITE SUPERVISOR DATE

DAILY DIARY

DATE: 12/3/2010

PROJECT NAME	Lorain 3.2
PROJECT#	101-10-124

DRILLING		CONSTRUCTION	
79' _____	LINEAR FEET OF DRILLING	HEADER # _____	PIPE DIA. _____
0' _____	LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____	LINEAR FT. _____
79' _____	LINEAR FEET OF WELL COMPLETION	TRENCH DEPTH _____	
68' _____	PERFORATED PIPE-DIA.	HEADER # _____	PIPE DIA. _____
14' _____	SOLID PIPE -DIA.	STATION _____	LINEAR FT. _____
		TRENCH DEPTH _____	
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 305 TD 79'		STATION # _____	LINEAR FT. _____
		TRENCH DEPTH _____	
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
GENERAL INFORMATION		LATERAL: # _____	PIPE DIA. _____
WEATHER CONDITIONS		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
START TIME _____ 7:00 A.M.		SUMPS _____	VALVES _____
STOP TIME _____ 5:30 P.M.			

COMMENTS:

Arrived on site rigged up on EW 305 drilled 0' to 79' TD set and completed to surface moved rig to EW 302 built benches for EW 302,311 and 301 total 5 hrs cleaned up off site

BROWN AND CROWELL 12/3/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I

Dokk	12/3/2010
AEGL SITE SUPERVISOR	DATE



DAILY DIARY

DATE: 12/6/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
141'	LINEAR FEET OF DRILLING	HEADER #	PIPE DIA.
0'	LINEAR FEET OF DRILLING-ABANDONMENT	STATION	LINEAR FT.
141'	LINEAR FEET OF WELL COMPLETION	HEADER #	TRENCH DEPTH
119'	PERFORATED PIPE-DIA.	STATION	PIPE DIA.
28'	SOLID PIPE -DIA.	STATION	LINEAR FT.
COMPLETION: (WELL NUMBERS)		SUBHEADER #	TRENCH DEPTH
EW 302	TD 84'	STATION #	PIPE DIA.
EW 303	TD 57'	STATION #	LINEAR FT.
		LATERAL: #	TRENCH DEPTH
		STATION	PIPE DIA.
		RISER HEIGHT	LINEAR FT.
		LATERAL: #	TRENCH DEPTH
		STATION	PIPE DIA.
		RISER HEIGHT	LINEAR FT.
		LATERAL: #	TRENCH DEPTH
		STATION	PIPE DIA.
		RISER HEIGHT	LINEAR FT.
		LATERAL: #	TRENCH DEPTH
		STATION	PIPE DIA.
		RISER HEIGHT	LINEAR FT.
		SUMPS	VALVES

COMMENTS:

Arrived on site riged up on EW 302 drilled 0' to 84' TD set and completed to surface moved rig to EW 303 drilled 0' to 57' TD set and completed to surface moved rig to EW 306 cleaned up off site.

BROWN AND CHADWELL 12/6/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 12/6/2010
AEGL SITE SUPERVISOR DATE



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DAILY DIARY

DATE: 12/7/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
88' LINEAR FEET OF DRILLING		HEADER # _____	PIPE DIA. _____
0' LINEAR FEET OF DRILLING-ABANDONMENT		STATION _____	LINEAR FT. _____
88' LINEAR FEET OF WELL COMPLETION		STATION _____	TRENCH DEPTH _____
77' PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
14' SOLID PIPE -DIA.		STATION _____	LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 306 TD 88'		STATION # _____	LINEAR FT. _____
		STATION # _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

COMMENTS:

Arrived on site rigged up on EW 306 drilled 0' to 88' TD set and completed to surface moved rig to EW 311 rigged up
had to shut down at 12:30 due to site making us wait in line at face 3 hrs lost cleaned up off site

BROWN AND CALDWELL 12/7/10
CLIENT REPRESENTATIVE DATE

Dokk 12/7/2010
AEGLE SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



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DAILY DIARY

DATE: 12/8/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
64' LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
64' LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
53' PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
14' SOLID PIPE -DIA.			LINEAR FT.
		STATION	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
EW 311 TD 64'			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 7:00 A.M.		SUMPS	VALVES
STOP TIME 5:30 P.M.			

COMMENTS:

Arrived on site rigged up on EW 311 drilled 0' to 64' TD set and completed to surface moved rig to EW 301
had to shut down at 11:30 to build road to EW 309 and 310 5 hrs cleaned up off site.

BROWN AND ORRILL 12/8/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVEN ENGINEER I
NAME & TITLE

Dokk 12/8/2010
AEGL SITE SUPERVISOR DATE



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DAILY DIARY

DATE: 12/9/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
69' LINEAR FEET OF DRILLING		HEADER # _____	PIPE DIA. _____
0' LINEAR FEET OF DRILLING-ABANDONMENT		STATION _____	LINEAR FT. _____
69' LINEAR FEET OF WELL COMPLETION			TRENCH DEPTH _____
58' PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
14' SOLID PIPE -DIA.		STATION _____	LINEAR FT. _____
			TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
EW 301 TD 69'		STATION # _____	LINEAR FT. _____
			TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____
GENERAL INFORMATION			
WEATHER CONDITIONS			
START TIME <u>7:00 A.M.</u>			
STOP TIME <u>5:30 P.M.</u>			

COMMENTS:

Arrived on site rigged up on EW 301 drilled 0' to 69' TD set and completed to surface moved rig to EW 310
had to shut down at 12:30 to build road to EW 309 and 310 5 hrs cleaned up off site.

BROWN AND CALDWELL 12/9/10
CLIENT REPRESENTATIVE DATE

Dokk 12/9/2010
AEGLE SITE SUPERVISOR DATE

NATHAN GUNES ENGINEER I
NAME & TITLE



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DAILY DIARY

DATE: 12/10/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
67' LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
0' LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
67' LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
56' PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
14' SOLID PIPE -DIA.			LINEAR FT.
		STATION	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
EW 310 TD 67'			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

COMMENTS:

Arrived on site rigged up on EW 310 drilled 0' to 67' TD set and completed to surface moved rig to top of hill
had to shut down to build road to EW 309 5 hrs cleaned up off site.

BROWN AND CALDWELL 12/10/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 12/10/2010
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DAILY DIARY

DATE: 12/11/2010

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DRILLING		CONSTRUCTION	
55' LINEAR FEET OF DRILLING		HEADER # _____	PIPE DIA. _____
0' LINEAR FEET OF DRILLING-ABANDONMENT		STATION _____	LINEAR FT. _____
55' LINEAR FEET OF WELL COMPLETION		STATION _____	TRENCH DEPTH _____
44' PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
14' SOLID PIPE -DIA.		STATION _____	LINEAR FT. _____
COMPLETION: (WELL NUMBERS)		STATION _____	TRENCH DEPTH _____
EW 309 TD 55'		SUBHEADER # _____	PIPE DIA. _____
		STATION # _____	LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

COMMENTS:

Arrived on site rigged up on EW 309 drilled 0' to 55' TD set and completed to surface moved rig off of hill got ready to move out cleaned up off site project complete.

BROWN AND CALDWELL 12/11/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 12/11/2010
AEGL SITE SUPERVISOR DATE



**American
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DAILY DAIRY

DATE: 9-8-10 Wed.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	Header #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
SOLID PIPE -DIA.	STATION	LINEAR FT.
		TRENCH DEPTH
	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
MATERIAL USED THIS DAY	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
WEATHER CONDITIONS	8"x 4" Forcemain	PIPE DIA.
<u>Clear/Sunny</u>	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
START TIME <u>7:00 AM</u>	8"x 4" Forcemain	PIPE DIA.
STOP TIME <u>5:30 PM</u>	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH

COMMENTS:

Today we mobed in on site, and had 8:00AM construction meeting with Chris Jaquet and Richard Kostelnick from site also there was Nate Givens from Brown & Caldwell the QC. After meeting was over we had equipment show up and are pipe and fittings come in. We then started fusing up pipe, and laying out work to be done by putting in pin flag's on 2" air & force main we also looked at new redrills for are laterals. We took inventory on pipe and fittings and also guys all read and signed Health & Safety plan for job.

BROWN AND CALDWELL 9/8/10
CLIENT REPRESENTATIVE DATE

Billy Brown 9/8/2010
AEGL SITE Supervisor DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



DAILY DAIRY

DATE: 9-9-10

PROJECT NAME Lorain County L/F
PROJECT# 202-10-133

Thur.

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL EW-26R	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT 5'	LINEAR FT. 33'
LINEAR FEET OF WELL COMPLETION	STATION 0+00 to 0+33	TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL EW-115R	PIPE DIA. 6"
SOLID PIPE -DIA.	RISER HEIGHT 6'	LINEAR FT. 28'
	STATION 0+00 to 0+26	TRENCH DEPTH 3>4
	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
MATERIAL USED THIS DAY	2" Air EW-116	PIPE DIA. 2"
	RISER HEIGHT 8'	LINEAR FT. 199'
	STATION 0+00 to 1+99	TRENCH DEPTH 3>4
GENERAL INFORMATION	4" Air	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
Clear/Sunny	STATION	TRENCH DEPTH
START TIME 7:00 AM	2" FORCE MAIN EW-116	PIPE DIA. 2"
STOP TIME 6:30 PM	RISER HEIGHT 8'	LINEAR FT. 199'
	STATION 0+00 to 1+99	TRENCH DEPTH 3>4
	TIE IN'S 2	PIPE DIA. 6"
	EW-26R EW-115R 2-HOURS EACH	TOTAL HOURS 4

COMMENTS:

Today we started with are safety meeting then went over the hill and started exposing tie in point for EW-26R. After we exposed tie in we trenched the lateral and then tied in line from EW-26 to EW-26R. We then shot in pipe it all shot in at 3% or more grade. We then set survey risers at tie in point and at the well also rolled caution tape though trench and finished back filling. While we were finishing back filling we were also digging up tie in point for EW-115R. After we finished trenching the lateral for EW-115R we tied in into vacuum source from EW-115 with a 6" 90 elbow QC said it was alright to tie in to 6" tee with a 6" EFC. After we tied in lateral we shot the pipe and it all shot in at 3% or more grade. So we started back filling trench we set survey risers at every fitting. Then rolled caution tape down trench line. WE also abandon two wells they were EW-26 and EW-115. We abandon them with a 6" slip cap and lag screws also put silicone around it. After that we dug up tie in point For EW-116 so we could get air and force main to the well. We located it and trenched the lateral. After it was trench we put pipe in trench and put air test on it. Then found out Air test had to be on for 4 hours there for we had to wait till tomorrow morning to tie in the air and force main. So we went up on the hill and started fusing 2" pipe. We then wrapped things up and left for the day. We spent 2 hours on EW-26R and EW-115R

BROWN AND CALDWELL 9/9/10
CLIENT REPRESENTATIVE DATE
NATHAN GUKUS ENGINEER I
NAME & TITLE

Billy Brown 9/9/2010
AEGE SITE SUPERVISOR DATE



American
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DAILY DAIRY

DATE: 9-10-10 FR.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
MATERIAL USED THIS DAY	2" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	4" Air	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
<u>Clear/Sunny</u>	STATION	TRENCH DEPTH
START TIME <u>7:00 AM</u>	2" FORCE MAIN	PIPE DIA.
STOP TIME <u>6:30 PM</u>	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2. TIE IN's <u>1- Air @ 1. Force</u>	PIPE DIA. <u>2"</u>
	<u>2</u> TOTAL HOURS	

COMMENTS:

After air test was past we began working on tie inn's we made 2" air tying in to 2" line with 1-2" tee we then tied into 4" force main with 1- 4" tee and 1-4x2 reducer. This tie in was made for EW-116 we then began exposing at EW-165R on liner to extend 6" lateral we also exposed around EW-165 for abandonment. We then went to EW-166R and EW-166 and dug up and exposed, for abandonment and extend lateral. We then went to 73R and to EW-163R and exposed using same procedures, we also was fuesing all 4- laterals and putting them on air test to install. Air test has to be left on for 4- Hours so we will have to make are tie inn's on Saturday we will not have time to do today. We also made up fittings and took measurements for 2" air and force main lines.

BROWN AND CALDWELL 9/10/10
CLIENT REPRESENTATIVE DATE

Billy Brown 9/10/2010
AEGL SITE SUPERVISOR DATE

NATHAN GUNNS ENGINEER E
NAME & TITLE



American
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DAILY DAIRY

DATE: 9-11-10
SAT.

PROJECT NAME Lorain County L/F
PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL EW-165R	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT 6'	LINEAR FT. 28'
LINEAR FEET OF WELL COMPLETION	STATION 0+0 to 0+28	TRENCH DEPTH 4"
PERFORATED PIPE-DIA.	LATERAL EW-166R	PIPE DIA. 6"
SOLID PIPE -DIA.	RISER HEIGHT 6'	LINEAR FT. 21'
	STATION 0+0 to 0+21	TRENCH DEPTH 4'
	LATERAL EW-73R	PIPE DIA. 6"
	RISER HEIGHT 6'	LINEAR FT. 21'
	STATION 0+0 to 0+21	TRENCH DEPTH 4'
	LATERAL EW-163R	PIPE DIA. 6"
	RISER HEIGHT 6'	LINEAR FT. 18'
	STATION 0+0 to 0+1	TRENCH DEPTH 4'
	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	WELL ABANDONMENTS EW-165 EW-166	
	EW-73 EW-163	
	4 abandonment's	
	4- TIE IN's 6" Laterals	PIPE DIA. 6"
	5.5	TOTAL HOURS
GENERAL INFORMATION		
WEATHER CONDITIONS		
Clear/Sunny		
START TIME 7:00 AM		
STOP TIME 6:30 PM		

COMMENTS:

Today we had 4-well abandonment's using 4-6" slip caps and silicone on caps we also put clamps back around liner boots at old wells. We then made are tie inn's at new 6" red rills into existing 6" lines, we shot all pipe at each tie in point for grade assurance. All 6" laterals had 3% or better we then put survey risers at fittings put in lift of dirt and ran caution tape and finished back filling are laterals and dressed up. We still had to leave new re drills open for liner repair and boots we caution taped of holes, all laterals were air tested and past by QC before we installed. We then started working on 2" air and force main lines to be installed we also put air test on 2" lines for Monday we finished up test and it started to ran we left site for day.

BROWN AND CALDWELL 9/11/10
CLIENT REPRESENTATIVE DATE

NATHAN GUENS SUPERVISOR I
NAME & TITLE

Billy Brown 9-11-10
AEG SITE SUPERVISOR DATE



American
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DAILY DAIRY

DATE: 9-13-10 MON.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	LATERAL <u>EW-133 to EW-7R to</u> PIPE DIA. <u>2" SDR-9</u>
LINEAR FEET OF DRILLING-ABANDONMENT	LATERAL <u>EW-125</u> LINEAR FT. <u>414</u>
LINEAR FEET OF WELL COMPLETION	STATION <u>0+0 to 4+14</u> TRENCH DEPTH <u>3>4</u>
PERFORATED PIPE-DIA.	LATERAL <u>EW-133 to EW-7R to</u> PIPE DIA. <u>2" SDR-11</u>
SOLID PIPE -DIA.	LATERAL <u>EW-125</u> LINEAR FT. <u>414</u>
	STATION <u>0+0 to 414</u> TRENCH DEPTH <u>3>4</u>
	LATERAL _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
MATERIAL USED THIS DAY	LATERAL _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
GENERAL INFORMATION	2" TIE IN <u>1</u> PIPE DIA. <u>2" tee</u>
WEATHER CONDITIONS	STATION <u>4+14</u> TRENCH DEPTH <u>4'</u>
<u>Clear/Sunny</u>	
START TIME <u>7:00 AM</u>	4" TIE IN <u>1</u> PIPE DIA. <u>4" tee</u>
STOP TIME <u>7:00 PM</u>	STATION <u>4+14</u> TRENCH DE <u>4'</u>
	TOATL HOURS AT TIE IN <u>2</u>

COMMENTS:

Today we worked on 2" air and force main from EW-133 to tie in point at 4+14 after we located tie in we began trenching on line.

After trenching line we installed air and force main and installed 2-2" tees at EW-7R with 2" riser's at well, we then installed 2-more

tees at EW-125 and risers. We also made 2" tie in with 1- 2"tee and made tie in at 4" with 1-4" tee and 1-4x2 reducer. We then set

riser pipe for survey back filled and ran caution tape and dressed up on 2" line we then left site for the day.

BROWN AND CALDWELL 9/13/10
CLIENT REPRESENTATIVE DATE

NATHAN GIBENS ENGINEER T
NAME & TITLE

Billy Brown 9-13-10
AEG L SITE SUPERVISOR DATE



**American
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DAILY DAIRY

DATE: 9-14-10

Tues.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	2" Air/Force EW-124	PIPE DIA. 2"
LINEAR FEET OF DRILLING-ABANDONMENT	2-2" lines	LINEAR FT. 150'
LINEAR FEET OF WELL COMPLETION	STATION 0+0 to 0+75	TRENCH DEPTH 3>4
PERFORATED PIPE-DIA.	2" Air / Force EW-35R	PIPE DIA. 2"
SOLID PIPE -DIA.	2-2" lines	LINEAR FT. 300'
	STATION 0+0 to 1+50	TRENCH DEPTH 3>4
	2" AIR LINE	PIPE DIA.
		LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
		LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	2" AIR LINE TIE IN 2	PIPE DIA. 2" tees
WEATHER CONDITIONS		TRENCH DEPTH 3>4
Clear/Sunny	4" FORCE MAIN TIE IN 2	PIPE DIA. 4" tee
		TRENCH DEPTH 3>4
START TIME 7:00 AM	HOURS to Locate 3	PIPE DIA. 2" & 4"
STOP TIME 8:00 PM	HOURS to tie in 2	

COMMENTS:

Today we held safety meeting and started digging up at tie in point for EW-124 survey's had stacked for air and force main, after we located line and air test was past we installed line. We used 1-2" tee and 1-4" tee at tie in point with 2" risers at well for EW-124. We then moved to EW-35R to dig up and find tie in point, after we located we trenched line and installed 2" air and force main lines. After air test was passed on EW-35R we made tie in with 1-2" tee and 1-4" tee put in survey risers on both lines ran caution tape, and back filled on the two lines and dressed up finished out day and left site.

BROWN AND CALDWELL 9/14/10
CLIENT REPRESENTATIVE DATE

Billy Brown 9-14-10
AEGL SITE Supervisor DATE

NATHAN GUNNIS SUPERVISOR I
NAME & TITLE



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DAILY DAIRY

DATE: 9-15-10

Wed.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	LATERAL EW-45R PIPE DIA. 4"
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT 6' LINEAR FT. 25'
LINEAR FEET OF WELL COMPLETION	STATION 0+0 to 0+25 TRENCH DEPTH 3>4
PERFORATED PIPE-DIA.	LATERAL EW-38R PIPE DIA. 4"
SOLID PIPE -DIA.	RISER HEIGHT 6' LINEAR FT. 21'
	STATION 0+0 to 0+21 TRENCH DEPTH 3>4
	LATERAL EW-124R PIPE DIA. 6"
	RISER HEIGHT 6' LINEAR FT. 18'
	STATION 0+0 to 0+ TRENCH DEPTH 3>4
MATERIAL USED THIS DAY	LATERAL 125R PIPE DIA. 6"
	RISER HEIGHT 6' LINEAR FT. 16'
	STATION 0+0 to 0+16 TRENCH DEPTH 3>4
GENERAL INFORMATION	ABANDONMENT EW-125 EW-124 PIPE DIA. 6"
WEATHER CONDITIONS	EW-38 EW-45
Clear/Sunny	ABANDONMENT 1 4" RISER
	6" & 4" TIE IN's 2. 6" 2. 4" PIPE DIA. 6" & 4"
START TIME 7:00 AM	TOTAL HOURS 8
STOP TIME 6:00 PM	

COMMENTS:

Today we had safety meeting and made 2-6" tie ins and 2-4" tie ins and 4-6" well abandonment's along with 1-6" riser all wells were 4 foot below grade level with 6" slip caps silicone and lag screwed. 6" riser had 6" butt cap fused on to existing riser for vacuum.

All tie ins were made after Nate QC had past air test and notified gas plant of tie ins that were being done and which ones.

After all new wells went back on line Nate let gas plant know so they could make there adjustments in gas field we then finished with installing survey risers rolling out caution tape and back filling all new laterals we put in, and finished dess up on lines.

BROWN AND CALDWELL 9/15/10
CLIENT REPRESENTATIVE DATE
NATHAN GUEWS ENGINEER 2
NAME & TITLE

Billy Brown 9-15-10
AEGL SITE Supervisor DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 9-16-10

Thur.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	Header #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	Header #	PIPE DIA.
SOLID PIPE -DIA.	STATION	LINEAR FT.
		TRENCH DEPTH
	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
MATERIAL USED THIS DAY	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	8"x 4" Forcemain	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
Clear/Sunny	STATION	TRENCH DEPTH
	8"x 4" Forcemain	PIPE DIA.
START TIME 7:00 AM	RISER HEIGHT	LINEAR FT.
STOP TIME 9:00 AM	STATION	TRENCH DEPTH

COMMENTS:

Today we had are safety meting, and loaded tools and hauled 1- load of dirt and it began to rain Dokk and myself talked with, Nate and decided that it would be best to call a rain day because of more ran coming through for rest of day.

Brown and Calowell 9/16/10
CLIENT REPRESENTATIVE DATE

Billy Brown 9-16-10
AEGL SITE Supervisor DATE

Nathan Owens SARGINTOR I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9-17-2010 fri

PROJECT NAME Lorain County
PROJECT# 202-10-121

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		LATERAL	PIPE DIA.
		STATION	LINEAR FT.
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT	TRENCH DEPTH
		LATERAL	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
PERFORATED PIPE-DIA.		RISER HEIGHT	TRENCH DEPTH
		LATERAL	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		LATERAL	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL	
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION			
WEATHER CONDITIONS			
Sunny/cloudy			
START TIME <u>7:00 A.M.</u>			
STOP TIME <u>6:30 P.M.</u>			

COMMENTS: Today we held safety meeting and then started trenching around well EW #7. We trenched a new trench and used the old 6" lateral. We then trenched from tie-in to EW 34R2 on the air and forcemain. While we were at EW 34R2 we dug up around the vacuum riser to see what we are going to tie into when we run a new 6" lateral to EW10R. We also raised well #129 8 feet as well as the vacuum riser and the air and forcemain lines. We also extended the hose and cable on the pump that we had pulled out and made sure that the pump was pumping after reinstalling it. Total hours on rasing the well and pump was 4 hours T&M. We started exposing around EW-35 and found a 6" slip cap on an old well abandonment that was broken and replaced it, also using screws and silicone and Nate told us to backfill it and we could use old riser for EW-55. We had dug down 5 to 6 feet and found an electro coupling on the vacuum riser so we didn't dig any deeper.

BROWN AND CALDWELL 9/17/10
CLIENT REPRESENTATIVE DATE

Billy Brown 9/17/2010
AEGL SITE SUPERVISOR DATE

NATHAN GWENS OWNER 2
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9-18-10 sat.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-133

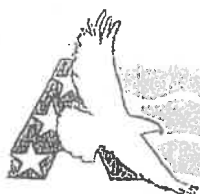
DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	LATERAL EW-34R2 to EW-10R PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT	STATION 0+00 to 2+42 LINEAR FT. 242'
LINEAR FEET OF WELL COMPLETION	RISER HEIGHT 6' TRENCH DEPTH 3'
PERFORATED PIPE-DIA.	LATERAL EW-155 PIPE DIA. 6"
SOLID PIPE -DIA.	RISER HEIGHT 6' LINEAR FT. 126'
COMPLETION: (WELL NUMBERS)	STATION 0+00 to 1+26 TRENCH DEPTH 3'
	AIR EW-155 PIPE DIA. 2"
	FORCEMAIN EW-155 LINEAR FT. 336'
	STATION # 0+00 to 1+68 TRENCH DEPTH 3'
	AIR EW-10R PIPE DIA. 2"
	FORCEMAIN EW-10R LINEAR FT. 484'
	STATION 0+00 to 2+42 TRENCH DEPTH 3'
GENERAL INFORMATION	LATERAL: # PIPE DIA.
WEATHER CONDITIONS	STATION LINEAR FT.
sunny	RISER HEIGHT TRENCH DEPTH
	LATERAL: # PIPE DIA.
	STATION LINEAR FT.
	RISER HEIGHT TRENCH DEPTH
START TIME 7:00 A.M.	SUMPS
STOP TIME 7:00 P.M.	VALVES

COMMENTS:

Today we started trenching the new 6" lateral from EW-34R2 to EW-10R for vacuum. We made the tie in at 8 am and also installed 2" air and forcemain in the same trench. We then dug a new trench for the 6" lateral from EW-35R to the existing 6" tee that we had lowered to get below grade for final cover. We then trenched from the 24" header to well EW-155 and installed the 6" lateral as a down slope well tying it in the well using a 6" tee. We installed 2" air and forcemain to EW-155 using the 2 trenches as they were connected. The 2" air and forcemain totalled to 168' and were tied in at well EW-35R all trenches were backfilled and caution tape installed.

BRENN AND CULDWELL 9/18/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Darren Goodhart 9/18/2010
AEG SITE FOREMAN DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9-20-10 mon.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	2" air tie in toward EW-138 PIPE DIA. 2"
LINEAR FEET OF DRILLING-ABANDONMENT	2" forcemain LINEAR FT. 800'
LINEAR FEET OF WELL COMPLETION	STATION 0+00 to 4+00 TRENCH DEPTH 3'
PERFORATED PIPE-DIA.	Air tie in to EW-36R PIPE DIA. 2"
SOLID PIPE -DIA.	forcemain same LINEAR FT. 13'
COMPLETION: (WELL NUMBERS)	STATION 0+00 to 0+13 TRENCH DEPTH 3'
	SUBHEADER # PIPE DIA.
	STATION # LINEAR FT.
	LATERAL: # PIPE DIA.
	STATION LINEAR FT.
	RISER HEIGHT TRENCH DEPTH
	LATERAL: # PIPE DIA.
	STATION LINEAR FT.
	RISER HEIGHT TRENCH DEPTH
	LATERAL: # PIPE DIA.
	STATION LINEAR FT.
	RISER HEIGHT TRENCH DEPTH
	SUMPS VALVES
GENERAL INFORMATION	
WEATHER CONDITIONS	
sunny	
START TIME 7:00 A.M.	
STOP TIME 10:30 P.M.	

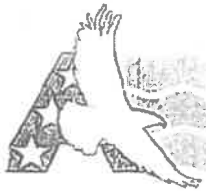
COMMENTS: Today we started digging to find the air & forcemain tie in point. The tie in point for the 2" air and 4" was 150' away from the survey stakes and took 4 hours to find. We also fabled up and air tested 6" laterals for EW-148 and EW-82R. We trenched the 2" air and forcemain from the tie in point toward well EW-138 we installed 400'. We also trenched the air and forcemain from the tie in point to EW-36R which was 13', all of the trenches were backfilled and caution tape installed.

Parts Used: 2-4" tee's, 2-2" tee's, 2-2" 90's, 2-4x2 reducers, 2-2x1 reducers, 2-1" trans. Fittings.

BROWN AND CALDWELL 9/20/10
CLIENT REPRESENTATIVE DATE

Darren Goodhart 9/20/2010
AEGLE SITE FOREMAN DATE

NATHAN GIVENS SUPERVISOR
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9-21-10 tues

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-133

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		LATERAL EW-148	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT 6'	LINEAR FT. 150'
LINEAR FEET OF WELL COMPLETION		STATION 0+00 to 1+50	TRENCH DEPTH 3'
PERFORATED PIPE-DIA.		LATERAL EW-82R	PIPE DIA. 6"
SOLID PIPE -DIA.		RISER HEIGHT 6'	LINEAR FT. 40'
		STATION 0+00 to 0+40	TRENCH DEPTH 2.5'
COMPLETION: (WELL NUMBERS)		AIR EW-82R	PIPE DIA. 2"-4X2 DC
		FORCEMAIN EW82R	LINEAR FT. 74'
		STATION # 0+00 TO 0+74	TRENCH DEPTH 2.5'
		AIR EW-138	PIPE DIA. 2"
		FORCEMAIN EW-138	LINEAR FT. 228'
		RISER HEIGHT 6'	TRENCH DEPTH 3'
		CMP LATERAL: # 12"	PIPE DIA. 12"
		STATION 0+0 TO 20	LINEAR FT. 20'
		RISER HEIGHT	TRENCH DEPTH 3'74"
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES
GENERAL INFORMATION			
WEATHER CONDITIONS			
sunny			
START TIME 7:00 A.M.			
STOP TIME 7:00 P.M.			

COMMENTS:

Today we trenched on 6" lateral EW-82R and EW-148 as well as EW-142R. We also trenched the air and forcemain from the tie-in point to well EW-82R which was a separate trench going down hill. We had installed the air and forcemain and made the tie in at that time this was done with air being 2" pipe and the forcemain being dual contain 4x2 pipe. The lateral that was installed on EW-148 had been buried to station 1+50 as we could not make the tie in due to the gas plant saying we could the day prior. We also had dug up test holes at well EW-144R to find the liner due to the grade was going the wrong direction and Nate wanted to wait till tomorrows meeting for a decision. We also had finished the air and forcemain trench to EW-138 which was another 114 feet. We also pre-fabed the 2" A&F valves for a future tie-in.

BROWN AND CALDWELL 9/21/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Darren Goodhart 9/21/2010
AEG SITE FOREMAN DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9-22-10 wed.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-133

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT		STATION	LINEAR FT.
LINEAR FEET OF WELL COMPLETION			TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
			TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
		STATION #	LINEAR FT.
			TRENCH DEPTH
		LATERAL: # EW-148	PIPE DIA. 6"
		STATION 1+50 to 1+57	LINEAR FT. 7'
		RISER HEIGHT	TRENCH DEPTH 3'
		LATERAL: # EW-142R	PIPE DIA. 6"
		STATION 0+00 to 0+18	LINEAR FT. 18'
		RISER HEIGHT 6'	TRENCH DEPTH 2.5'
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES
GENERAL INFORMATION			
WEATHER CONDITIONS cloudy			
START TIME 7:00 A.M.			
STOP TIME 6:30 P.M.			

COMMENTS:

Today we started by preping for tie-ins at EW-148,EW-82R and EW-142R as well as digging up tie-in points for air and forcemain valves. Dean and I went to the construction meeting at 8 am and mentioned to Chris that well #144R needed the lateral changed to a down slope for the grade was going the wrong way which he had ok'ed. Chris had asked if we could run air and forcemain to well EW-90R instead of 100R ^{AIR} he also asked if we could fix 3 man hole pumps LS1,LS2,and LS3 as soon as they got the details. After the meeting we started the tie-in at EW-148, and EW-142 which took an hour a piece as well as 45 min's to an hour for the gas plant to close valves with prior notice. Eric dug up LR-5 cause the site thought the saddle was broken , though it was not and Nate had checked it, this took 2 hours. We also dug up the tie in points for the air and forcemain valves for tomorrows air test.

BROWN AND CALDWELL 9/22/10
CLIENT REPRESENTATIVE DATE

Darren Goodhart 9/22/2010
AEGL SITE FOREMAN DATE

NATHAN GOWENS SUPERVISOR
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9-23-10 thurs.

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-133

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		WELL # <u>EW-10R</u>	PUMP S.N. # <u>4-1834</u>
LINEAR FEET OF DRILLING-ABANDONMENT		DEPTH <u>111'</u>	
LINEAR FEET OF WELL COMPLETION		WELL# <u>EW-35R</u>	PUMP S.N. # <u>4-1818</u>
PERFORATED PIPE-DIA.		DEPTH <u>89'</u>	
SOLID PIPE -DIA.		WELL # <u>EW-125R</u>	PUMP S.N. # <u>4-1821</u>
		DEPTH <u>76'</u>	
COMPLETION: (WELL NUMBERS)		WELL # <u>EW-7R</u>	PUMP S.N. # <u>4-1829</u>
		DEPTH <u>95'</u>	
		LATERAL: # <u>EW-144R</u>	PIPE DIA. <u>6"</u>
		STATION <u>0+00 to 0+61</u>	LINEAR FT. <u>61'</u>
		RISER HEIGHT <u>6'</u>	TRENCH DEPTH <u>3'</u>
		AIR <u>EW-144R</u>	PIPE DIA. <u>2", 4x2"</u>
		FORCEMAIN <u>EW-144R</u>	LINEAR FT. <u>122'</u>
		STATION <u>0+00 to 0+61</u>	TRENCH DEPTH <u>3'</u>
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES
GENERAL INFORMATION			
WEATHER CONDITIONS			
<u>sunny</u>			
START TIME <u>7:00 A.M.</u>			
STOP TIME <u>8:00 P.M.</u>			

COMMENTS:

Today we started air testing the 2" valves for air and forcemain at well's EW-125R and EW-34R2 after the air test had passed we then tied them in. We also trenched on laterals EW-100R and EW-2BR for tie-ins on Friday. We also dug a trench for well EW-144R that we tied in and ran it at 3% grade as a down slope well this lateral was 61 feet long and had 20 feet of 12" CMP put over it since it was in a road crossing. We also started putting pumps on well's EW-10R2, EW-35R, EW-125R, and EW-7R. Nate had measured the well depth and told us what level he want the pumps set at. We also moved the lateral and A&F closer to well EW-10R as it was drilled 6' away from the riser. All trenches and holes were backfilled and cleaned up and we put a well head on EW-155 to tie it in. We also fabed up the 6" laterals and air tested for laterals EW-100R and EW-2BR. Nate also asked if we could check out wells 227, and 126R that are not

pumping BROWN AND CROWELL 9/23/10
CLIENT REPRESENTATIVE DATE

Darren Goodhart 9/23/2010
AEGL SITE FOREMAN DATE

NATHAN GIVENS TRAINING I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 9-24-10 fri

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	AIR <u>EW-53R</u> PIPE DIA. <u>2"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	FORCEMAIN <u>0+00 to 2+14</u> LINEAR FT. <u>428'</u>
LINEAR FEET OF WELL COMPLETION	TRENCH DEPTH <u>3'</u>
PERFORATED PIPE-DIA.	AIR <u>EW-58R</u> PIPE DIA. <u>2"</u>
SOLID PIPE -DIA.	FORCEMAIN <u>0+00 to 2+00</u> LINEAR FT. <u>400'</u>
COMPLETION: (WELL NUMBERS)	TRENCH DEPTH <u>3'</u>
	SUBHEADER # <u> </u> PIPE DIA. <u> </u>
	STATION # <u> </u> LINEAR FT. <u> </u>
	TRENCH DEPTH <u> </u>
	LATERAL: # <u>EW-100R</u> PIPE DIA. <u>6'</u>
	STATION <u>0+00 to 0+48</u> LINEAR FT. <u>48'</u>
	RISER HEIGHT <u>6'</u> TRENCH DEPTH <u>2.5'</u>
	LATERAL: # <u>EW-2BR</u> PIPE DIA. <u>6"</u>
	STATION <u>0+00 to 0+39</u> LINEAR FT. <u>39'</u>
	RISER HEIGHT <u>6'</u> TRENCH DEPTH <u>2.5'</u>
GENERAL INFORMATION	LATERAL: # <u> </u> PIPE DIA. <u> </u>
WEATHER CONDITIONS	STATION <u> </u> LINEAR FT. <u> </u>
<u>cloudy/high winds</u>	RISER HEIGHT <u> </u> TRENCH DEPTH <u> </u>
START TIME <u>7:00 A.M.</u>	SUMPS <u> </u> VALVES <u> </u>
STOP TIME <u>7:00 P.M.</u>	

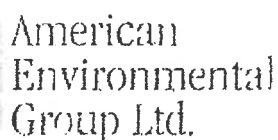
COMMENTS:

Today we tied in laterals EW-100R and EW-2BR the tie-ins were done around 11:30 am. Then we started to trench on EW-53R to install air and forcemain. The tie-in point was not where it was marked by the surveyors and took us an additional 3 hours to locate them and the 2" lines were installed 140 feet from the original location. After trenching on 53R we started trenching on EW-58R to install 2" air and forcemain lines. During the trenching the 4 2" air and forcemain line were fabled and air tests placed on them. All the trenches were backfilled and caution tape installed.

BROWN AND CALDWELL 9/24/10
CLIENT REPRESENTATIVE DATE

Darren Goodhart 9/24/2010
AEGL SITE FOREMAN DATE

NATHAN GIVONS ENGINEER I
NAME & TITLE



DAILY DIARY

DATE: 9-25-10 sat.

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-133

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		WELL# EW-58R2	PUMP S.N. # 4-1835
LINEAR FEET OF DRILLING-ABANDONMENT		DEPTH 80'	
LINEAR FEET OF WELL COMPLETION		WELL# EW-53R	PUMP S.N. # 4-1819
PERFORATED PIPE-DIA.		DEPTH 92'	
SOLID PIPE -DIA.		WELL# EW-34R2	PUMP S.N. # 4-1822
COMPLETION: (WELL NUMBERS)		DEPTH 105'	
		LATERAL: # EW-58R	PIPE DIA. 6"
		STATION 0+00 to 0+46	LINEAR FT. 46'
		RISER HEIGHT 6'	TRENCH DEPTH 4'
GENERAL INFORMATION		AIR EW-58R	PIPE DIA. 2"
WEATHER CONDITIONS		FORCEMAIN EW-58R	LINEAR FT. 78'
Sunny		STATION 2+00 to 2+39	TRENCH DEPTH 3'
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
START TIME 7:00 A.M.		RISER HEIGHT	TRENCH DEPTH
STOP TIME 3:30 P.M.		SUMPS	VALVES

COMMENTS:

Today we started out by digging up the tie-in point for the new 6" lateral to well EW-58R. Nate had the gas plant shut down the lateral to the tie-in point, and it was down for about an hour. The 6" lateral was 16 feet long and we replaced some of the existing lateral due to it having 3 electro couplers in one spot where the old vacuum riser was for the old well this extra 6" was 30' total. The tie-in point was backfilled and we started to install new pumps in wells EW-58R2, EW-53R, and EW-34R2. We also lowered the 2" air and forcemain on well EW-35R and hooked up the pump fittings. Nate had asked if we could check out 2 wells that were not pumping correctly, these wells were EW-227 and EW-126. The pump lines inside both of the wells were disconnected which we had reconnected and used new clamps on the lines and are now working properly. This took about 1.5 hours to do.

BROWN AND CALDWELL 9/25/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Darren Goodhart	9/25/2010
AEGL SITE FOREMAN	DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 9-27-10

MON.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	Header # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
	RISER HEIGHT _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
MATERIAL USED THIS DAY	4" Air _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
	4" Air _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
GENERAL INFORMATION	8"x 4" Forcemain _____ PIPE DIA. _____
WEATHER CONDITIONS	RISER HEIGHT _____ LINEAR FT. _____
Cloudy / Rain	STATION _____ TRENCH DEPTH _____
START TIME 7:00 AM	8"x 4" Forcemain _____ PIPE DIA. _____
STOP TIME 9:30 AM	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
	8"x 4" Forcemain _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____

COMMENTS:

Today we had a safety meeting, and loaded tools and it began to rain. Dokk and my self talked with Nate and QC and decided that it would be best to call a rain day because of more rain coming through for rest of day.

BROWN AND CALDWELL 9/27/10
CLIENT REPRESENTATIVE DATE

Billy Brown 9-27-10
AEGL SITE Supervisor DATE

NATHAN GIVENS ENGINEER 2
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 9-28-10

TUES.

PROJECT NAME Lorain County L/F
PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	Header # PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION TRENCH DEPTH
PERFORATED PIPE-DIA.	HEADER # PIPE DIA.
SOLID PIPE -DIA.	STATION LINEAR FT.
	STATION TRENCH DEPTH
	RISER HEIGHT PIPE DIA.
	STATION LINEAR FT.
	STATION TRENCH DEPTH
MATERIAL USED THIS DAY	RISER HEIGHT PIPE DIA.
	STATION LINEAR FT.
	STATION TRENCH DEPTH
GENERAL INFORMATION	RISER HEIGHT PIPE DIA.
WEATHER CONDITIONS	STATION LINEAR FT.
Cloudy / Rain	STATION TRENCH DEPTH
	LATERAL EW- 48R PIPE DIA. 6"
	STATION 0+0 to 0+40 LINEAR FT. 40'
START TIME 7:00 AM	T&M 2-Hours 4- guys & to excavters
STOP TIME 9:30 AM	Repair

COMMENTS:

We arrived on site and it was still raining, and to wet to do any thing so we left site and went back to motel we then got call from Nate QC that site hit a 6" line. We went back out and Nate showed us where line was and what well we then went and looked at line to see what was needed for repair. We then loaded up tools and machines into 2-excavters to get to EW-48R to make repair, we exposed 6" pipe and cut out bad and replaced with new 6" pipe and fused back together hooked well back up and left site.

BROWN AND CALDWELL 9/28/10
CLIENT REPRESENTATIVE DATE
NATHAN GUENS ENGINEER I
NAME & TITLE

Billy Brown 9-28-10
AEGL SITE Supervisor DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 9-29-10
WED.

PROJECT NAME Lorain County L/F
PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	Header # _____ PIPE DIA. _____	
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT _____ LINEAR FT. _____	
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____	
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____	
SOLID PIPE -DIA.	LINEAR FT. _____	
	STATION _____ TRENCH DEPTH _____	
		PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____	
	STATION _____ TRENCH DEPTH _____	
MATERIAL USED THIS DAY		PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____	
	STATION _____ TRENCH DEPTH _____	
		PIPE DIA. _____
GENERAL INFORMATION	RISER HEIGHT _____ LINEAR FT. _____	
WEATHER CONDITIONS	STATION _____ TRENCH DEPTH _____	
Clear	LATERAL _____ PIPE DIA. _____	
	LINEAR FT. _____	
START TIME <u>7:00 AM</u>	STATION _____	
STOP TIME <u>12:00 PM</u>	T&M _____	

COMMENTS:

Today we held safety meeting and fused 2" pipe for TEW-5R and put on air test, we also helped Dokk loading out trash with are 315 excavter. We also measured 6" lateral runs and checked culvert for road crossings we are short on both talked with Zach and he will order what we need. Do to all the rain we decided to let it dry out and start trenching again on Thursday morning.

BROWN AND CROWELL 9/29/10
CLIENT REPRESENTATIVE DATE
NATHAN GUNDS ENGINEER I
NAME & TITLE

Billy Brown 9-29-10
AEGL SITE Supervisor DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 9-30-10

Thurs..

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	Header # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ TRENCH DEPTH _____
	2" AIR Going to TEW-5 PIPE DIA. 2"
	RISER HEIGHT 5' LINEAR FT. 25'
	STATION 0+00 to 0+25 TRENCH DEPTH 3>4
MATERIAL USED THIS DAY	2" FORCEMAIN Going to TEW-5 PIPE DIA. 2"
	RISER HEIGHT 5' LINEAR FT. 25'
	STATION 0+00 to 0+ TRENCH DEPTH 3>4
GENERAL INFORMATION	2" AIR Goint to EW-87R PIPE DIA. 2"
WEATHER CONDITIONS	RISER HEIGHT 5' LINEAR FT. 450'
Clear	STATION 0+00 to 4+50 TRENCH DEPTH 3'
	4x2 FORCEMAIN Going to EW-87R PIPE DIA. 4x2
	RISER HEIGHT 5' LINEAR FT. 450'
	STATION 0+00 to 4+50
START TIME 7:00 AM	T&M _____
STOP TIME 7:00 PM	

COMMENTS:

Today we started off with our safety meeting then went over to TEW-5 and stated to expose 2" tie in point. After we found the existing 2" we the dug trench going to TEW-5 and installed 2" pipe and also tied in pipe to existing 2" lines with 2" tees. After we tied in pipes we put survey risers at every fitting and rolled caution tape through trench line and finished back filling we also set pump down TEW-5 at 76ft. the pump S/N# 4-1833. After that we went over to EW-116 and set pump down well at 44ft. the pump S/N# 4-1832. We then went over to EW-91R and exposed tie in point for EW-87R after we exposed tie in we trenched lateral to EW-87R. We installed pipe in trench also put a 40ft. piece of 8" pipe over the air and forcemain were it crossed over the bench. We then set survey risers at every 50ft mark and fittings also rolled out caution tape through trench line. We then put air test on all pipes the 2" air line was 100psi the dual contain forcemain was the inter pipe was 50 psi and the outer containment was 30 psi. We left air test on over night so we could tie in lines in the morning. We also set a pump down EW-87R at 47ft the pump S/N# 4-1827. We then wrapped things up and left for the day.

BROWN AND CALDWELL 9/30/10
CLIENT REPRESENTATIVE DATE

Billy Brown 9-30-10
AEGL SITE Supervisor DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 10/1/2010

FRI.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	2" AIR From EW-87R	PIPE DIA. 2"
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT. 8'
LINEAR FEET OF WELL COMPLETION	STATION 4+50 to 4+58	TRENCH DEPTH 3'
PERFORATED PIPE-DIA.	4x2 FORCEMAIN	PIPE DIA. 2"
SOLID PIPE -DIA.	STATION 4+50 to 4+58	LINEAR FT. 8'
		TRENCH DEPTH 3'
	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
MATERIAL USED THIS DAY	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
GENERAL INFORMATION	RISER HEIGHT	PIPE DIA.
WEATHER CONDITIONS	STATION	LINEAR FT.
Clear/Sunny		TRENCH DEPTH
	LATERAL	PIPE DIA.
	STATION	LINEAR FT.
START TIME 7:00 AM		
STOP TIME 5:30PM	T&M	

COMMENTS:

Today we started with a safety meeting we then went down on the hill to check air test on the lateral going to EW-87R. After Nate check air test and passed it we then tied in the 2" air and the 4x2 forcemain to the existing line coming from EW-91R. After we tied in lines we set survey risers at every 50 ft. and rolled caution tape through trench and backfilled it. We then went over to EW-82R and fused a 6" flange to the well so we could drop a pump in it we dropped pump and set it at 48ft. s/n# on pump was 4-1837. After that we put a new 2" landtec wellhead at EW-146 and hooked up well. Then we went up to EW-144R and abandon old well with a 6" slip cap and then hooked up EW-144R with existing 3" wellhead. We then went over to EW-138 and dug up around well so we could straighten up well so we could drop pump in well. We trench about 10 ft. down to straighten well. We spent 2 hours digging around EW-138. After we back filled around well we the dropped pumped in to EW-138 at 100ft. S/N# on pump is 4-1836. We also pieced up all 2" pipe that was laying around and unrolled 3 rolls of SDR9 2" pipe. Also we went down by the boneyard and brought up all the 12" CMP that was down there. We the wrapped things up and left site for the day.

BROWN AND CALDWELL 10/1/10
CLIENT REPRESENTATIVE DATE

Billy Brown 10-1-10
AEGL SITE Supervisor DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 10-2-10

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

SAT.

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	Header #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
SOLID PIPE -DIA.	STATION	LINEAR FT.
		TRENCH DEPTH
	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
MATERIAL USED THIS DAY	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	8"x 4" Forcemain	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
Cloudy/over cast and raining	STATION	TRENCH DEPTH
	8"x 4" Forcemain	PIPE DIA.
START TIME 7:00 AM	RISER HEIGHT	LINEAR FT.
STOP TIME 9:30 AM	STATION	TRENCH DEPTH
	8"x 4" Forcemain	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH

COMMENTS:

Today we held safety meeting and Ohio Cat came out to service are 320 excavator Nate also had us check around L-5 clean out, to see if we could locate leak. We dug down to saddle tees and exposed we also dug around 6" EFC we found no leaks, it then began to rain again so we had to shut down due to rain.

BROWN AND CHADWELL 10/3/10
CLIENT REPRESENTATIVE DATE
NATHAN GWENS ENGINEER
NAME & TITLE

Billy Brown 10-3-10
ABGL SITE Supervisor DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 10-4-10
MON.

PROJECT NAME Lorain County L/F
PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	Header #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
SOLID PIPE -DIA.	STATION	LINEAR FT.
		TRENCH DEPTH
	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
MATERIAL USED THIS DAY	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	8"x 4" Forcemain	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
<u>Clear/Sunny</u>	STATION	TRENCH DEPTH
START TIME <u>7:00 AM</u>	8"x 4" Forcemain	PIPE DIA.
STOP TIME <u>11:00 AM</u>	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	8"x 4" Forcemain	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH

COMMENTS:

Today had safety meeting and started to fab up parts, with all the rain over week end it was to wet and sloppy to trench also we had more rain moving in for the next three days. I called Mike and talked with him and we decided to let rain move through and come back out on Thursday. Also talked with Rick and let him and Nate are QC know what was going on Rick was aware and was ok with it. So we packed things up and left site till rain moves out and dries up we will return on Thursday if it clears out.

BROWN AND CALDWELL 10/4/10
CLIENT REPRESENTATIVE DATE
NATHAN GUNNS ENGINEER I
NAME & TITLE

Billy Brown 10-4-10
AEGL SITE Supervisor DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 10-7-10
Thurs.

PROJECT NAME Lorain County L/F
PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	LATERAL # <u>EW-152 to EW-151</u> PIPE DIA. <u>6"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT <u>7'</u> LINEAR FT. <u>140'</u>
LINEAR FEET OF WELL COMPLETION	STATION <u>0+00 to 1+40</u> TRENCH DEPTH <u>5>7</u>
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
	TRENCH DEPTH _____
	PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
MATERIAL USED THIS DAY	2" Air <u>EW-152 to tie in</u> PIPE DIA. <u>2"</u>
	RISER HEIGHT <u>6'</u> LINEAR FT. <u>140'</u>
	STATION <u>0+00 to 1+40</u> TRENCH DEPTH <u>5>7</u>
GENERAL INFORMATION	4" Air _____ PIPE DIA. _____
WEATHER CONDITIONS	RISER HEIGHT _____ LINEAR FT. _____
<u>Clear/Sunny</u>	STATION _____ TRENCH DEPTH _____
	2" Force main <u>EW-152 to tie in</u> PIPE DIA. <u>2"</u>
	RISER HEIGHT <u>6'</u> LINEAR FT. <u>140'</u>
	STATION <u>0+00 to 1+40</u> TRENCH DEPTH <u>5>7</u>
START TIME <u>7:00 AM</u>	2" pipe is add on here.
STOP TIME <u>7:00 PM</u>	Time spent 2-Hours. _____ LINEAR FT. <u>140'</u>
	STATION <u>0+0 to 1+40</u> TRENCH DEPTH <u>5>7</u>

COMMENTS:

Today we started off with our safety meeting and then started trenching on 6" lateral coming from EW-152. After we were done dig on on lateral we laid out 12" cmp down our trench line and started feeding our 6" pipe through it after all the 6" pipe was feed through it we then set pipe in trench and started bolting the cmp together after we put it together Nate the QC thought we should put 2" air and force main in the cmp also so after we got the ok to put the 2" pipes in we had to pull out the lateral and feed the 2" pipes through the cmp after we got all the pipe fed through the cmp we set in back in the trench. Then we marked out the pipe and shot it in at 3% it all shot in good so we started backfilling the trench with stone. We put survey risers on the cmp and rolled caution tape down trench line and finished backfilling. We also went over and we measured out the 3 add on laterals so we could get the pipe order. While we were doing that some of the guys litter lugged the trench line. After they got done we wrapped things up and left for the day. We used 140 ft of 12" CMP and used about 100 ton of 4 to 5" stone because we had had to use a 3ft bucket and had to put 3ft. above the CMP.

BROWN AND CALDWELL 10/7/10
CLIENT REPRESENTATIVE DATE

Billy Brown 10-7-10
AEGLE SITE Supervisor DATE

NATHAN GIBBS SALES
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 10-8-10

Fri.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	Header # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
	RISER HEIGHT _____ PIPE DIA. _____
	LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
MATERIAL USED THIS DAY	4" Air _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
GENERAL INFORMATION	4" Air _____ PIPE DIA. _____
WEATHER CONDITIONS	RISER HEIGHT _____ LINEAR FT. _____
Clear/Sunny	STATION _____ TRENCH DEPTH _____
START TIME 7:00 AM	LINER CREW 2-guys 6 HRS. 3-guys-6 HRS.
STOP TIME 6:30 PM	HOURS 12
	8"x 4" Force main _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____

COMMENTS:

Today we started off with our safety meeting and then went over on the cap side so we could clean out around all the redrills so the liner guys could start booting around the new wells. After we cleaned around all the wells we started going around and putting the pipe on grade after they finished booting each well. We then backfilled holes and put survey risers and caution tape over pipe. We also went through all parts that are here so we could get all the parts order that we needed to finish up the job. We also fused up 240 ft. of 6" and put a 90 riser on it and air tested it at 25 psi for lateral EW-38R. Also built up risers and fab up parts that we need. We also went over and set in casements around the air and force main ball valves that were out of the ground. We set a total of 4 in casements. We did some litter lugging around the in casements and the wrapped up things and left site for the day.

BROWN AND CALDWELL 10/8/10
CLIENT REPRESENTATIVE DATE

NATHAN GREENS ENGINEER E
NAME & TITLE

Billy Brown 10-8-10
AEGL SITE Supervisor DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 10-9-10

SAT.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	Header #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL# EW-153	PIPE DIA. 6"
SOLID PIPE -DIA.	STATION 0+0 to 1+20	LINEAR FT. 120'
		TRENCH DEPTH 3>7
	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
MATERIAL USED THIS DAY	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	CMP# Road CROSSING	PIPE DIA. 12"
WEATHER CONDITIONS	STATION 0+0 to 0+60	LINEAR FT. 60'
Clear/Sunny		TRENCH DEPTH 3>7
START TIME 7:00 AM	LINER CREW Repair	HOURS 4
STOP TIME 5:00 PM	GUYS 4	

COMMENTS:

Today we trenched from EW-153 across road and over hill to EW-51R, we installed 60 feet of 12" CMP across road way and ran 120 feet of 6" pipe. The liner crew finished up with repair around well heads they spent 4-hours with 4-guys working on repair.

We also used 2" to 6" rock base to go back in over road crossing and compacted back in, all pipe was shot in at 3% for grade.

We could not dig past 11:30AM so we hauled dirt to spots that needed it and finished backfilling and dress up work for the day.

BROWN AND CALDWELL 10/9/10
CLIENT REPRESENTATIVE DATE

Billy Brown 10-9-10
AEGL SITE Supervisor DATE

NATHAN CHURCH ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 10-11-10
Mon.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____
PERFORATED PIPE-DIA.	LATERAL # <u>EW-152 EW-151</u> PIPE DIA. <u>6"</u>
SOLID PIPE -DIA.	STATION <u>1+30 to 5+30</u> LINEAR FT. <u>400'</u>
	TRENCH DEPTH <u>3 > 4</u>
	PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
MATERIAL USED THIS DAY	AIR LINE # <u>From EW-152</u> PIPE DIA. <u>2"</u>
	LINEAR FT. <u>7'</u>
	STATION _____ TRENCH DEPTH <u>3>4</u>
	<u>1+40 to 1+47</u>
GENERAL INFORMATION	FORCE MAIN # <u>From EW-152</u> PIPE DIA. <u>2"</u>
WEATHER CONDITIONS	LINEAR FT. <u>6'</u>
<u>Clear/Sunny</u>	STATION <u>1+40 to 1+46</u> TRENCH DEPTH <u>3>4</u>
START TIME <u>7:00 AM</u>	T&M For Man Hole _____ HOURS <u>5</u>
STOP TIME <u>6:30 PM</u>	<u>1# 2# 3#</u>
	Pump 3# <u>was reused</u> DEPTH SET <u>15'</u>

COMMENTS:

Today we started out trenching on lateral EW-152 to EW-151 to tie in at 12" header, we also installed air and force main lines at station 1+46 and at station 1+47. We installed 6" tee at station 2+89 with riser for EW-151 the 2" air & force main is for EW-152.

We shot pipe for grade put survey risers at 50' marks put in lift dirt over pipe and ran caution tape we hauled dirt and backfilled and dressed up lateral. We worked on man holes 1# 2# and 3# we had to go find stainless steel plating for lids and we also put pumps together for 1# and 2# and we was able to pull and reuse pump 3# it was set at 15 feet and was pumping by 6:00 PM.

All work that was done on man holes will be T&M with 2- guys and F-250 pick up and materials hours for today was 5.

BROWN AND CRAWELL 10/11/10
CLIENT REPRESENTATIVE DATE

Billy Brown 10-11-10
AEGLE SITE Supervisor DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



**American
Environmental
Group Ltd.**

DAILY DAIRY

PROJECT NAME Lorain County L/F
PROJECT# 202-10-133

DATE: 10-12-10
Tues.

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL # <u>EW-153 EW-51R</u>	PIPE DIA. <u>6"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT <u>6'</u>	LINEAR FT. <u>179'</u>
LINEAR FEET OF WELL COMPLETION	STATION <u>1+40 to 3+</u>	TRENCH DEPTH <u>3'4"</u>
PERFORATED PIPE-DIA.	AIR # <u>EW-50</u>	PIPE DIA. <u>2"</u>
SOLID PIPE -DIA.	STATION <u>0+0 to 4+45</u>	LINEAR FT. <u>445'</u>
	FORCE MAIN # <u>EW-50</u>	TRENCH DEPTH <u>4'</u>
	STATION <u>0+0 to 4+45</u>	PIPE DIA. <u>2"</u>
		LINEAR FT. <u>445'</u>
		TRENCH DEPTH
MATERIAL USED THIS DAY	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	T&M <u>2- guys</u>	HOURS <u>10</u>
WEATHER CONDITIONS	PUMP 1- <u>Serial Num.4-1823</u>	DEPTH <u>15 feet</u>
<u>Clear/Sunny</u>	PUMP 2- <u>Serial Num. 4-1837</u>	DEPTH <u>15 feet</u>
START TIME <u>7:00 AM</u>	8"x 4" Forcemain	PIPE DIA.
STOP TIME <u>6:30 PM</u>	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH

COMMENTS:

Today we finished trenching from EW-153 to EW-51R at tie in on 6" lateral, we also trenched down to EW-50 for 2" air & force main.

Also guys worked on Man hole 1# and 2# they set pumps on both at 15 feet serial number pump 1# 4-1823 pump 2# 4-1837.

Work done on man holes was T&M 2-guys F-250 and materials, time spent on work done today was 10 hours we also have to get

water out of old air line will ask Rick or Chris if they would like us to blow water from line. We also shot all pipe for grade assurance

and put survey risers at 50 foot marks and at all fittings put down caution tape and backfilled and dressed up on lines.

BROWN AND COLDWELL 10/12/10
CLIENT REPRESENTATIVE DATE

Billy Brown 10-12-10
AEGL SITE Supervisor DATE

NATHAN GIBENS ENGINEER II
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 10-13-10

Wed.

PROJECT NAME Lorain County L/F

PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL # EW-154	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT 8'	LINEAR FT. 150'
LINEAR FEET OF WELL COMPLETION	STATION 0+0 to 1+50	TRENCH DEPTH 4'
PERFORATED PIPE-DIA.	LATERAL # EW-47R	PIPE DIA. 6"
SOLID PIPE -DIA.	RISER HEIGHT 6'	LINEAR FT. 21'
	STATION 0+0 to 0+21	TRENCH DEPTH 4'
	CMP Road Crossing	PIPE DIA. 12"
		LINEAR FT. 60'
	STATION 0+52 to 1+12	TRENCH DEPTH 4'
MATERIAL USED THIS DAY	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	12" TIE IN 1	PIPE DIA. 12"
WEATHER CONDITIONS	6" TIE IN 4	PIPE DIA. 6"
Clear/Sunny		
START TIME 7:00 AM	8"x 4" Forcemain	PIPE DIA.
STOP TIME 6:30 PM	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH

COMMENTS:

Today we made 1-12" tie in and 4-6" tie ins we also trenched 6" lateral from EW-154 to 1+50 and put in 6" tee for EW-47R and tied in. also made 6" tie in at EW-51R with 6" tee and 6" tie in was made at 12X6 tee we installed, we also had 60 feet of 12" CMP installed for road crossing all pipe was shot for grade and survey risers put in caution tape put down and we began to haul dirt for lines road crossing was put back in with 4" to 5" rock and compacted we then finished up with dress up work on lines.

BROWN AND CROWELL 10/13/10
CLIENT REPRESENTATIVE DATE

Billy Brown 10-13-10
AEGL SITE Supervisor DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



**American
Environmental
Group Ltd.**

DAILY DAIRY

DATE: 10-14-10
Thur.

PROJECT NAME Lorain County L/F
PROJECT# 202-10-133

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	Header #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	HEADER #	PIPE DIA.
SOLID PIPE -DIA.	STATION	LINEAR FT.
		TRENCH DEPTH
	RISER HEIGHT	PIPE DIA.
	STATION	LINEAR FT.
		TRENCH DEPTH
MATERIAL USED THIS DAY	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	4" Air	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	8"x 4" Forcemain	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
cloudy/Rain	STATION	TRENCH DEPTH
START TIME <u>7:00 AM</u>	8"x 4" Forcemain	PIPE DIA.
STOP TIME <u>11:00 AM</u>	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	8"x 4" Forcemain	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH

COMMENTS:

Today we had safety meeting and guys moved 24" machine in to place and hauled up 12" culvert, after 8:00 construction meeting with Chris and Rick and Nate with Brown & Caldwell due to rain last night it was to wet to work we fabed up 24" parts and left site.

BROWN AND CALDWELL 10/14/10
CLIENT REPRESENTATIVE DATE

Billy Brown 10-14-10
AEGL SITE Supervisor DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: ### 10-15-10

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	TRENCH DEPTH _____
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
COMPLETION: (WELL NUMBERS)	TRENCH DEPTH _____
	SUBHEADER # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	TRENCH DEPTH _____
	LATERAL: # <u>EW-38R</u> PIPE DIA. <u>6"</u>
	STATION <u>0+00 to 1+70</u> LINEAR FT. <u>170'</u>
	RISER HEIGHT <u>6'</u> TRENCH DEPTH <u>4'</u>
	AIR _____ PIPE DIA. <u>2" and 4"</u>
GENERAL INFORMATION	FORCEMAIN _____ LINEAR FT. <u>156'</u>
WEATHER CONDITIONS	STATION <u>0+00 to 1+56</u> TRENCH DEPTH <u>4'</u>
<u>sunny</u>	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
START TIME <u>7:00 A.M.</u>	SUMPS _____ VALVES _____
STOP TIME <u>7:00 P.M.</u>	

COMMENTS:

Today we dug a new trench for the 6" lateral for EW-38R toward the 24" header the lateral was 170 feet in length and had a 6' riser on it at the well. The trench had air and forcemain installed in it for the main trunk line going from the tie-in point toward well EW-56, only 156' was installed just before the road crossing. We then backfilled the trench and installed caution tape and cleaned up around the trench. We also put the lids on the A&F encasements which the brackets were installed with lag screws. We then fabed up the new 6" lateral for well EW-35R that will be tying into the 12" subheader.

BROWN AND CHOWELL 10/15/10
CLIENT REPRESENTATIVE DATE

NATHAN GUGER SLOANER I
NAME & TITLE

Darren Goodhart 10-15-10
AEGL SITE FOREMAN #####
DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 10/16/10 sat

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # _____ PIPE DIA. 24"
LINEAR FEET OF DRILLING-ABANDONMENT	STATION <u>0+00 to 1+70</u> LINEAR FT. 170'
LINEAR FEET OF WELL COMPLETION	TRENCH DEPTH <u>2'-5'</u>
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
COMPLETION: (WELL NUMBERS)	TRENCH DEPTH _____
	SUBHEADER # _____ PIPE DIA. _____
	STATION # _____ LINEAR FT. _____
	TRENCH DEPTH _____
	LATERAL: # <u>EW-38R</u> PIPE DIA. 6"
	STATION <u>1+70 to 1+78</u> LINEAR FT. 8'
	RISER HEIGHT _____ TRENCH DEPTH 4'
GENERAL INFORMATION	LATERAL: # _____ PIPE DIA. _____
WEATHER CONDITIONS	STATION _____ LINEAR FT. _____
<u>sunny/dark</u>	RISER HEIGHT _____ TRENCH DEPTH _____
START TIME <u>7:00 A.M.</u>	LATERAL: # _____ PIPE DIA. _____
STOP TIME <u>12:00 A.M.</u>	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	SUMPS _____ VALVES _____

COMMENTS:

Today we dug up the 24" header and installed 4-24" flanges and a 24x6 tee which was the tie in point for the 6" lateral from EW-38R. We had found at the 24" valve 2 electro couplers that were broken and ask Rick if he wanted them replace or new flanges fused on. We unbolted the 24" valve and fused 2 new flanges then re-installed the valve. After bolting up the valve we fused in the 6" lateral to the 24" tee. At the end of the 24x6 tee we fused in 2-24" flanges that were bolted together. We also regraded the 24" header that we had exposed and then started backfilling and installed caution tape before cleaning up around the trench.

BLOWN AND CALDWELL 10/16/10
CLIENT REPRESENTATIVE DATE

Darren Goodhart 10-16-10
AEGL SITE FOREMAN #####
DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 10-18-10 Mon.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-133

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.			LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: # EW-35R	PIPE DIA. 6"
		STATION 0+00 to 2+74	LINEAR FT. 274'
		RISER HEIGHT 6'	TRENCH DEPTH 3'
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 7:00 A.M.		SUMPS	VALVES
STOP TIME 7:00 P.M.			

COMMENTS:

Today we started trenching from EW-35R toward the 12" subheader. The tie-in on the 12" subheader was made with 2-12" electro couplers and the lateral was hard welded in. The old vacuum riser for well EW-155 was abandoned 3' below grade with a 6" butt cap welded on. We also fused a 6" flange on well EW-144 as well as bolted on the blind to complete that well. We then installed a 3" wellhead at well EW-151R which completes that well. We also dug up and installed CMP for the road crossing on the air and forcemain.

BROWN AND CALDWELL 10/18/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Darren Goodhart 10-18-10
AEGL SITE FOREMAN #####
DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 10/19/2010

Tues.

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____ TRENCH DEPTH _____
LINEAR FEET OF WELL COMPLETION	HEADER # _____ PIPE DIA. _____
PERFORATED PIPE-DIA.	STATION _____ TRENCH DEPTH _____
SOLID PIPE -DIA.	SUBHEADER # _____ PIPE DIA. _____
COMPLETION: (WELL NUMBERS)	STATION # _____ TRENCH DEPTH _____
	2" AIR Trunk line PIPE DIA. 2"
	STATION 2+90 to 13+50 LINEAR FT. 1060'
	RISER HEIGHT _____ TRENCH DEPTH 3>4
	4" FORCEMAIN Trunk line PIPE DIA. 4"
	STATION 2+90 to 13+50 LINEAR FT. 1060'
	RISER HEIGHT _____ TRENCH DEPTH 3>4
GENERAL INFORMATION	LATERAL: # _____ PIPE DIA. _____
WEATHER CONDITIONS	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
START TIME 7:00 A.M.	SUMPS _____ VALVES _____
STOP TIME 7:00 P.M.	

COMMENTS:

Today we started with our safety meeting and then started digging on the air and force main line. While we were trenching we went over to EW-50 and set a pump down it at 41ft. The pump S/N is 4-1824. After that we started to put pipe in trench line after we put pipe in trench we marked out pipe and set risers at every 50ft. After that we rolled caution tape though trench and started back filling trench. We also went down by the maintenance building and extended a drain line coming from the new cell. We extended it with 69ft. Of SDR 11 2" pipe. We had 1 hour of T&M on it.

BROWN AND CROVELL 10/19/10
CLIENT REPRESENTATIVE DATE

Darren Goodhart 10-19-10
AEGL SITE FOREMAN #####
DATE

NATHAN GUKUS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 10/20/2010

Weds.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-133

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
COMPLETION: (WELL NUMBERS)	STATION _____ TRENCH DEPTH _____
	SUBHEADER # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
	2" AIR Trunk line PIPE DIA. 2"
	STATION 13+50 to 21+78 LINEAR FT. 828'
	RISER HEIGHT _____ TRENCH DEPTH 3>4
	4"FORCEMAIN Trunk line PIPE DIA. 4"
	STATION 13+50 to 21+78 LINEAR FT. 828'
	RISER HEIGHT _____ TRENCH DEPTH 3>4
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	SUMPS _____ VALVES _____
GENERAL INFORMATION	
WEATHER CONDITIONS	
START TIME 7:00 A.M.	
STOP TIME 7:30 P.M.	

COMMENTS:

Today we started off with our safety meeting and then went over and started trenching on the air and force main line. After we finished trenching line we installed the pipe in trench we tied into tees that we already installed and put 90 risers at the end of the trench for future use. We also went back to the starting point of the line and installed a 4" and a 2" ball valve. While we were doing that we were back filling trench and set survey risers at every fitting and 50 ft mark also rolled caution tape through trench. We then wrapped things up and left for the day.

BROWN AND CHADWELL 10/20/10
CLIENT REPRESENTATIVE DATE

Darren Goodhart 10/20/10
AEGL SITE FOREMAN #####
DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

DAILY DIARY

DATE: 10/21/2010

Thurs.

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-133

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT		STATION	LINEAR FT.
LINEAR FEET OF WELL COMPLETION		HEADER #	TRENCH DEPTH
PERFORATED PIPE-DIA.		STATION	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
COMPLETION: (WELL NUMBERS)		SUBHEADER #	TRENCH DEPTH
		STATION #	PIPE DIA.
			LINEAR FT.
		2" AIR EW-50 to CS-13	TRENCH DEPTH
		STATION 0+00 to 3+08	PIPE DIA. 2"
		RISER HEIGHT 4'	LINEAR FT. 308'
			TRENCH DEPTH 3>4
GENERAL INFORMATION		4" FORCEMAIN EW-50 to CS-13	PIPE DIA. 4"
WEATHER CONDITIONS		STATION 0+00 to 3+08	LINEAR FT. 308'
		RISER HEIGHT 4'	TRENCH DEPTH 3>4
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
START TIME 7:00 A.M.		RISER HEIGHT	TRENCH DEPTH
STOP TIME 6:30 P.M.		SUMPS	VALVES

COMMENTS:

Today we started with our safety meeting and went down to EW-50 and started trenching to CS-13 after we finished trenching line we installed tees in our line and tied both 2" lines in and put 90 risers at CS-13. After that we went up and put air test on the 2" and 4" line. We put 50 psi on the 4" and 100psi on the 2" line. We also rerouted 6" sed pond line from new cell. We cut out a 6" EFC and harded welled the 6" line back together. Then hooked it back up to the pump. While we were doing that we backfilled trench line and put survey risers at every 50ft and fittings also rolled out caution tape through trench line. We also hauled some dirt to clean up trench lines and started pulling survey risers out that the surveyor had already had shot. We also took inventory on parts and hauled them down to the bone yard. We then wrapped things up and left for the day. 4 hrs T&M for sedi. Pump.

BROWN AND CALDWELL 10/21/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Darren Goodhart	10-21-16
AEGL SITE FOREMAN	#####
	DATE

AEGL SITE FOREMAN DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 10-23-10 sat

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-133

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.			LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

COMMENTS:

Today we put reflective stickers and numbered all wells that we had installed. We also put silicon on and lag screwed the blinds on LR5. We then pulled out what was left of the survey risers and put all fencing back up that we had removed during pipe installation. We also moved all extra parts and pipe to the boneyard as well as took inventory on them. We also hauled dirt to mound up around the air and forcemain encasements.

BROWN AND CALDWELL 10/23/10
CLIENT REPRESENTATIVE DATE

NATHAN GAUVENS ENGINEER I
NAME & TITLE

Darren Goodhart 10/23/10
AEGL SITE FOREMAN ~~#####~~ DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11-9-10 Tues.

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
COMPLETION: (WELL NUMBERS)	STATION _____ TRENCH DEPTH _____
	SUBHEADER # _____ PIPE DIA. _____
	STATION # _____ LINEAR FT. _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
GENERAL INFORMATION	LATERAL: # _____ PIPE DIA. _____
WEATHER CONDITIONS	STATION _____ LINEAR FT. _____
Sunny	RISER HEIGHT _____ TRENCH DEPTH _____
START TIME <u>7:30 A.M.</u>	LATERAL: # _____ PIPE DIA. _____
STOP TIME <u>2:30 P.M.</u>	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	SUMPS _____ VALVES _____

COMMENTS:

Today we showed up on site around 7:30 am and unloaded the 24" machine as well as the generator. Later we had dropped our flat trailer at the boneyard and went back to the top of the hill and unloaded the second truck that had pipe on it. Later I had talked with Rick about what we had done and what we were doing for the day, which was unloading trucks with pipe and parts. We had left site at 2:30 pm as the last truck had showed up for the day, there were a total of 5 trucks that showed up onsite and that we had expected more for Wednesday.

BROWN AND CALDWELL 11/9/10
CLIENT REPRESENTATIVE DATE

NATHAN GAVINS ENGINEER I
NAME & TITLE

Darren Goodhart 11/9/2010
AEGLE SITE FOREMAN DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 11-10-10
Wen.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	LATERAL PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT LINEAR FT.
	STATION TRENCH DEPTH
	2" AIR LINE PIPE DIA.
	RISER HEIGHT LINEAR FT.
	STATION TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN PIPE DIA.
	STATION LINEAR FT.
	RISER HEIGHT TRENCH DEPTH
	2" Air Line PIPE DIA.
GENERAL INFORMATION	RISER HEIGHT LINEAR FT.
WEATHER CONDITIONS	STATION TRENCH DEPTH
Sunny / Clear	2" Force Main PIPE DIA.
	RISER HEIGHT LINEAR FT.
START TIME 7:00 AM	STATION TRENCH DEPTH
STOP TIME 5:00 PM	TIE INS HOURS
	T & M WELL HEADS

COMMENTS:

Today we mobed in on site with job trailer and went over site and safety plan we also had construction meeting at 8:00 AM with Chris Jaquet Rick Kostelnick Nate Givens Dokk Stanley Jeff Enochs Zach Maurer Billy Brown Darren Goodhart. We went over scope of work for drilling and pipe line. We then began inventory on parts and fusing 6" pipe and 4" and 2" we also had trucks bringing in 24" pipe to unload. We also set up 24" machine and generator to start fusing 24" pipe we then left for the day.

BROWN AND CALDWELL 11/10/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Billy Brown 11-10-10
AEG: SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 11-11-10
Thur.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	LATERAL _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____
PERFORATED PIPE-DIA.	LATERAL _____ PIPE DIA. _____
SOLID PIPE -DIA.	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
	LATERAL _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
	2" AIR LINE _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
MATERIAL USED THIS DAY	2" FORCE MAIN _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	2" Air Line _____ PIPE DIA. _____
GENERAL INFORMATION	RISER HEIGHT _____ LINEAR FT. _____
WEATHER CONDITIONS	STATION _____ TRENCH DEPTH _____
Sunny / Clear	2" Force Main _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
START TIME <u>7:00 AM</u>	TIE INS _____ HOURS _____
STOP TIME <u>5:00 PM</u>	T & M _____ WELL HEADS _____

COMMENTS:

We arrived on site at 7:00AM had safety meeting and began fusing up 24" pipe, and worked on fabricating up 6" well head parts and fusing 6X4 by 4X2 reducers. Also we put air test on 200 foot stringer of 6" pipe at 25PSI for 4- hours air test was checked and passed by are QAC. We also had trucks coming in with 24" pipe to be unloaded, we also fused up 1630 feet of 24" and left for the day.

BROWN AND CALDWELL 11/11/10
CLIENT REPRESENTATIVE DATE

NATHAN GWENS ENGINEER I
NAME & TITLE

Billy Brown 11-11-10
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 11-12-10
FR.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	LATERAL PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT LINEAR FT.
	STATION TRENCH DEPTH
	2" AIR LINE PIPE DIA.
	RISER HEIGHT LINEAR FT.
	STATION TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN PIPE DIA.
	STATION LINEAR FT.
	RISER HEIGHT TRENCH DEPTH
	2" Air Line PIPE DIA.
GENERAL INFORMATION	RISER HEIGHT LINEAR FT.
WEATHER CONDITIONS	STATION TRENCH DEPTH
Sunny / Clear	2" Force Main PIPE DIA.
	RISER HEIGHT LINEAR FT.
START TIME 7:00 AM	STATION TRENCH DEPTH
STOP TIME 5:00 PM	TIE INS HOURS
	T & M WELL HEADS

COMMENTS:

Today we had safety meeting and began fusing 24" pipe we also fused up 6" laterals with 6" 90 elbows and risers with 6" flanges and back up rings, we also fused 6X4 reducer on and 4X2 reducer. We made up 7 laterals and fused up 600 feet of 24" pipe we also put air test on 200 foot stringer at 25 PSI for 4-hours test was past by Nate are QAC we then finished up and left for the day.

BROWN AND CALDWELL 11/12/10
CLIENT REPRESENTATIVE DATE
NATHAN GILLES ENGINEER I
NAME & TITLE

Billy Brown 11-12-10
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11-13-10 sat

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.			LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

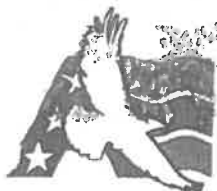
COMMENTS:

Today we held the safety meeting which lasted 10 min. we then started fusing the last of the 24" pipe that was on site. We had finished at noon and left site for the day, we fused 800 feet.

BROWN AND CALDWELL 11/13/10
CLIENT REPRESENTATIVE DATE

Darren Goodhart 11-13-10
AEGLE SITE FOREMAN #####
DATE

NATHAN GIBBS ENGINEER I
NAME & TITLE



**American
Environmental
Group Ltd.**

DAILY DIARY

DATE: 11-15-10 mon

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # <u>24"</u> PIPE DIA. <u>24"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	LINEAR FT. <u>36'</u>
LINEAR FEET OF WELL COMPLETION	STATION <u>0+00 to 3+60</u> TRENCH DEPTH <u>5'</u>
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)	SUBHEADER # _____ PIPE DIA. _____
	STATION # _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	SUMPS _____ VALVES _____

GENERAL INFORMATION

WEATHER CONDITIONS

sunny

START TIME 7:00 A.M.

STOP TIME 6:30 P.M.

COMMENTS:

Today we started trenching on the 24" header going from the west near the sed. Pond toward the east. We also started fabing up the 18x24 in. tee's for access risers with 18" flanges and had bolted on the blinds on top of them. We trenched 360 feet of 24" pipe and backfilled with dirt adding caution tape as well as cleanup around the trench and left site for the day.

BROWN AND CALDWELL 11/15/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Darren Goodhart 11-15-10
AEGL SITE FOREMAN ##### DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11-16-10 Tues

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER # <u>24"</u>	PIPE DIA. <u>24"</u>
LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT. <u>240'</u>
LINEAR FEET OF WELL COMPLETION		STATION <u>3+60 to 6+00</u>	TRENCH DEPTH <u>3'-5'</u>
PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
SOLID PIPE -DIA.			LINEAR FT. _____
COMPLETION: (WELL NUMBERS)		STATION _____	TRENCH DEPTH _____
		SUBHEADER # _____	PIPE DIA. _____
			LINEAR FT. _____
		STATION _____	TRENCH DEPTH _____
		LATERAL # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

COMMENTS:

Today we started trenching on the 24" where we had left off from yesterday at station 3+60. We trenched to the haul road where we had stopped because we did not have the CMP for the road crossing. We ended up trenching 240 feet to the road, and fabled up the other 2 18x24 in tee's for access risers. We also bolted on the 24" blind, at the end of the pipe where we had started, for the future air test. We also had unloaded a truck that showed up with 800' of 24" pipe then we went back to the 24" pipe that we had trenched and started to backfill and dressup the entire trench that had been done for the past 2 days. We were rained out around 4:30 pm and had left site.

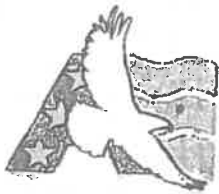
BROWN AND CALDWELL 11/16/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER 2
NAME & TITLE

Darren Goodhart
AEGLE SITE FOREMAN

11-16-10

DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11-17-10 wed

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT		STATION	LINEAR FT.
LINEAR FEET OF WELL COMPLETION			TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
			TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
		STATION #	LINEAR FT.
			TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		LATERAL: #	PIPE DIA.
WEATHER CONDITIONS		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 7:00 A.M.		SUMPS	VALVES
STOP TIME 3:30 P.M.			

COMMENTS:

Today we held our safety meeting and decided to fuse 24" pipe due to the previous rain. We had fused up 600 feet and fixed a 4" forcemain that the site had hit near the active face while pushing dirt. We replaced a 5' section of the 4" pipe hard fusing it back in. We then left for the day at 3:30 pm.

BROWN AND CALDWELL 11/17/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER T
NAME & TITLE

Darren Goodhart 11-17-10
AEGL SITE FOREMAN #####
DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11-18-10 thur.

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT		STATION	LINEAR FT.
LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		SUBHEADER #	PIPE DIA.
		STATION #	LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: # EW-112S	PIPE DIA. 6"
		STATION 0+00 to 0+21	LINEAR FT. 21'
		RISER HEIGHT 7'	TRENCH DEPTH 3'
		LATERAL: # EW-113S	PIPE DIA. 6"
		STATION 0+00 to 0+22	LINEAR FT. 22'
		RISER HEIGHT 7'	TRENCH DEPTH 3'
		LATERAL: # EW-114S	PIPE DIA. 6"
		STATION 0+00 to 0+21	LINEAR FT. 21'
		RISER HEIGHT 7'	TRENCH DEPTH 3'
		SUMPS	VALVES

GENERAL INFORMATION

WEATHER CONDITIONS
rainy/cloudy

START TIME 7:00 A.M.

STOP TIME 4:30 P.M.

COMMENTS:

Today we started trenching on lateral EW-112S and tied it into the existing vacuum riser with a 6" tee. The tie in took 2hrs. We then dug up and trenched the lateral for EW-113S and tied it into the 8" subheader using a 8x6 tee and attaching the lateral to the port side of the tee. This tie in took 2 hrs. The next lateral we had tied in was EW-114S it was tied into the existing vacuum riser with a 6" tee and the tie in took 2 hrs. All trenches and tie in points were backfilled as well as having caution tape installed 1 foot above the pipe the holes were dressed up and cleaned up before leaving for the day.

BROWN AND CALDWELL 11/18/10
CLIENT REPRESENTATIVE DATE

Darren Goodhart 11-18-10
AEGL SITE FOREMAN #####
DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11-19-10 fri

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # <u>24"</u> PIPE DIA. <u>24"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	STATION <u>6+00 to 7+70</u> LINEAR FT. <u>170'</u>
LINEAR FEET OF WELL COMPLETION	TRENCH DEPTH <u>5'-7'</u>
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
COMPLETION: (WELL NUMBERS)	TRENCH DEPTH _____
	SUBHEADER # _____ PIPE DIA. _____
	STATION # _____ LINEAR FT. _____
	TRENCH DEPTH _____
	LATERAL: # <u>EW-116S</u> PIPE DIA. <u>6"</u>
	STATION <u>0+00 to 0+16</u> LINEAR FT. <u>16'</u>
	RISER HEIGHT <u>7'</u> TRENCH DEPTH <u>3'-5'</u>
	LATERAL: # <u>EW-117S</u> PIPE DIA. <u>6"</u>
	STATION <u>0+00 to 0+24</u> LINEAR FT. <u>24'</u>
	RISER HEIGHT <u>7'</u> TRENCH DEPTH <u>3'-5'</u>
	LATERAL: # <u>EW-118S</u> PIPE DIA. <u>6"</u>
	STATION <u>0+00 to 0+22</u> LINEAR FT. <u>22'</u>
	RISER HEIGHT <u>7'</u> TRENCH DEPTH <u>3'-5'</u>
	SUMPS _____ VALVES _____
GENERAL INFORMATION	
WEATHER CONDITIONS <u>sunny</u>	
START TIME <u>7:00 A.M.</u>	
STOP TIME <u>7:00 P.M.</u>	

COMMENTS:

Today we started trenching laterals EW-116S, 117S, 118S and preping for tie ins. SCS cleared us for tie-ins around 9 am and took us 4 hrs to complete. The total time for trenching, tie ins, and backfill was 6 hrs. EW-116S was tied in with a 6" tee into the existing vacuum line and the lateral was 16 feet long with a 7 foot riser. EW-117S was tied in with a 6" tee with a 6" 90 coming off of it to the new well and the lateral was 24 feet long with a 7 foot riser. EW-118S was tied in with a 6" tee in the existing vacuum line and the lateral was 22 feet long with a 7 foot riser. We then started trenching through the road for the 24" road crossing as well as fusing in the first 24x18 access riser. The road crossing was 6 feet deep for the 36" cmp to have 3 foot of cover of crushed brick. We had put 40 feet of 36in cmp over the 24" pipe. We had finished up by backfilling and cleaning up around the trench then leaving site for the day.

BROWN AND CALDWELL 11/19/10
CLIENT REPRESENTATIVE DATE

Darren Goodhart 11-19-10
AEGL SITE FOREMAN #####
DATE

NATHAN GUENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 11-20-10 sat

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER # <u>24"</u>	PIPE DIA. <u>24"</u>
LINEAR FEET OF DRILLING-ABANDONMENT		STATION <u>7+70 to 11+70</u>	LINEAR FT. <u>400'</u>
LINEAR FEET OF WELL COMPLETION			TRENCH DEPTH <u>5'</u>
PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
SOLID PIPE -DIA.		STATION _____	LINEAR FT. _____
			TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
		STATION # _____	LINEAR FT. _____
			TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

GENERAL INFORMATION

WEATHER CONDITIONS

sunny

START TIME 7:00 A.M.

STOP TIME 5:00 P.M.

COMMENTS:

Today we started trenching on the 24 in header toward HP. We had installed 400 feet of the header for the day we also backfilled the pipe and inserted caution tape above it before we started cleaning up and dressing up around the trench. We also had hauled dirt for the site cause they said they wouldn't load us unless we hauled for them. We also had dressed up some other laterals the had already had been done and were affected by hard rain days before. We then left site for the day.

BROWN AND COWELL 11/20/10
CLIENT REPRESENTATIVE DATE

NATHAN GAVENS ENGINEER I
NAME & TITLE

Darren Goodhart 11-20-10
AEGL SITE FOREMAN #####
DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 11-22-10
Mon.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	LATERAL <u> </u> PIPE DIA. <u> </u>
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT <u> </u> LINEAR FT. <u> </u>
LINEAR FEET OF WELL COMPLETION	STATION <u> </u> TRENCH DEPTH <u> </u>
PERFORATED PIPE-DIA.	LATERAL <u> </u> PIPE DIA. <u> </u>
SOLID PIPE -DIA.	RISER HEIGHT <u> </u> LINEAR FT. <u> </u>
	STATION <u> </u> TRENCH DEPTH <u> </u>
	2" AIR LINE <u> </u> PIPE DIA. <u> </u>
	RISER HEIGHT <u> </u> LINEAR FT. <u> </u>
	STATION <u> </u> TRENCH DEPTH <u> </u>
MATERIAL USED THIS DAY	2" FORCE MAIN <u> </u> PIPE DIA. <u> </u>
	STATION <u> </u> LINEAR FT. <u> </u>
	RISER HEIGHT <u> </u> TRENCH DEPTH <u> </u>
	2" Air Line <u> </u> PIPE DIA. <u> </u>
	RISER HEIGHT <u> </u> LINEAR FT. <u> </u>
	STATION <u> </u> TRENCH DEPTH <u> </u>
	2" Force Main <u> </u> PIPE DIA. <u> </u>
	RISER HEIGHT <u> </u> LINEAR FT. <u> </u>
	STATION <u> </u> TRENCH DEPTH <u> </u>
	TIE INS <u> </u> HOURS <u> </u>
	T & M <u> </u> WELL HEADS <u> </u>

COMMENTS:

We had safety meeting and went over health and safety plan with new guys on site, Dokk and I talked with Nate and also talked to Rick do to all the rain we called it a rain day. All so we sent some of the guys home do to whether and short week for thanksgiving.

BROWN AND CALDWELL 11/22/10
CLIENT REPRESENTATIVE DATE
NATHAN GAVENS ENGINEER I
NAME & TITLE

Billy Brown 11-22-10
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 11-23-10
Tues.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	2" Force Main	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
Sunny / Clear	STATION	TRENCH DEPTH
START TIME 7:00 AM	2" Force Main	PIPE DIA.
STOP TIME 5:00 PM	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	TIE INS	HOURS
	T & M	WELL HEADS

COMMENTS:

Today we had safety meeting and talked with Chris on what was going on along with Rick also surveys' was coming out to mark out 6" collector trench and other lines. We also fuesed up 900 feet of 24" pipe and 2- 24X18 riser tee's we then finished and left site.

BROWN AND CALDWELL 11/23/10
CLIENT REPRESENTATIVE DATE
NATHAN CHENS ENGINEER I
NAME & TITLE

Billy Brown 11-23-10
AEGL SITE: SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 11-24-10

Weds.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	HEADER 24"	PIPE DIA. 24"
LINEAR FEET OF DRILLING-ABANDONMENT		LINEAR FT. 150'
LINEAR FEET OF WELL COMPLETION	STATION 11+70 to 13+20	TRENCH DEPTH 5'
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
GENERAL INFORMATION	RISER HEIGHT	LINEAR FT.
WEATHER CONDITIONS	STATION	TRENCH DEPTH
Sunny / Clear	2" Force Main	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
START TIME 7:00 AM	TIE INS	HOURS
STOP TIME 4:00 PM	T & M	WELL HEADS

COMMENTS:

We started with our safety meeting then started trenching on 24" line. After we finished trench for the day we put pipe in trench and shot at 3% or more graded it all shot in good so we started back filling trench and rolled out caution tape and set survey risers at every 50ft. We also took eye piece and shot in the road crossing. We then made sure everything was closed up and left for the holiday weekend.

BROWN AND CALDWELL 11/24/10
CLIENT REPRESENTATIVE DATE
NATHAN CHURCH ENGINEER II
NAME & TITLE

Billy Brown 11-24-10
AEGL: SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 11-29-10
Mon.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

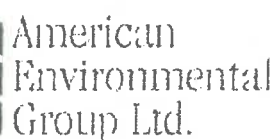
DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL 24" header	PIPE DIA. 24"
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT. 180'
LINEAR FEET OF WELL COMPLETION	STATION 13+20 to 15+00	TRENCH DEPTH 5'
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION	2" Air Line	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
sunny/clear	STATION	TRENCH DEPTH
	2" Force Main	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
START TIME 7:00 AM	TIE INS	HOURS
STOP TIME 10:30 PM	36" CMP 40ft.	
	T & M	WELL HEADS

COMMENTS:

We started the day off with our safety meeting and then went and started digging on 24" header. We then had to get with Rick and found he wanted to do with the road crossing because of the lack of cover and said to keep running the way we were and just mound up around the pipe. After everything was ok with Rick we finished trenching on 24" header and installed 40ft of 36" CMP over 24" pipe and put in in place and banded it together we then shot in pipe at 3% or more grade and it all shot in good so we started back filling trench. We put rock over top of CMP and and mounded dirt around pipe we also set survey risers at every 50ft mark and at each end of the CMP. we put caution tape down trench line and finished backfilling and left for the day.

BROWN AND CALDWELL 11/29/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER
NAME & TITLE

Billy Brown 11-29-10
AEGLE SITE: SUPERVISOR DATE



DAILY DIARY

DATE: 11/29/2010

PROJECT NAME	<u>Lorain</u>
PROJECT#	202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		H.C H#5	PIPE DIA. 6"Perf
		STATION 0+00 to 2+25	LINEAR FT. 225'
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT 6'	TRENCH DEPTH 4'
		LATERAL	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
PERFORATED PIPE-DIA.		DRAIN LINE	PIPE DIA.
		STATION	LINEAR FT.
SOLID PIPE -DIA.		RISER HEIGHT	TRENCH DEPTH
		DOWNSLOPE	PIPE DIA.
COMPLETION: (WELL NUMBERS)		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
			PIPE DIA.
		STATION	LINEAR FT.
GENERAL INFORMATION		RISER HEIGHT	TRENCH DEPTH
WEATHER CONDITIONS			
sunny			
START TIME 7:00 A.M.			
STOP TIME 10:30 P.M.		VALVE	

COMMENTS: Today we started trenching on H.C#5 trench up slope and put tee riser in at station mark 2+25 trench was a 4' cut and 6' wide trench put 6" of stone in for bottom bedding and put 6" perf pipe in trench and put 3' of stone on top of pipe and then rolled out 60 mill. Liner across trench that was 23' wide and then rolled out geo fabric over liner and then hauled in clay for cover up to tie in point.

BROWN AND CALDWELL 11/29/2010
CLIENT REPRESENTATIVE DATE

James L Rice III 11-29-10
AEGLE SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 11-30-10

PROJECT NAME Lorain L/F

tues.

PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	LATERAL PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT LINEAR FT.
	STATION TRENCH DEPTH
	2" AIR LINE PIPE DIA.
	RISER HEIGHT LINEAR FT.
	STATION TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN PIPE DIA.
	STATION LINEAR FT.
	RISER HEIGHT TRENCH DEPTH
	2" Air Line PIPE DIA.
	RISER HEIGHT LINEAR FT.
	STATION TRENCH DEPTH
GENERAL INFORMATION	2" Force Main PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT LINEAR FT.
Rain	STATION TRENCH DEPTH
START TIME 7:00 AM	TIE INS HOURS
STOP TIME 9:00 AM	T & M 2hrs. WELL HEADS

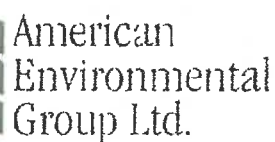
COMMENTS:

Do to the rain we called it a rain day however we talked to Rick and he want us to put in sample ports at LC-5 around the 4" ball vavle so we called a couple of guys in to install 2 sample ports do to the fact the hill was to wet and couldn't get a hoe down to it we had to hand shovel down to the valve so we could put sample ports in. After we finished with that we wrapped things up and left for the day.

We had 2 hours of T&M for the day.

BROWN AND CALDWELL 11/30/10
CLIENT REPRESENTATIVE DATE
NATHAN GWENS ENGINEER E
NAME & TITLE

Billy Brown 11-30-10
AEGL: SITE: SUPERVISOR DATE



DATE: 11-30-10 Tues.

PROJECT NAME	Lorain
PROJECT#	202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING _____		DRAIN LINE _____	PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT _____		STATION _____	LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION _____		RISER HEIGHT _____	TRENCH DEPTH _____
PERFORATED PIPE-DIA. _____		HEADER _____	PIPE DIA. _____
SOLID PIPE -DIA. _____		STATION _____	LINEAR FT. _____
COMPLETION: (WELL NUMBERS) _____		RISER HEIGHT _____	TRENCH DEPTH _____
_____		HEADER _____	PIPE DIA. _____
_____		STATION _____	LINEAR FT. _____
_____		LATERAL _____	TRENCH DEPTH _____
_____		STATION _____	PIPE DIA. _____
_____		LATERAL _____	LINEAR FT. _____
_____		STATION _____	TRENCH DEPTH _____
_____		RISER _____	PIPE DIA. _____
_____		_____	LINEAR FT. _____
_____		_____	TRENCH DEPTH _____
_____		_____	_____
GENERAL INFORMATION		CMP _____	_____
WEATHER CONDITIONS		_____	_____
Rain _____		_____	_____
START TIME _____ 7:00 A.M.		_____	_____
STOP TIME _____ 10:00 A.M.		_____	_____

COMMENTS: Today we could not work due to rain. We did expose by hand 4" valve to install sample ports.

BROWN AND CADWELL 11/30/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

James C. R. III 11-30-10
AEGLE SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12-01-10

PROJECT NAME Lorain L/F

weds.

PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	2" Force Main	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
Rain	STATION	TRENCH DEPTH
START TIME 7:00 AM	2" Force Main	PIPE DIA.
STOP TIME 9:00 AM	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	TIE INS	HOURS
	T & M 2hrs.	WELL HEADS

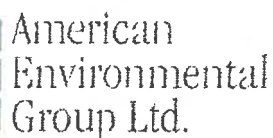
COMMENTS:

Do to all the rain we told the guys to hold back and wait until we got back with them to see if we were going to work. Me and James Rice went in and had a meeting with Chris and Rick to go over what we have got done. When we got done with the meeting we went up on the hill and it was to wet to move around so we went back down to talk to Chris and tell him that it was to wet he asked us if we could hook a drain line from the flare and also fix a 1" trans fitting so I called in 2 guys to come in and do it. We spent 2 hours on fixing the repairs. We then wrapped things up and left for the day. We had 2 hours of T&M for the day

BROWN AND CALDWELL 12/1/10
CLIENT REPRESENTATIVE DATE

Billy Brown 12-01-10
AEGL SITE: SUPERVISOR DATE

NATHAN GAVENS TANNIS
NAME & TITLE



DATE: 12-1-10 Wed.

PROJECT NAME	Lorain
PROJECT#	202-10-136

[illegible]

COMMENTS: Today we held meeting with Chris and went over the work that we had done so far and it was to wet to work so we left for the day. Chris wanted us to look into putting a drain line in the bottem of the flame restor on the flair so we went and found parts to do so and got the drain in.

BROWN AND CALDWELL 12/1/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Jane CR II 11-1-10
A/EGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12-02-10
Thurs.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

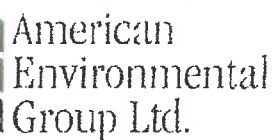
DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL <u>24" header</u>	PIPE DIA. <u>24"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT <u>6'</u>	LINEAR FT. <u>340'</u>
LINEAR FEET OF WELL COMPLETION	STATION <u>15+00 to 18+40</u>	TRENCH DEPTH <u>5'</u>
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" Force Main	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	TIE INS	HOURS
	T & M	WELL HEADS

COMMENTS:

Today we started with our safety meeting and then started trenching on 24" header. While we were trenching we installed a 24"x18" cleanout risers at high point station mark 15+83 we also installed a 24"x6" saddle tee riser for EW-52R at station mark 16+05. After we finished trenching on header we put pipe in trench and shot pipe in at 3% or more grade in all shot in good so we started back filling trench we set survey risers at every 50 ft mark and fittings we also rolled out caution tape down trench line. We then finished backfilling Trench line and caution tape the end of our trench off and covered it with tarps to cover the trash up in our trench. We then wrapped things up and left for the day.

BROWN AND CHOWEN 12/2/10
CLIENT REPRESENTATIVE DATE
NATHAN CHOWEN ENGINEER
NAME & TITLE

Billy Brown 12-02-10
AEGL SITE SUPERVISOR DATE



DATE: 12-2-10 Thur.

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HC #5	PIPE DIA. 8"
		STATION 2+25 to 2+90	LINEAR FT. 65'
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT 8'	TRENCH DEPTH 4'
		HC	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
PERFORATED PIPE-DIA.		LC	PIPE DIA.
		STATION	LINEAR FT.
SOLID PIPE -DIA.		RISER HEIGHT	TRENCH DEPTH
		HC	PIPE DIA.
COMPLETION: (WELL NUMBERS)		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		HC	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION			
WEATHER CONDITIONS			
Cloudy/Snowy			
START TIME 7:00 A.M.		ROAD CROSSING	LINEAR FT.
STOP TIME 6:30 P.M.		STATION	TRENCH DEPTH

COMMENTS: Today we exposed the tie in point for the horizontal and made the tie in with a hard weld fuse and then we put top stone to the top of trench and then put liner over the trench and put geo composited down and then started putting clay cover on top of trench line. We also have to weld boot around the riser's. Also we hauled 10 loads of clay that Rick wanted use to cover to were they had installed liner time in exposing for tie in and time for hauling extra clay was 4 hours for the tie in and 4 hours foot hauling clay.

BROWN AND CALDWELL 12/2/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I

Jan C. M. 12-2-10
AEGLE SITE SUPERVISOR DATE



American
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Group Ltd.

DAILY DAIRY

DATE: 12/3/2010

Fri.

PROJECT NAME Lorain L/F

PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL 24" header	PIPE DIA. 24"
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT. 240'
LINEAR FEET OF WELL COMPLETION	STATION 18+40 to 20+80	TRENCH DEPTH 7'
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" Force Main	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	TIE INS	HOURS
	T&M	WELL HEADS

COMMENTS:

Today we started with our safety meeting and then started trenching on 24" header. After we were done trenching we put 24" pipe in trench then shot in pipe at 3% or more grade it all shot in good so we started back filling trench. We set survey risers at every 50ft mark and rolled caution down trench line and finished back filling trench. We then covered up the end of the trench with tarps and caution taped around the open trench. We then unloaded trucks and left for the day.

BROWN AND CARROLL 12/3/10
CLIENT REPRESENTATIVE DATE

Billy Brown 12-03-10
AEGL SITE SUPERVISOR DATE

NATHAN CHENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-03-10 Fri.

PROJECT NAME Lorain
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HORIZONTAL	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT		STATION 0+00 to 0+70	LINEAR FT. 70'
LINEAR FEET OF WELL COMPLETION		RISER HEIGHT	TRENCH DEPTH 4'
PERFORATED PIPE-DIA.		Drain line	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
			TRENCH DEPTH
		Drain line	PIPE DIA.
		STATION	LINEAR FT.
			TRENCH DEPTH
		LATERAL	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		HORIZONTAL	PIPE DIA.
		STATION	LINEAR FT.
			TRENCH DEPTH
		FORCE MAIN	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		VALVE	U-Trap

COMMENTS: Today we started trenching on H.C the weather was snowing and the grown was slick had to keep pushing the truck around and had to keep scraping the ground. We put 6" of stone on bottom of trench and then put the 6" solid in and the 6" perf in trench and then put 3' of rock on top of the pipe and then we put the liner down and just backfilled around the edge of the liner.

BROWN AND CALDWELL 12/3/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I

20.70 12-3
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12/4/2010

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

Sat

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	LATERAL <u>24" header</u> PIPE DIA. <u>24"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT _____ LINEAR FT. <u>130'</u>
LINEAR FEET OF WELL COMPLETION	STATION <u>20+80 to 22+10</u> TRENCH DEPTH <u>7>11</u>
PERFORATED PIPE-DIA.	LATERAL _____ PIPE DIA. _____
SOLID PIPE -DIA.	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
	2" AIR LINE _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
MATERIAL USED THIS DAY	2" FORCE MAIN _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	2" Air Line _____ PIPE DIA. _____
GENERAL INFORMATION	RISER HEIGHT _____ LINEAR FT. _____
WEATHER CONDITIONS	STATION _____ TRENCH DEPTH _____
<u>cold/snow</u>	2" Force Main _____ PIPE DIA. _____
	RISER HEIGHT _____ LINEAR FT. _____
START TIME <u>7:00 AM</u>	STATION _____ TRENCH DEPTH _____
STOP TIME <u>4:00 PM</u>	TIE INS _____ HOURS _____
	T & M _____ WELL HEADS _____

COMMENTS:

Today we started with our safety meeting then started trenching on 24" header. After we finished trenching we installed the 24" pipe in trench and shot in pipe at 3% or more graded it all shot in fine so we started back filling trench. We set survey risers at every 50 ft and rolled caution down trench and finish backfilling trench. We also covered and sealed the end of our trench line with tarps and dirt for the weekend. We then cleaned track on the equipment and wrapped up things and left for the day.

BROWN AND CALDWELL 12/4/10
CLIENT REPRESENTATIVE DATE

NATHAN GWENS ENGINEER I
NAME & TITLE

Billy Brown 12-04-10
AEGLE SITE: SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-04-10 Sat

PROJECT NAME Lorain
PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	H.C	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT	STATION 0+70 to 1+50	LINEAR FT. 90'
LINEAR FEET OF WELL COMPLETION	RISER HEIGHT	TRENCH DEPTH 4.5 to 5'
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	STATION	LINEAR FT.
COMPLETION: (WELL NUMBERS)	Road Crossing	TRENCH DEPTH
	STATION	PIPE DIA.
	LATERAL	LINEAR FT.
	STATION	TRENCH DEPTH
	RISER HEIGHT	PIPE DIA.
	Road Crossing	LINEAR FT.
	STATION	PIPE DIA.
	Road Crossing	LINEAR FT.
	STATION	
GENERAL INFORMATION		
WEATHER CONDITIONS		
START TIME <u>7:00 A.M.</u>		
STOP TIME <u>3:00 P.M.</u>		

COMMENTS: Today we started taking of the liner were we had lifted off the trench on Friday spent 2 hours on removing dirt. We started trenching and the started putting stone in trench installed the 6" and then we put stone on top of pipe Nate said we didn't have to put the liner over the trench yet that we can just put the stone up to the trash level and then put cover the stone and then do liner and clay cover later. We fused tee's in at station mark 1+17.

BROWN AND CALDWELL 12/4/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I

12-4-10
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12-6-10
Mon.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL 24" header	PIPE DIA. 24"
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT. 240'
LINEAR FEET OF WELL COMPLETION	STATION 22+10 to 24+50	TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	2" Force Main	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
cold/snow	STATION	TRENCH DEPTH
START TIME 7:00 AM	TIE INS	HOURS
STOP TIME 7:30 PM	T & M	WELL HEADS Installed 3

COMMENTS:

Today we started with our safety meeting then started trenching on 24" header. After we finished trenching we installed the 24" pipe in trench and shot in pipe at 3% or more graded it all shot in fine so we started back filling trench. We set survey risers at every 50 ft and rolled caution down trench and finish backfilling trench. We also installed new well heads at EW-112S EW-113S and EW-114S, this was all done after gas plant was notified and valve was shut off by SCS field services after installing well heads SCS was notified and valve was opened back up and gas plant was then told valve was back open.

BROWN AND CALDWELL 12/6/10
CLIENT REPRESENTATIVE DATE
NATHAN GAVENS ENGINEER I
NAME & TITLE

Billy Brown 12-04-10
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-06-10 Mon.

PROJECT NAME Lorain
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		H.C #4	PIPE DIA. 6"Perf
		STATION 1+50 to 2+50	LINEAR FT. 100'
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT	TRENCH DEPTH 5>7
		LATERAL	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
PERFORATED PIPE-DIA.		DRAIN LINE	PIPE DIA.
		STATION	LINEAR FT.
SOLID PIPE -DIA.		RISER HEIGHT	TRENCH DEPTH
		DOWNSLOPE	PIPE DIA.
COMPLETION: (WELL NUMBERS)		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		STATION	PIPE DIA.
		RISER HEIGHT	LINEAR FT.
			TRENCH DEPTH
GENERAL INFORMATION			
WEATHER CONDITIONS			
Snowing			
START TIME 7:00 A.M.			
STOP TIME 6:00 P.M.		VALVE	

COMMENTS: Today we started of on H.C#4 at station mark 1+50 started trenching and started getting deep in the cut and was not going to meet were the 24" header was going to be so Joey got with Chris and the talk about what to do and decided to just run the perf in the trench and bring it back up to a 4' cut and then pull the lateral back out and start it at a 1' cut to the 24" header. We the put 6" of stone on bottom of trench and then ran 6" perf pipe in trench and put stone up to the trash and then put cover over the stone.

BROWN AND CALDWELL 12/6/10
CLIENT REPRESENTATIVE DATE

D. J. C. 12-6-10
AEGL SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12/7/2010

Tues.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

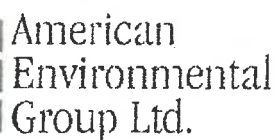
DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL <u>24" header</u>	PIPE DIA. <u>24"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT. <u>307'</u>
LINEAR FEET OF WELL COMPLETION	STATION <u>24+50 to 27+57</u>	TRENCH DEPTH <u>5'</u>
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	2" Force Main	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
<u>cold/snow</u>	STATION	TRENCH DEPTH
START TIME <u>7:00 AM</u>	TIE INS	HOURS
STOP TIME <u>4:30 PM</u>	T & M	WELL HEADS

COMMENTS:

Today we started with our safety meeting then started trenching on 24" header. While we were trenching we installed a 24"x6" saddle tee for EW-10R at station mark 26+47. We also installed a 24"x 18" cleanout riser at station mark 27+57. After we finished trenching we put the 24" pipe in trench line and shot in pipe at 3% or more grade it all shot in good so we started backfilling trench. We set survey risers at every 50ft mark and fittings also rolled caution tape down trench line and finished back filling. We then covered end of trench with tarp and caution taped off open hole at the end of the trench. We then unloaded trucks and cleaned out tracks on hoes and left for the day.

BROWN AND CROWE 12/7/10
CLIENT REPRESENTATIVE DATE
NATHAN GILLES ENGINEER I
NAME & TITLE

Billy Brown 12-07-10
AEGL SITE SUPERVISOR DATE



DATE: 12-07-10 Tues.

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HC #4	PIPE DIA. 6"
		STATION 0+00 to 2+50	LINEAR FT. 250'
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT 4'	TRENCH DEPTH 0>4'
		HEADER	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER	PIPE DIA.
		STATION	LINEAR FT.
SOLID PIPE -DIA.		RISER HEIGHT	TRENCH DEPTH
		LATERAL	LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		LATERAL	PIPE DIA.
		STATION	LINEAR FT.
		RISER	TRENCH DEPTH
GENERAL INFORMATION		CMP	
WEATHER CONDITIONS			
Snow			
START TIME 7:00 A.M.			
STOP TIME 5:30 A.M.			

COMMENTS: Today we regraded the 6" solid pipe for the H.C#4 at 3% grade and started backfilling the trench.

BROWN AND CALDWELL 12/7/10
CLIENT REPRESENTATIVE DATE
NATHAN GWENS ENGINEER I
NAME & TITLE

DN 12-7-10
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12-8-10
Wen.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL 24" header	PIPE DIA. 24"
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT. 233'
LINEAR FEET OF WELL COMPLETION	STATION 27+57 to 29+90	TRENCH DEPTH 5'
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	2" Force Main	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
cold/snow	STATION	TRENCH DEPTH
START TIME 7:00 AM	TIE INS	HOURS
STOP TIME 5:00 PM	T & M	WELL HEADS 3

COMMENTS:

Today we held safety meeting and began work on 24" header we also installed well heads at 116S 117S and at 118S before we installed well heads we notified SCS. After installing was made SCS was again notified and they made there adjustments in field. After we were done trenching we put 24" pipe in trench and shot in pipe at 3% or more grade it all shot in fine so we started backfilling trench we set survey risers at ever 50ft mark and rolled caution tape down trench line then we finished up back filling trench. We then unloaded truck and cleaned out track on the equipment and then left for the day.

BROWN AND CALDWELL 12/8/10
CLIENT REPRESENTATIVE DATE
NATHAN GUEDES ENGINEER I
NAME & TITLE

Billy Brown 12-8-10
AEGL: SITE: SUPERVISOR DATE



American.
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-08-10 Wen.

PROJECT NAME: Lorain
PROJECT#: 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		H.C Lateral	PIPE DIA. 6"solid
LINEAR FEET OF DRILLING-ABANDONMENT		STATION 2+50 to 3+80	LINEAR FT. 130'
LINEAR FEET OF WELL COMPLETION		RISER HIEGHT	TRENCH DEPTH 4'
PERFORATED PIPE-DIA.		H.C #4 Perf	PIPE DIA. 6"
SOLID PIPE -DIA.		STATION 2+50 +3+80	LINEAR FT. 130'
COMPLETION: (WELL NUMBERS)		RISER HIEGHT	TRENCH DEPTH 4'
		HEADER	PIPE DIA.
		STATION	LINEAR FT.
		HEADER	PIPE DIA.
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
		DOWNSLOPE	PIPE DIA.
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
		ROAD CROSSING	PIPE DIA.
		STATION	LINEAR FT.
GENERAL INFORMATION			
WEATHER CONDITIONS			
Snowy			
START TIME 7:00 A.M.			
STOP TIME 6:30 A.M.		VALVE	

COMMENTS: Today we trenched more on H.C #4 and we exposed the 24" header were tie in going to be we spent 3 hours digging around the 24" and finished the trench going up slope to H.C #1 we put 6" of stone in the bottom of trench and then put the 6" solid in trench and the 6" perf and then put the stone over the pipe and put cover trench line.

BROWN AND CALDWELL 12/8/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Dan [Signature] 12-8-10
AEGLE SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12-9-10

PROJECT NAME Lorain L/F

Thur.

PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	2" Force Main	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
cold/sunny	STATION	TRENCH DEPTH
START TIME 7:00 AM	TIE INS	HOURS
STOP TIME 5:30 PM		
	T & M 10.5 hours	WELL HEADS

COMMENTS:

Today we started our safety meeting and then went over the hill to the 24" header where we began and had to dig up pipe to install a 24"X6" saddle tee that Rick and Chris had requested so they could hook up 6" lateral coming from EW-163R to the new 24" header. The tee was never in our scope of work so there for we had 10.5 hours of T&M work for having to build a road so we could get the trucks down the slope. After we finished that we then had to expose pipe and dig it out enough so we could put 24" machine in ditch so we could welded tee into our line. We also had to get with SCS and have them close valves so we coul cut 6" lateral that was running over our 24" pipe. After they closed the valves we cut out 6" pipe and welded the 24"X6" tee into line at station mark 2+07. After we finished putting in tee we repaired 6" lateral and got back with SCS so they could open back up valves. We then hauled dirt to trench and back backfill trench line. We then cleaned tracks on all equipment and wrap things up and left for the day. We used 2-6"EFC to repair 6" lateral but the 6" EFC was just a quick repair to get them back on line we will be cutting them out when we tie the 6" lateral into our 24" when it gets tied in.

BROWN AND CALDWELL 12/9/10
CLIENT REPRESENTATIVE DATE

Billy Brown 12-9-10
AEGL SITE SUPERVISOR DATE

NATHAN GUENIS ENGINEER II
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-9-10 Thur.

PROJECT NAME Lorain
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HC #2 <u>perf</u>	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT		STATION <u>0+00 to 0+53</u>	LINEAR FT. 53'
LINEAR FEET OF WELL COMPLETION		RISER HEIGHT <u>8'</u>	TRENCH DEPTH <u>7'</u>
PERFORATED PIPE-DIA.		HC #1	PIPE DIA. 6"
SOLID PIPE -DIA.		STATION <u>0+00 to 1+12</u>	LINEAR FT. 112'
COMPLETION: (WELL NUMBERS)		RISER HEIGHT <u>8'</u>	TRENCH DEPTH <u>7'</u>
		LC	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		HC	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		HC	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION			
WEATHER CONDITIONS			
<u>Cloudy/Snowy</u>			
START TIME <u>7:00 A.M.</u>			
STOP TIME <u>7:00 P.M.</u>		ROAD CROSSING	LINEAR FT.
		STATION	TRENCH DEPTH

COMMENTS: Today we finished installing the 6" perf and the 6" solid for H.C #1 tee off the riser for H.C #1 and ran just 6" perf 112 feet down slope put bottom stone in and put 6" perf in and put the stone in to top of trash and back filled. Also we did liner boot with 1 tech and 1 labor and spent 9 hours on doing boot's. Also we hauled clay in for H.C #4 and we also place some clay down and spent 3 hour's with 1 operator and 1 excavator and 2 725 rock truck's.

BERNARD CALDWELL 12/9/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I

D. A. C. 12-9-10
AEGL SITE SUPERVISOR DATE



DAILY DAIRY

DATE: Fri. 12-10-10

PROJECT NAME LORAIN L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
	STATION _____ TRENCH DEPTH _____
	LATERAL # <u>EW-119S</u> PIPE DIA. <u>6"</u>
	STATION <u>0+0 to 0+22</u> LINEAR FT. <u>22'</u>
	TRENCH DEPTH <u>4'</u>
	LATERAL: # <u>EW-146R</u> PIPE DIA. <u>6"</u>
	STATION <u>0+0 to 0+43</u> LINEAR FT. <u>43'</u>
	TRENCH DEPTH <u>4'</u>
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	TIE INS <u>2-6" 5-HOURS</u> VALVES _____
	T&M

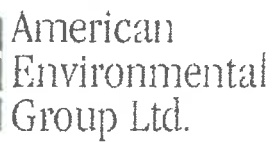
COMMENTS:

Today we held safety meeting and began working on EW-119S digging up tie in point and making up 6" lateral and air testing air test was put on for 4- hours for EW-119S and for EW-146R. Lateral was then installed for EW-119S and tie in was made we had 2- hours on this tie in. We shot grade on pipe for grade assurance and backfilled putting in survey risers and rolled out caution tape we then moved to EW-146R and exposed tie in point and trenched lateral. This tie in took 3-hours after we were done we shot grade on pipe at 3% and put in survey risers rolled out caution tape and backfilled trench. We also notified SCS tie ins were done so they could open up there valves. We then finished up for the day and prepared for road crossing on Saturday and left site for the day.

BROWN AND CROWELL 12/12/10
CLIENT REPRESENTATIVE DATE

Billy Brown 12-10-10
AEGL Site DATE

NATHAN GUKAS ENGINEER I
NAME & TITLE



DATE: 12-10-10 Fri.

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HORIZONTAL	PIPE DIA.
		STATION	LINEAR FT.
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT	TRENCH DEPTH
		Drain line	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
			TRENCH DEPTH
PERFORATED PIPE-DIA.		Drain line	PIPE DIA.
		STATION	LINEAR FT.
SOLID PIPE -DIA.			TRENCH DEPTH
COMPLETION:	(WELL NUMBERS)	LATERAL	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		HORIZONTAL	PIPE DIA.
		STATION	LINEAR FT.
			TRENCH DEPTH
GENERAL INFORMATION		FORCE MAIN	PIPE DIA.
		STATION	LINEAR FT.
WEATHER CONDITIONS		RISER HEIGHT	TRENCH DEPTH
sunny		LATERAL	PIPE DIA.
thawing		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME	7:00 A.M.		
STOP TIME	6:00 P.M.	VALVE	U-Trap

COMMENTS: Today we exposed the existing 24" header for the tie-in from the horizontal. We found 2 4" lines and 2 2" lines that are in the way of excavating the header directly. We had to go wider and deeper to do what we needed tie-in rescheduled for staurday. We placed more geo and hauled more clay for backfilling the trenches. We spent 10 hrs on tie-in.

BROWN AND CALDWELL 12/10/10
CLIENT REPRESENTATIVE DATE
NATHAN GWENS ENGINEER I

072-12-10-10
AEGLE SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12-11-10

PROJECT NAME Lorain L/F

Sat.

PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	HEADER 24"	PIPE DIA. 24"
LINEAR FEET OF DRILLING-ABANDONMENT		LINEAR FT. 170'
LINEAR FEET OF WELL COMPLETION	STATION 29+90 to 31+60	TRENCH DEPTH 5'
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
WEATHER CONDITIONS Sunny / Clear	2" Force Main	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
START TIME 7:00 AM	TIE INS	HOURS
STOP TIME 5:00 PM	T & M	36" CMP 80'

COMMENTS:

We held safety meeting and started trenching on 24" header and road crossing, we installed 36" cmp over 24" pipe and installed into trench. We then shot pipe for grade assurance and began backfilling road crossing with number 2 stone and brick also trench was backfilled with clean fill. Survey risers was installed and caution tape put down we finished up and left site for the day.

BROWN AND CALDWELL 12/11/10
CLIENT REPRESENTATIVE DATE

Billy Brown 12-11-10
AEGL SITE SUPERVISOR DATE

NATHAN GUNNE CARPENTER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-04-10 Sat.

PROJECT NAME Lorain
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		H.C HC 2-4	PIPE DIA. 6" perf
LINEAR FEET OF DRILLING-ABANDONMENT		STATION 3+80 to 3+99	LINEAR FT. 19'
LINEAR FEET OF WELL COMPLETION		RISER HEIGHT 5'	TRENCH DEPTH 4'
PERFORATED PIPE-DIA.		LATERAL HC 2-4	PIPE DIA. 6"
SOLID PIPE -DIA.		STATION 3+80 to 4+21	LINEAR FT. 41'
COMPLETION: (WELL NUMBERS)		RISER HEIGHT 5'	TRENCH DEPTH 4'
		Road Crossing	PIPE DIA.
		STATION	LINEAR FT.
			TRENCH DEPTH
		LATERAL	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		Road Crossing	PIPE DIA.
		STATION	LINEAR FT.
		Road Crossing	PIPE DIA.
		STATION	LINEAR FT.
GENERAL INFORMATION			
WEATHER CONDITIONS			
START TIME <u>7:00 A.M.</u>			
STOP TIME <u>6:00 P.M.</u>			

COMMENTS: Today we did the tie-in to the existing 24" header pipe for the vacuum to HC 1-4. We used 2 24" flanges 24"x 6"x24" tee in the header we did 24" ditch fuse. We used a 6"x6"x4" tee on the port of the 24"x6" tee to tie our line into the port side and to tie the vacuum line to the clean out riser to the other side 4". We shot the pipe and backfilled what we could. In the vacuum line we risers tees at 3+82 for HC 2 and a tee at 3+99 for the connection to HC 1. We used rock out passed the the tees for HC 1. We put liner and geo from HC 2 out passed the tees for HC 1. We spent all day on the ie-in 10 hrs. We put an air test on the vacuum pipe for HC 1-4 and it passed. Test was from 8:00 to 12:00.

BROWN AND CALDWELL 12/11/10
CLIENT REPRESENTATIVE DATE
NATHAN GUKINS ENGINEER I

DAE 12-11-10
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-13-10 mon.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT		STATION	LINEAR FT.
LINEAR FEET OF WELL COMPLETION			TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
			TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
		STATION #	LINEAR FT.
			TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

COMMENTS:

Today we held our safety meeting the started digging up around the 24" tie in. exposing around electrial conduit,air and forcemain lines, and 24" pipe.

BROWN AND CALDWELL 12/13/10
CLIENT REPRESENTATIVE DATE
NATHAN CHUENS ENGINEER I
NAME & TITLE

Darren Goodhart 12-13-10
AEGL SITE FOREMAN #####
DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-14-10 Tues.

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT.
LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.			LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES
GENERAL INFORMATION			
WEATHER CONDITIONS			
windy/cloudy			
START TIME <u>7:00 A.M.</u>			
STOP TIME <u>5:30 P.M.</u>			

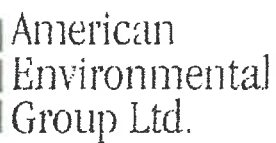
COMMENTS:

Today we held our safety meeting and then started digging up around the 24" tie-in on the east slope. We had dug up around the old 24" valve that is getting replaced. We also started trenching on the 24" header pipe heading toward the road crossing, the trenching was started about 11 am and was stopped about 1 pm after finding more existing pipes crossing into our path of trenching. We then went back to cleaning around the tie in point exposing around the electrical conduit. We also had started pre-fabing the 24" tee's and flanges for this tie-in.

BROWN AND OGDEN 12/14/10
CLIENT REPRESENTATIVE DATE

NATHAN GUESS ENGINEER E
NAME & TITLE

Darren Goodhart 12-14-10
AEGL SITE FOREMAN #####
DATE



DATE: 12-14-10 Tues.

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HC	PIPE DIA.
		STATION	LINEAR FT.
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT	TRENCH DEPTH
		HEADER	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER	PIPE DIA.
		STATION	LINEAR FT.
SOLID PIPE -DIA.		RISER HEIGHT	TRENCH DEPTH
		LATERAL	LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		LATERAL	PIPE DIA.
		STATION	LINEAR FT.
		RISER	TRENCH DEPTH
GENERAL INFORMATION		CMP	
WEATHER CONDITIONS			
Snow			
START TIME 7:00 A.M.			
STOP TIME 5:30 A.M.			

COMMENTS: Today we cut for the liner over HC 4-1 and placed some liner. We hauled in clay to cover the liner and hauled out the dirt that was frozen. We fused up the pipe for HC 6-11.

BROWN AND CROWELL 12/14/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER
NAME & TITLE

AEGL SITE SUPERVISOR 12-14-10



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-15-10 wed.

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER # <u>24"</u>	PIPE DIA. <u>24"</u>
LINEAR FEET OF DRILLING-ABANDONMENT		STATION <u>31+60 to 34+48</u>	LINEAR FT. <u>288'</u>
LINEAR FEET OF WELL COMPLETION			TRENCH DEPTH <u>5'</u>
PERFORATED PIPE-DIA.		HEADER # _____	PIPE DIA. _____
SOLID PIPE -DIA.		STATION _____	LINEAR FT. _____
			TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS)		SUBHEADER # _____	PIPE DIA. _____
		STATION # _____	LINEAR FT. _____
			TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS _____	VALVES _____

GENERAL INFORMATION

WEATHER CONDITIONS

cloudy

START TIME 7:00 A.M.

STOP TIME 6:00 P.M.

COMMENTS:

Today we started trenching from the 24" header tie in toward the road crossing on the east slope. While we were trenching for the 24" header we finished fabing up the 24" tee's and flanges for the tie in point. We had fused in 288 feet of 24" header pipe and put a flange and blind on the end for the future air test. We had shot the pipe in and started backfilling the pipe installing caution tape 1 foot above the header and finished out the day with cleanup and dressing up the trench line.

BROWN AND CALDWELL 12/15/10
CLIENT REPRESENTATIVE DATE

NATHAN BROWN ENGINEER I
NAME & TITLE

Darren Goodhart 12-15-10
AEGLE SITE FOREMAN ~~#####~~ DATE



DATE: 12-15-10 Wed.

[illegible]

COMMENTS: Today we booted around HC 2 and shot the area for HC 6-11. We started cutting the bench for the HC. We fabricated fittings and put an airtest on 5 laterals. We cut and put a 4" tee in the vacuum line for LR 3 for the riser to HC 11. We spent 4 hrs on the tie-in. We ran the line to the stake for HC 11. We shot the pipe and backfilled it. We backfilled sections of bench we made due to it possibly having odor.

P. N. S. 12-15-10
AEGLE SITE SUPERVISOR DATE

NATHAN GREENS ENGINEER I
NAME & TITLE



**American
Environmental
Group Ltd.**

DAILY DIARY

DATE: 12-16-10 thur.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT		STATION	LINEAR FT.
LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
		STATION	TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
		STATION #	LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

GENERAL INFORMATION

WEATHER CONDITIONS

START TIME 7:00 A.M.

STOP TIME 4:30 P.M.

COMMENTS:

Today we dug up and exposed around the 18" and 12" on the west slope. We also fabed up the 18"x12" tee for the tie-in as well as added 18" pipe to get to the 24" flange where the valve is going to be. We also aired up the 24" header which was 3,448 feet in length. The air test was started at 9:23 am and was released at 1:30 pm by Nate who had passed the test. We also had moved all parts and hardware to the location at the end of the 24" as it will be tied in on Friday morning.

BROWN AND CALDWELL 12/16/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Darren Goodhart 12-16-10
AEGLE SITE FOREMAN #####
DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-16-10 Thur.

PROJECT NAME Lorain
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING	HC HC 11	PIPE DIA. 6" perf	
LINEAR FEET OF DRILLING-ABANDONMENT	STATION 0+00 to 1+30	LINEAR FT. 130'	
LINEAR FEET OF WELL COMPLETION	RISER HEIGHT 11'	TRENCH DEPTH 6-8'	
PERFORATED PIPE-DIA.	HC	PIPE DIA.	
SOLID PIPE -DIA.	STATION	LINEAR FT.	
COMPLETION: (WELL NUMBERS)	RISER HEIGHT	TRENCH DEPTH	
	LC	PIPE DIA.	
	STATION	LINEAR FT.	
	RISER HEIGHT	TRENCH DEPTH	
	HC	PIPE DIA.	
	STATION	LINEAR FT.	
	RISER HEIGHT	TRENCH DEPTH	
	HC	PIPE DIA.	
	STATION	LINEAR FT.	
	RISER HEIGHT	TRENCH DEPTH	
	LATERAL	PIPE DIA.	
	STATION	LINEAR FT.	
	RISER HEIGHT	TRENCH DEPTH	
GENERAL INFORMATION			
WEATHER CONDITIONS			
Sunny			
START TIME 7:00 A.M.			
STOP TIME 5:30 P.M.			
	ROAD CROSSING	LINEAR FT.	
	STATION	TRENCH DEPTH	

COMMENTS: Today we trenched from the riser for HC 11 toward HC 10. We dug down to the trash + 2' and put 6" of rock the pipe then rock over the pipe. We put liner over the trench, geo net over the liner, and clay over the liner. We backfilled what we could. We covered the trench where we stopped with liner and covered the ends of the liner with dirt.

BROWN AND CALDWELL 12/16/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I

P. A. C. 12-16-10
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-17-10 fri.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER # <u>18"</u>	PIPE DIA. <u>18"</u>
LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT. <u>68'</u>
LINEAR FEET OF WELL COMPLETION		STATION <u>0+00 to 0+68</u>	TRENCH DEPTH <u>5'-7'</u>
PERFORATED PIPE-DIA.		HEADER # <u>12"</u>	PIPE DIA. <u>12"</u>
SOLID PIPE -DIA.			LINEAR FT. <u>6'</u>
		STATION <u>0+00 to 0+06</u>	TRENCH DEPTH <u>5'-7'</u>
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
			LINEAR FT.
		STATION #	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES <u>12" and 24"</u>

GENERAL INFORMATION

WEATHER CONDITIONS

sunny

START TIME 7:00 A.M.

STOP TIME 7:00 P.M.

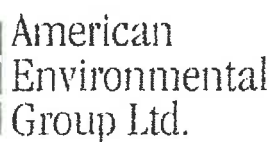
COMMENTS:

Today we started getting ready for the tie-in on the 24" header from the 18" existing header. John from SCS had shut all valves to that tie-in point at 10 am at which time we had started cutting out the 12" 90 that was attached to the 18" header. We had put an 18" tee onto the old 18" header and on the port side of the 18" tee which was reduced down to a 12" flange for a 12" valve. We also had butt fused a 12" flange to the existing pipe for the same valve. We had extended the 18" header 60 feet from the tee toward the 24" header at the end of the 18" header we installed a 24x18 reducer and a 24" flange for the 24" valve. We had bolted in 1- 24" valve and its valve head extension as well as a 12" valve and its valve head extension. All of the tie in was backfilled and cleaned up before leaving site. Parts Used: 1-24" flange 1-24x18 reducer, 1-18" 22 degree elbow, 1-18" tee, 1-18x12 reducer, 2-12" flanges, 1-24" valve, 1-12" valve

BROWN AND CALDWELL 12/17/10
CLIENT REPRESENTATIVE DATE

NATHAN GUENS ENGINEER I
NAME & TITLE

Darren Goodhart 12-17-10
AEGLE SITE FOREMAN DATE



DATE: 12-17-10 Fri.

PROJECT NAME	<u>Lorain</u>
PROJECT#	202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING _____		HORIZONTAL HC 10 DS _____	PIPE DIA. 6" solid
		STATION 0+00 to 1+37 _____	LINEAR FT. 137'
LINEAR FEET OF DRILLING-ABANDONMENT _____		RISER HEIGHT _____	TRENCH DEPTH 0-4'
		Drain line HC _____	PIPE DIA. 6" perf
LINEAR FEET OF WELL COMPLETION _____		STATION 1+30 to 2+60 _____	LINEAR FT. 130'
			TRENCH DEPTH 4-6'
PERFORATED PIPE-DIA. _____		Drain line _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
SOLID PIPE -DIA. _____			TRENCH DEPTH _____
COMPLETION: (WELL NUMBERS) _____		LATERAL _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		HORIZONTAL _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
			TRENCH DEPTH _____
GENERAL INFORMATION		FORCE MAIN _____	PIPE DIA. _____
WEATHER CONDITIONS _____		STATION _____	LINEAR FT. _____
sunny		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
START TIME _____ 7:00 A.M.		t 238 _____	
STOP TIME _____ 6:30 P.M.		VALVE _____	U-Trap _____

COMMENTS: Today we trenched and installed the horizontal and the down slope HC 10. We installed a 6" tee at 2+38 in the perforated pipe for the connection to HC 10 downslope. We put rock in the trench and and pipe. We marked out the pipe and put rock over the pipe. We rolled out liner over the trench and rolled out geo net over the liner. We hauled in clay to cover the liner. We backfilled what we could and sealed off what we could with the time we had. We started the day with a ditch fuse.

BROWN AND CALDWELL 12/17/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I




AEGL SITE SUPERVISOR
 DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12-20-10
Mon.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" Force Main	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	TIE INS 1- 6"	HOURS 4
	T & M 2- Hours	Regrade on 6" line

COMMENTS:

Today we began work on 6" tie in at 24X 6 tee, we had to expose tie in and trench back on 6" line as we fowled 6" back we found belly in 6" line. So we went back 80 feet and put pipe back on grade we then finished working on 6" tie in and shot pipe and tie in point for grade assurance. We also worked on fabricating 24" pipe and exposing around tie in area for 24" connection to be made.

BROWN AND COLDWELL 12/20/10
CLIENT REPRESENTATIVE DATE
NATHAN GIBENS ENGINEER I
NAME & TITLE

Billy Brown 12-20-10
AEGLE SITE SUPERVISOR DATE



DATE: 12-20-10 Mon.

PROJECT NAME	Lorain
PROJECT#	202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		H.C HC 10-9	PIPE DIA. 6" perforated
		STATION 2+60 to 4+00	LINEAR FT. 140'
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT	TRENCH DEPTH 6-8'
		LATERAL	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
PERFORATED PIPE-DIA.		DRAIN LINE	PIPE DIA.
		STATION	LINEAR FT.
SOLID PIPE -DIA.		RISER HEIGHT	TRENCH DEPTH
		DOWNSLOPE	PIPE DIA.
COMPLETION: (WELL NUMBERS)		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
			PIPE DIA.
		STATION	LINEAR FT.
GENERAL INFORMATION		RISER HEIGHT	TRENCH DEPTH
WEATHER CONDITIONS			
Sunny			
START TIME 7:00 A.M.			
STOP TIME 6:30 A.M.		VALVE	

COMMENTS: Today we trenched and installed the horizontal between HC 10 and HC 9. We put down rock and installed the pipe. We marked it out and put rock over the pipe. We rolled out liner over the trench and geo net over the liner. We hauled in clay to fill the trench and we cleaned up what we could. We started the day with a ditch fuse.

BROWN AND CALDWELL 12/20/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

1220-10 Da [Signature]
AEGLE SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12-21-10

Tues.

PROJECT NAME Lorain L/F

PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	SUB HEADER west side 6"	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT	EW- 150 Riser at tee 0+16	LINEAR FT. 330'
LINEAR FEET OF WELL COMPLETION	STATION 0+0 to 3+30	TRENCH DEPTH
PERFORATED PIPE-DIA.	LATERAL EW-149	PIPE DIA. 6"
SOLID PIPE -DIA.	LATERAL TEE At 2+63	LINEAR FT. 59'
	STATION 0+0 to 0+59	TRENCH DEPTH 3>4
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
GENERAL INFORMATION	2" Force Main	PIPE DIA.
WEATHER CONDITIONS	RISER HEIGHT	LINEAR FT.
cold/snow	STATION	TRENCH DEPTH
START TIME 7:00 AM	2" Force Main	PIPE DIA.
STOP TIME 6:00 PM	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	TIE INS	HOURS
	T& M	WELL HEADS 1- At EW-52R

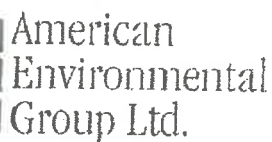
COMMENTS:

Today we had safety meeting and we had meeting with Rick and Chris and Justin with SCS about 24" tie in after discussion we agreed on tie in for Tuesday 12-28-10 We then began working on cleaning up at 24" tie in point moving everything out of area so we could backfill as much as possible and put liner in trench and also over top of excavation and placed dirt around edges. We also installed a 2" tee with a 1" transitions fitting with a fitting so site can hook up to for air for there mister. We also pulled all riser pipes that Nate had marked in orange paint and filled in holes with clean dirt also all existing hoels was filled in and compacted with hoe bucket. We also put air test on 6" pipe and 6" lateral for EW-50 and EW-49 air test was on for 4- hours and checked and past by Nate QAC. We then installed pipe at 3% grade or better put survey risers at 50 foot marks and covered pipe. Also installed 1-well head EW-52R.

BROWN AND CALDWELL 12/21/10
CLIENT REPRESENTATIVE DATE

Billy Brown 12-21-10
AEGL SITE: SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



DATE: 12-21-10 Tues.

Lorain

202-10-136

COMMENTS: Today we trenched and installed the hc from between 10 and 9 past 9 toward 8. We installed a 6" tee at 4+97 for the downslope conection. We put 20' of solid pipe on the port side of the tee to get us out past the leachate line and the conduits. We put rock in the trench then pipe. We marked out the pipe and put rock over the pipe. We rolled out liner over the trench and rolled out geo net over the liner. We hauled in clay to cover the liner and we cleaned up what we could. We started the day with a ditch fuse.

Da AC 12-27-10
AEGL SITE SUPERVISOR DATE

NATHAN GUNNS ENGINEER I



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12-22-10

PROJECT NAME Lorain L/F

Wen.

PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	SUB-HEADER 6"	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT	RISER HEIGHT	LINEAR FT. 190'
LINEAR FEET OF WELL COMPLETION	STATION 3+30 to 5+20	TRENCH DEPTH At tie in 7'
PERFORATED PIPE-DIA.	LATERAL	PIPE DIA.
SOLID PIPE -DIA.	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
	2" AIR LINE	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
MATERIAL USED THIS DAY	2" FORCE MAIN	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	2" Air Line	PIPE DIA.
GENERAL INFORMATION	RISER HEIGHT	LINEAR FT.
WEATHER CONDITIONS	STATION	TRENCH DEPTH
cold/snow	2" Force Main	PIPE DIA.
	RISER HEIGHT	LINEAR FT.
	STATION	TRENCH DEPTH
START TIME 7:00 AM	TIE INS 6" into 18" 7'	HOURS 4
STOP TIME 7:00 PM		
	T & M	

COMMENTS:

We held safely meeting and began work on 6" line on west side for EW-150 and EW-149 to 18" tie in, this was done with 3-guys

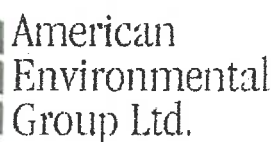
1-Excaveter and operator. We spent 4 hours on tie in we also had to pull all survey risers for Rick and had to load and haul 15 loads

of dirt around top of bowl area to cover trash that was in this area. We then finished up and left site till Monday

BROWN AND CHARWELL 12/22/10
CLIENT REPRESENTATIVE DATE

Billy Brown 12-22-10
AEG: SITE: SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



DATE: 12-27-10 Mon.

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		H.C HC 8-7	PIPE DIA. 6" perforated
		STATION 7+40 to 8+40	LINEAR FT. 100'
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT	TRENCH DEPTH 6-8'
		LATERAL	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
PERFORATED PIPE-DIA.		DRAIN LINE	PIPE DIA.
		STATION	LINEAR FT.
SOLID PIPE -DIA.		RISER HEIGHT	TRENCH DEPTH
		DOWNSLOPE	PIPE DIA.
COMPLETION: (WELL NUMBERS)		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
			PIPE DIA.
		STATION	LINEAR FT.
GENERAL INFORMATION		RISER HEIGHT	TRENCH DEPTH
WEATHER CONDITIONS			
Sunny			
START TIME 7:00 A.M.			
STOP TIME 6:00 A.M.		VALVE	

COMMENTS: Today we trenched and installed the horizontal between HC 8 and HC 7. We put down rock and installed the pipe. We marked it out and put rock over the pipe. We rolled out liner over the trench and geo net over the liner. We hauled in clay to fill the trench and we cleaned up what we could. We started the day with a ditch fuse. We installed a riser tee at 7+40 for HC 8 wellhead. We booted around the well riser and the 4" vacuum riser.

Dr. PC 12-27-10
AEGL SITE SUPERVISOR DATE

NATHAN GUNNS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: 12-27-10

PROJECT NAME LORAIN L/F
PROJECT# 202-10-136

Mon.

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT	LINEAR FT.
LINEAR FEET OF WELL COMPLETION	TRENCH DEPTH
PERFORATED PIPE-DIA.	PIPE DIA.
SOLID PIPE -DIA.	LINEAR FT.
	TRENCH DEPTH
	LINEAR FT.
	LINEAR FT.
	TRENCH DEPTH
MATERIAL USED THIS DAY	PIPE DIA.
	LINEAR FT.
	TRENCH DEPTH
	PIPE DIA.
	LINEAR FT.
	TRENCH DEPTH
GENERAL INFORMATION	PIPE DIA.
WEATHER CONDITIONS	LINEAR FT.
Sunny.	TRENCH DEPTH
	PIPE DIA.
START TIME 7:00 AM	LINEAR FT.
	TRENCH DEPTH
STOP TIME 6:00PM	PIPE DIA.
	LINEAR FT.
	TRENCH DEPTH
	TIE INS
	SAND
	T & M
	VALVES
	DIRT
	TRASH

COMMENTS:

Today we held safety meeting and we had to remove liner from 24" tie in point and expose every thing again for tie in Tuesday.

We also got things prepared for tie in by fabing up parts to be used and worked on 24" flanges and preparing valves and bolt kits.

BROWN AND CASWELL 12/27/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER 2
NAME & TITLE

Billy Brown 12-27-10
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 12-28-10 Tues.

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER # 24"	PIPE DIA. 24"
LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT. 32'
LINEAR FEET OF WELL COMPLETION		STATION 0+0 to 0+32	TRENCH DEPTH 5'
PERFORATED PIPE-DIA.		HEADER # 18"	PIPE DIA.
SOLID PIPE -DIA.			LINEAR FT. 18'
		STATION 0+37 to 0+55	TRENCH DEPTH 5'
COMPLETION: (WELL NUMBERS)		HEADER # 24"	PIPE DIA. 24"
			LINEAR FT. 43'
		STATION # 34+10 to 34+53	TRENCH DEPTH 5'
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

GENERAL INFORMATION

WEATHER CONDITIONS

sunny/windy

START TIME 7:00 A.M.

STOP TIME 7:00 P.M.

COMMENTS:

Today we started on the 24" tie in on the east slope. We installed 2- 24" tee's, 11-24" flanges/w bolt kits, 2-24" valves, and 1-24x18 reducer, as well as an 18" 45 degree elbow. We had butt fused the 24x18 reducer to the existing 18" header using a 18" 45 elbow at station 0+37 the 24" flange connection was at 0+31 this was connected to the new 24" tee that points toward phase 3's 24" header. That 24" tee is flanged to the 24" tee that hooks up to the 24" header coming from the west slope that we had ran earlier. There was a 24" valve installed at the end of the 24" header coming from the west slope, we also put the valve extension on this valve and replace the valve head. We had installed the last 24" tee with 2-24" flanges, the one that had connected to the existing 24" tee was put on with a 24" electro coupling. The last valve was installed on the new 24" tee facing toward phase 3.

BROWN AND CROWELL 12/28/10
CLIENT REPRESENTATIVE DATE

NATHAN GUNDS ENGINEER I
NAME & TITLE

Billy Brown 12-28-10
AEG SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DAIRY

DATE: Wed. 12-29-10

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	AIR LINE # <u>2"</u>	PIPE DIA. <u>2"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	STATION <u>0+0 to 0+50</u>	LINEAR FT. <u>50'</u>
LINEAR FEET OF WELL COMPLETION		TRENCH DEPTH <u>3'</u>
PERFORATED PIPE-DIA.	LATERAL#	PIPE DIA.
SOLID PIPE -DIA.	STATION	LINEAR FT.
	STATION	TRENCH DEPTH
	LATERAL#	PIPE DIA.
	RISER#	LINEAR FT.
	STATION	TRENCH DEPTH
		LINEAR FT.
MATERIAL USED THIS DAY	LATERAL: #	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION	LATERAL: #	PIPE DIA.
WEATHER CONDITIONS	STATION	LINEAR FT.
Sunny/ clear	RISER HEIGHT	TRENCH DEPTH
START TIME <u>7:00 AM</u>	LATERAL: #	PIPE DIA.
	STATION	LINEAR FT.
STOP TIME <u>6:00 PM</u>	RISER HEIGHT	TRENCH DEPTH
	TIE INS <u>1-2"</u>	Hours <u>1</u>

Well ABANDONMENTS

COMMENTS:

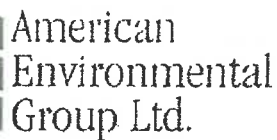
Today we had safety meeting and trenched line for conduit for elect ration we also trenched for 2" air line we installed to run with 24".

We hauled dirt to finish backfilling at 24" tie in from Tuesday and dressed up, we also cleaned up area and fused up 18" pipe.

Also talked to Rick to make sure there was nothing else he wanted done before we left for New Years he was good with every thing.

BROWN AND CROWELL 12/29/10
CLIENT REPRESENTATIVE DATE
NATHAN CROWELL ENGINEER I
NAME & TITLE

Billy Brown 12-29-10
AEGL SITE SUPERVISOR DATE



DATE: 12-29-10 Tues.

PROJECT NAME	Lorain
PROJECT#	202-10-136

COMMENTS: Today we trenched and installed the hc and the tee for HC 7. The tee for HC 7 is at 9+91. We put in rock and installed pipe. We marked up the pipe and put rock over the pipe. We rolled out the liner over the trench and rolled out geo over the liner. We hauled in clay to cover the liner. We used construction rock in the area we trenched today so we put 15' of solid pipe and and clay plug where we stopped for the day. We started out the day with a ditch fuse. We regraded 4" lateral 215'. We did a liner seam.

BROWN AND ORDWELL 12/29/10
CLIENT REPRESENTATIVE DATE
NATHAN OWENS ENGINEER I
NAME & TITLE

Doc AC 12-29-16
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

30
DATE: 12-30-10 Wed.

PROJECT NAME Lorain
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		H.C HC	PIPE DIA. 6" perforated
LINEAR FEET OF DRILLING-ABANDONMENT		STATION 10+50 to 12+31	LINEAR FT. 181'
LINEAR FEET OF WELL COMPLETION		RISER HIEGHT	TRENCH DEPTH 6-8'
PERFORATED PIPE-DIA.		H.C HC 6	PIPE DIA. 6"
SOLID PIPE -DIA.		STATION 0+00 to 0+70	LINEAR FT. 70'
COMPLETION: (WELL NUMBERS)		RISER HIEGHT	TRENCH DEPTH 4-6'
		HEADER	PIPE DIA.
		STATION	LINEAR FT.
		HEADER	PIPE DIA.
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
		DOWNSLOPE	PIPE DIA.
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
		ROAD CROSSING	PIPE DIA.
		STATION	LINEAR FT.
GENERAL INFORMATION			
WEATHER CONDITIONS			
Cloudy			
START TIME 7:00 A.M.			
STOP TIME 7:00 P.M.		VALVE	

COMMENTS: Today we trenched and installed the HC. We ended with a 90 for the ds for HC 6. We put solid 6" pipe under ground for the lateral to the other side of the road. We daylighted the 6" and ran a temporary 4" line up to the wellhead so the site could pull on the HC. The installed the riser tee for vacuum into the 4" pipe we regraded. We installed the wellhead. We put rock and installed the pipe. We marked out the pipe and put rock over the pipe. We rolled out liner over the trench and geo over the liner. We hauled in clay to cover the liner and fill the trench. We started the day with a ditch fuse. We did a liner seam.

BROWN AND CALDWELL
CLIENT REPRESENTATIVE

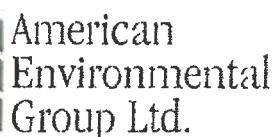
12/30/10
DATE

D. A. Cantor
AEGL SITE SUPERVISOR

1230-10
DATE

NATHAN GIVENS
NAME & TITLE

ENGINEER I



DATE: 1-3-11 Mon.

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		H.C HC 9	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT		STATION 0+15 to 1+55	LINEAR FT. 140'
LINEAR FEET OF WELL COMPLETION		RISER HEIGHT 7'	TRENCH DEPTH 0-4'
PERFORATED PIPE-DIA.		HC HC 8	PIPE DIA. 6"
SOLID PIPE -DIA.		STATION 0+20 to 1+33	LINEAR FT. 113'
COMPLETION: (WELL NUMBERS)		RISER HEIGHT 7'	TRENCH DEPTH 0-4'
		DRAIN LINE	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		DOWNSLOPE	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		STATION	LINEAR FT.
WEATHER CONDITIONS		RISER HIEGHT	TRENCH DEPTH
Sunny		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
START TIME 7:00 A.M.			
STOP TIME 5:00 A.M.		VALVE	

COMMENTS: Today we trenched and installed the vacuum lines for HC 9 and 8. We hauled in clay for backfill. The ground was thawing so we were unable to do HC 6. We started the day with ditch fuses and exposing the pipe where we stopped last week. We had 4 hrs. on tie-ins and 3 hrs hauling clay.

BROWN AND CALDWELL 1/3/11
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER E
NAME & TITLE




AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-3-11 Mon.

PROJECT NAME Lorain County L/F
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT		STATION	LINEAR FT.
LINEAR FEET OF WELL COMPLETION		STATION	TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
COMPLETION: (WELL NUMBERS)		STATION	TRENCH DEPTH
		SUBHEADER #	PIPE DIA.
		STATION #	LINEAR FT.
		STATION	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

COMMENTS:

Today we had safety meeting and dug up around tie in at 24" valve also Rick ask if we could dig up and fix break out for him. We dug up 4 foot into trash 80 foot long put stone in bottom of trench and filled back in with clay and compacted in with hoe bucket. This was T&M 1- truck 1-excaveter 2- hours, we then found liner was tore at 24" valve and liner guys was on site so they fixed and made repair it took them 2-hours.

BROWN AND CROWELL 1/3/11
CLIENT REPRESENTATIVE DATE

NATHAN GUNNS ENGINEER I
NAME & TITLE

Billy Brown 1/3/2011
AEGL SITE SUPERVISOR DATE



1. 4-11

DATE: ~~12~~-29-10 Tues.

PROJECT NAME Lorain

PROJECT# 202-10-136

[illegible]

COMMENTS: Today we trenched and installed the rest of HC 6 vacuum line. We hauled in clay for backfill. We started the day exposing the pipe we we stopped at so we could tie on it and complete the line. We spent 1.5 hrs on tie-ins. We spent 8 hrs hauling clay For future digging.

BROWN AND CALDWELL 1/4/11
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Da AC ~~21-4-10~~
 AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-4-11 Tues.

PROJECT NAME Lorain L/F
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER # <u>24"</u>	PIPE DIA. <u>24"</u>
LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT. <u>267'</u>
LINEAR FEET OF WELL COMPLETION		STATION <u>0+0 to 2+67</u>	TRENCH DEPTH <u>4>5</u>
PERFORATED PIPE-DIA.		AIR LINE# <u>2"</u>	PIPE DIA. <u>2"</u>
SOLID PIPE -DIA.			LINEAR FT. <u>267'</u>
COMPLETION: (WELL NUMBERS)		STATION <u>0+0 to 2=67</u>	TRENCH DEPTH <u>4>5</u>
		FORCE MAIN # <u>4"</u>	PIPE DIA. <u>4"</u>
			LINEAR FT. <u>267'</u>
		STATION # <u>0+0 to 2+67</u>	TRENCH DEPTH <u>4>5</u>
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES
GENERAL INFORMATION			
WEATHER CONDITIONS			
<u>Cold Windy</u>			
START TIME <u>7:00 A.M.</u>			
STOP TIME <u>6:00 P.M.</u>			

COMMENTS:

Today we began trenching on 24" header from 24" tee at 0+0 and valve at 0+4 at 2+58 we installed 24" tee with blind flange for future. We also installed 24X6 tee at station 2+67 for EW-301 we then shot pipe for grade at 3% and set survey risers at every 50 foot and at all fittings. We rolled out caution tape and finished backfilling trench line and compacted in with hoe bucket and left site for the day.

BROWN AND CHOWELL 1/4/11
CLIENT REPRESENTATIVE DATE

NATHAN GWENS ENGINEER I
NAME & TITLE

Billy Brown 1/4/2011
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-5-11 Wed.

PROJECT NAME LORAIN L/F

PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # 24" PIPE DIA. 24"
LINEAR FEET OF DRILLING-ABANDONMENT	STATION 2+68 to 5+00 LINEAR FT. 232'
LINEAR FEET OF WELL COMPLETION	TRENCH DEPTH 4>5
PERFORATED PIPE-DIA.	AIR LINE# 2" PIPE DIA. 2"
SOLID PIPE -DIA.	STATION 2+68 to 5+00 LINEAR FT. 232'
COMPLETION: (WELL NUMBERS)	TRENCH DEPTH 4>5
	FORCE MAIN# 4" PIPE DIA. 4"
	STATION # 2+68 to 5+00 LINEAR FT. 232'
	TRENCH DEPTH 4>5
	LATERAL: # PIPE DIA.
	STATION LINEAR FT.
	RISER HEIGHT TRENCH DEPTH
	LATERAL: # PIPE DIA.
	STATION LINEAR FT.
	RISER HEIGHT TRENCH DEPTH
	LATERAL: # PIPE DIA.
	STATION LINEAR FT.
	RISER HEIGHT TRENCH DEPTH
	SUMPS VALVES
GENERAL INFORMATION	
WEATHER CONDITIONS	
Cold / Cloudy	
START TIME 7:00 A.M.	
STOP TIME 7:00 P.M.	

COMMENTS:

Today we had safety meeting and began trenching on 24" line we then installed 24" pipe and 2" air and 4" force main, at 3% grade or better. We installed survey risers at 50 foot marks and rolled out caution tape we finished backfilling and compacted trench with hoe bucket. We also hauled clay and dressed up on line with dozer and finished up and left site for the day.

BROWN AND CROWELL 1/5/11
CLIENT REPRESENTATIVE DATE

NATHAN GUNDS EVANS JR.
NAME & TITLE

Billy Brown 1-5-11
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-6-11 thurs.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER # <u>24"</u>	PIPE DIA. <u>24"</u>
LINEAR FEET OF DRILLING-ABANDONMENT		STATION <u>5+00 to 5+39</u>	LINEAR FT. <u>39'</u>
LINEAR FEET OF WELL COMPLETION			TRENCH DEPTH <u>3'</u>
PERFORATED PIPE-DIA.		HEADER # <u>18"</u>	PIPE DIA. <u>18"</u>
SOLID PIPE -DIA.		STATION <u>0+00 to 0+50</u>	LINEAR FT. <u>50'</u>
			TRENCH DEPTH <u>3'</u>
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
		STATION #	LINEAR FT.
			TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		A/F <u>2" and 4" 89' each</u>	VALVES

GENERAL INFORMATION

WEATHER CONDITIONS
cloudy/snow

START TIME 7:00 A.M.

STOP TIME 7:00 P.M.

COMMENTS:

Today we finished trenching on the 24" header to high point and then started trenching for the 18" header going toward low point at the sump. We also fabed up the 24" tee for H.P. and the 24x18 tee that has the 24" flange and blind for the future tie-in. We had fused in the two 24" tee's and tied in the 18" header in at H.P. using an 18" 90 degree elbow. We also fused in air and forcemain lines which totals 178', 89' of 2" and 89' of 4". We then finished the day out with backfilling the trench as well as dressing up.

Parts Used: 2-24" flanges and backup rings, 2- 24" blinds with bolt kits, 1- 24" tee, 1-24x18 tee, 1-18" 90 elbow

BROWN AND CHADWELL 1/6/11
CLIENT REPRESENTATIVE DATE

Billy Brown 1/6/2011
AEGL SITE SUPERVISOR DATE

NATHAN GUNDS ENGINEER II
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-6-11 Thur.

PROJECT NAME Lorain
PROJECT# 202-10-136

DRILLING	CONSTRUCTION	
LINEAR FEET OF DRILLING	LATERAL EW 303-311	PIPE DIA. 6"
LINEAR FEET OF DRILLING-ABANDONMENT	STATION 0+00 to 2+94	LINEAR FT. 294'
LINEAR FEET OF WELL COMPLETION	RISER HEIGHT 6' x 3	TRENCH DEPTH 0-4'
PERFORATED PIPE-DIA.	LATERAL EW 301	PIPE DIA. 6"
SOLID PIPE -DIA.	STATION 0+00 to 0+89	LINEAR FT. 89'
COMPLETION: (WELL NUMBERS)	RISER HEIGHT 6'	TRENCH DEPTH 0-4'
	LC	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	HC	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	HC	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
	LATERAL	PIPE DIA.
	STATION	LINEAR FT.
	RISER HEIGHT	TRENCH DEPTH
GENERAL INFORMATION		
WEATHER CONDITIONS		
Snowing		
START TIME 7:00 A.M.		
STOP TIME 5:30 P.M.		
	ROAD CROSSING	LINEAR FT.
	STATION	TRENCH DEPTH

COMMENTS: Today we trench for EW 303-311 putting a tee riser in at station mark 1+51 for EW 307 and a riser tee at 2+94 for EW 311. We started with a 90 riser at 0+00 EW 303. We trenched and installed the lateral for EW 301 we started with a 90 riser at the well and tied into the new 24" header. We shot the pipes and put clay over the pipe. We rolled out caution tape and put survey risers every 50' and fittings. We hauled in clay for backfill.

BROWN AND CALDWELL 1/6/11
CLIENT REPRESENTATIVE DATE
NATHAN GAVINS SARINKEE I

D. J. [Signature] 1-6-11
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1/7/2011
Fr.

PROJECT NAME Lorain County L/F
PROJECT# 202-10-136

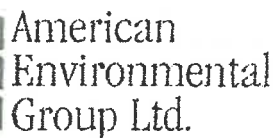
DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER # <u>18"</u>	PIPE DIA. <u>18"</u>
LINEAR FEET OF DRILLING-ABANDONMENT			LINEAR FT. <u>68'</u>
LINEAR FEET OF WELL COMPLETION		STATION <u>0+50 to 1+18</u>	TRENCH DEPTH <u>4'</u>
PERFORATED PIPE-DIA.		Air Line # <u>2"</u>	PIPE DIA. <u>2"</u>
SOLID PIPE -DIA.			LINEAR FT. <u>68'</u>
		STATION <u>0+50 to 1+18</u>	TRENCH DEPTH <u>4'</u>
COMPLETION: (WELL NUMBERS)		Force Main # <u>0+50 to 1+18</u>	PIPE DIA. <u>4"</u>
			LINEAR FT. <u>68'</u>
		STATION # _____	TRENCH DEPTH <u>4'</u>
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		LATERAL: # _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		SUMPS <u>1-24"</u>	VALVES _____
GENERAL INFORMATION			
WEATHER CONDITIONS <u>Cold/Snow</u>			
START TIME <u>7:00 A.M.</u>			
STOP TIME <u>6:30 P.M.</u>			

COMMENTS: Today we had safety meeting and started digging out for 24" sump, while digging sump we worked on fabricating the rest of 24" sump. We installed sump with 1-foot of stone on bottom and put stone around sump and clay was compacted in around sump. We also tied in 18" header into sump with flange to flange connection and bolted together we shot pipe in for grade at 3% or better. We also finished 2" and 4" run to sump and installed 2" 90 elbow and 4" 90 elbow with risers at sump, we then backfilled and left site for the day.

BROWN AND CRAWFORD 1/7/11
CLIENT REPRESENTATIVE DATE

NATHAN GUENS ENGINEER I
NAME & TITLE

Billy Brown 1/7/2011
AEGL SITE SUPERVISOR DATE



1-7-11
DATE: 12-17-10 E.J.

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HORIZONTAL <u>EW 302-310</u>	PIPE DIA. <u>6"</u>
		STATION <u>0+00 to 3+18</u>	LINEAR FT. <u>318'</u>
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT <u>6"x3</u>	TRENCH DEPTH <u>0-4'</u>
		Drain line _____	PIPE DIA. _____
LINEAR FEET OF WELL COMPLETION		STATION _____	LINEAR FT. _____
		_____	TRENCH DEPTH _____
PERFORATED-PIPE-DIA.		Drain line _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		_____	TRENCH DEPTH _____
SOLID PIPE -DIA.		LATERAL _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
COMPLETION: (WELL NUMBERS)		RISER HEIGHT _____	TRENCH DEPTH _____
		HORIZONTAL _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		_____	TRENCH DEPTH _____
		_____	_____
		_____	_____
GENERAL INFORMATION		FORCE MAIN _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
WEATHER CONDITIONS		RISER HEIGHT _____	TRENCH DEPTH _____
Cloudy		LATERAL _____	PIPE DIA. _____
		STATION _____	LINEAR FT. _____
		RISER HEIGHT _____	TRENCH DEPTH _____
		_____	_____
START TIME <u>7:00</u> A.M.		_____	_____
STOP TIME <u>6:30</u> P.M.		VALVE _____	U-Trap _____

COMMENTS: Today we trenched and installed the lateral for EW 302-310. We started with a 6" 90 riser at EW 302, and installed a riser tee at 1+52 for EW 306, and a riser tee at 3+06 for EW 310. We shot the pipe and put clay over the pipe. We rolled out the caution tape and hauled in clay for backfill and to fix area's that AEGL was suppose to have messed up. what we could and sealed off what we could with the time we had.

BROWN AND CRAWFORD 1/7/11
CLIENT REPRESENTATIVE DATE
NATHAN CRAWFORD ENGINEER I

D. J. C. 1-7-11
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-8-11 Sat.

PROJECT NAME Lorain
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		H.C	PIPE DIA.
		STATION	LINEAR FT.
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT	TRENCH DEPTH
		LATERAL	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
PERFORATED PIPE-DIA.		Road Crossing	PIPE DIA.
		STATION	LINEAR FT.
SOLID PIPE -DIA.			TRENCH DEPTH
		LATERAL	PIPE DIA.
COMPLETION: (WELL NUMBERS)		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		Road Crossing	PIPE DIA.
		STATION	LINEAR FT.
		Road Crossing	PIPE DIA.
		STATION	LINEAR FT.
GENERAL INFORMATION			
WEATHER CONDITIONS			
START TIME <u>7:00</u> A.M.			
STOP TIME <u>1:00</u> P.M.			

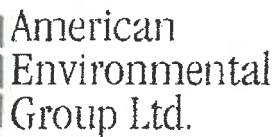
COMMENTS: Today we fused fittings and pipe for the laterals. We cut out the bench the drillers built to get to their wells.

We hauled in clay and built the bench for the 18" header pipe.

BROWN AND CALDWELL 1/8/11
CLIENT REPRESENTATIVE DATE

NATHAN GUKUS ENGINEER I

D. J. C. 1-8-11
AEGL SITE SUPERVISOR DATE



DATE: 1-10-11 Mon.

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		LATERAL EW 305	PIPE DIA. 6"
		STATION 0+00 to 0+90	LINEAR FT. 90'
LINEAR FEET OF DRILLING-ABANDONMENT		RISER HEIGHT 6'	TRENCH DEPTH 4'
		HC	PIPE DIA.
LINEAR FEET OF WELL COMPLETION		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
PERFORATED PIPE-DIA.		DRAIN LINE	PIPE DIA.
		STATION	LINEAR FT.
SOLID PIPE -DIA.		RISER HEIGHT	TRENCH DEPTH
		DOWNSLOPE	PIPE DIA.
COMPLETION: (WELL NUMBERS)		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
			PIPE DIA.
		STATION	LINEAR FT.
GENERAL INFORMATION		RISER HEIGHT	TRENCH DEPTH
WEATHER CONDITIONS			
Sunny			
START TIME 7:00 A.M.			
STOP TIME 6:00 P.M.		VALVE	

COMMENTS: Today we trenched and installed the lateral for EW 305. We located and exposed the 18" existing header pipe between CS 11 and 12 at HP so that we could put an 18" valve. We fixed fence that was damaged and hauled clay for clean up. The lateral we started with a 6" 90 riser at the well and connected it to the 24" header pipe we installed. We shot the pipe and put clay over the pipe. We rolled out the caution tape and put survey riser on the 90.

BROWN AND COLDWELL 1/10/11
CLIENT REPRESENTATIVE DATE
NATHAN GWENS ENGINEER I
NAME & TITLE

D. A. C. 1-10-11
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-10-11 mon.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # <u>18"</u> PIPE DIA. <u>18"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	LINEAR FT. <u>250'</u>
LINEAR FEET OF WELL COMPLETION	STATION <u>0+00 to 2+50</u> TRENCH DEPTH <u>4'</u>
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	LINEAR FT. _____
COMPLETION: (WELL NUMBERS)	STATION _____ TRENCH DEPTH _____
	SUBHEADER # _____ PIPE DIA. _____
	LINEAR FT. _____
	STATION # _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	SUMPS _____ VALVES _____
GENERAL INFORMATION	
WEATHER CONDITIONS <u>cloudy/cold</u>	
START TIME <u>7:00 A.M.</u>	
STOP TIME <u>7:00 P.M.</u>	

COMMENTS:

Today we started trenching on the 18" header from the 24" condensate sump toward high point. We had installed the 18" header, bolting it to the sump with 2-18" flanges and also installed 2-18x6 tee's one at station 0+43 and the other at station 1+84. We then put reducers on the air and forcemain lines to get it ready for an air test in the future. We then put in survey risers and started backfilling the header installing caution tape and cleaning up around the trench to finish out the day.

BROWN AND CARDWELL 1/10/11
CLIENT REPRESENTATIVE DATE

Darren Goodhart ### 1-10-11
AEGLE SITE FOREMAN DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-11-11 tues.

PROJECT NAME Lorain County Landfill

PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # <u>18"</u> PIPE DIA. <u>18"</u>
LINEAR FEET OF DRILLING-ABANDONMENT	LINEAR FT. <u>250'</u>
LINEAR FEET OF WELL COMPLETION	STATION <u>2+50 to 5+00</u> TRENCH DEPTH <u>4'</u>
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	LINEAR FT. _____
COMPLETION: (WELL NUMBERS)	STATION _____ TRENCH DEPTH _____
	SUBHEADER # _____ PIPE DIA. _____
	LINEAR FT. _____
	STATION # _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
GENERAL INFORMATION	LATERAL: # _____ PIPE DIA. _____
WEATHER CONDITIONS	STATION _____ LINEAR FT. _____
<u>snow/cold</u>	RISER HEIGHT _____ TRENCH DEPTH _____
START TIME <u>7:00 A.M.</u>	LATERAL: # _____ PIPE DIA. _____
STOP TIME <u>6:00 P.M.</u>	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	SUMPS _____ VALVES _____

COMMENTS:

Today we trenched to high point on the 18" header starting from station 2+50. We had installed 2-18x6 tee's and a full size 18" tee for the H.P. riser it also has a flange on it for a future tie-in. After installing the 18" header we started backfilling and cleaning up around the trench. We had hauled some dirt to the slope until the road got to slick starting a safety issue. We had finished out the day with minor clean up and preparing for the air test tomorrow.

Parts Used: 2-18" blind flanges and bolt kits, 1-18" tee, 2-18x6 tee's.

BROWN AND CHOWELL 1/11/11
CLIENT REPRESENTATIVE DATE
NATHAN CHOWELL ENGINEER I
NAME & TITLE

Darren Goodhart #### 1-11-11
AEGL SITE FOREMAN DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-12-11 wed.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	STATION _____ TRENCH DEPTH _____
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
COMPLETION: (WELL NUMBERS)	STATION _____ TRENCH DEPTH _____
	SUBHEADER # _____ PIPE DIA. _____
	STATION # _____ LINEAR FT. _____
	STATION # _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	SUMPS _____ VALVES _____
GENERAL INFORMATION	
WEATHER CONDITIONS	
snow/cold	
START TIME <u>7:00</u> A.M.	
STOP TIME <u>5:30</u> P.M.	

COMMENTS:

Today we air tested the 24" and 18" header's with the 6" laterals, they all were air tested at 10psi for 4 hours. The air test started at 1:30 pm and Nate said it had passed at 5:40 pm. We also had air tested the air and forcemain going from the 24" sump back toward the 24" valve, the 2" air line was tested at 100psi and the 4" forcemain line was tested at 50psi. Both of the lines were air tested for 4 hours starting at 11:15 am and ending at 3:40 pm at which time Nate had passed them. While air testing all the pipes we also had moved all of the extra parts and pipe to the boneyard as well as cleaning up the area which had finished out the day.

BROWN AND CROWELL 1/12/11
CLIENT REPRESENTATIVE DATE

NATHAN GIBBS ENGINEER E
NAME & TITLE

Darren Goodhart 1/12/2011
AEGLE SITE FOREMAN DATE



American
Environmental
Group Ltd.

DAILY DIARY

1-12-11
DATE: 12-22-10 Wed.

PROJECT NAME Lorain
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		LATERAL	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT		STATION	LINEAR FT.
LINEAR FEET OF WELL COMPLETION		RISER HIEGHT	TRENCH DEPTH
PERFORATED PIPE-DIA.		LATERAL	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
COMPLETION: (WELL NUMBERS)		RISER HIEGHT	TRENCH DEPTH
		HEADER	PIPE DIA.
		STATION	LINEAR FT.
		HEADER	PIPE DIA.
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
		DOWNSLOPE	PIPE DIA.
		STATION	LINEAR FT.
		RISER HIEGHT	TRENCH DEPTH
		ROAD CROSSING	PIPE DIA.
		STATION	LINEAR FT.
GENERAL INFORMATION			
WEATHER CONDITIONS			
Cloudy			
START TIME <u>7:00 A.M.</u>			
STOP TIME <u>5:00 P.M.</u>		VALVE	

COMMENTS: Today we installed the 18" valve in the existing 18" header in the northwest corner. We cut the header and hard welded 16" flanges to the pipe and installed the valve. We put on a 7' valve stem. We packed dirt under the pipe and backfilled and cleaned up the area.

BROWN AND CALDWELL 1/12/11
CLIENT REPRESENTATIVE DATE

NATHAN GUNNS OWNER
NAME & TITLE

D. J. C. 1-12-11
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-13-11 thur.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-136

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING		HEADER #	PIPE DIA.
LINEAR FEET OF DRILLING-ABANDONMENT		STATION	LINEAR FT.
LINEAR FEET OF WELL COMPLETION			TRENCH DEPTH
PERFORATED PIPE-DIA.		HEADER #	PIPE DIA.
SOLID PIPE -DIA.		STATION	LINEAR FT.
			TRENCH DEPTH
COMPLETION: (WELL NUMBERS)		SUBHEADER #	PIPE DIA.
		STATION #	LINEAR FT.
			TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		LATERAL: #	PIPE DIA.
		STATION	LINEAR FT.
		RISER HEIGHT	TRENCH DEPTH
		SUMPS	VALVES

GENERAL INFORMATION

WEATHER CONDITIONS
cold/snow

START TIME 7:00 A.M.

STOP TIME 6:00 P.M.

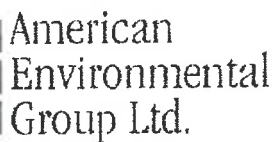
COMMENTS:

Today we started with our safety meeting and then went over the slope and tied in the air and forcemain lines to existing pipe we tied in forcemain with a 8x4 endseal to the existing pipe sticking out of vault and the tied into 4". We then went over and tied in 2" air line to existing 2" pipe. We spent 2 hours tying in both lines. We then grinded off weld to the 24" sump lid and welded another 8" flange to the to the other sided of sump lid and extrusion welded around both sides of the lid where the 8" went through. We then put a 30 ft piece of 8" pipe with 8" flange and bolted up to flange and dropped it back on to sump and bolted it back together. We the dropped pump down sump. pump was set at 30 ft. pump #4-1274 we also put around 250 gallon of water in sump as details asked for. finished down taking down all pipe to bone yard. We also started hauling dirt for final dress up work. We then wrapped up thing and left for the day.

BROWN AND CALDWELL 1/13/11
CLIENT REPRESENTATIVE DATE

Darren Goodhart 1/13/2011
AEGL SITE FOREMAN DATE

NATHAN GREENE ENGINEER I
NAME & TITLE



DATE: 1-13-11 Thur

DRILLING		CONSTRUCTION	
LINEAR FEET OF DRILLING _____		LATERAL STATION _____	PIPE DIA. LINEAR FT. _____
LINEAR FEET OF DRILLING-ABANDONMENT _____		RISER HEIGHT _____	TRENCH DEPTH _____
LINEAR FEET OF WELL COMPLETION _____		LATERAL STATION _____	PIPE DIA. LINEAR FT. _____
PERFORATED PIPE-DIA. _____		RISER HEIGHT _____	TRENCH DEPTH _____
SOLID PIPE -DIA. _____		LC _____	PIPE DIA. LINEAR FT. _____
COMPLETION: (WELL NUMBERS) _____		STATION _____	TRENCH DEPTH _____
_____		RISER HEIGHT _____	PIPE DIA. LINEAR FT. _____
_____		HC _____	TRENCH DEPTH _____
_____		STATION _____	PIPE DIA. LINEAR FT. _____
_____		RISER HIEGHT _____	TRENCH DEPTH _____
_____		LATERAL STATION _____	PIPE DIA. LINEAR FT. _____
GENERAL INFORMATION _____		RISER HEIGHT _____	TRENCH DEPTH _____
WEATHER CONDITIONS _____		_____	_____
Snowing _____		_____	_____
START TIME _____ 7:00 A.M.		_____	_____
STOP TIME _____ 5:30 P.M.		ROAD CROSSING STATION _____	LINEAR FT. TRENCH DEPTH _____

COMMENTS: Today we exposed, cut, and capped the existing 18" pipe across the road from the plant. We cut the pipe above the 18"x24"x18" tee. We waited for the plant to get back to full power to be assured of seal there is no leak so we backfilled the pipe and cleaned up the area. We hauled clay to the area in cell A where we are working and cleaned up some of the area's we are working. We started taking parts and pipe to the stock area on site.

BROWN AND CRAWFORD 1/13/11
CLIENT REPRESENTATIVE DATE
NATHAN GREENS ENGINEER I

DAC 7-13-11
AEGL SITE SUPERVISOR DATE



American
Environmental
Group Ltd.

DAILY DIARY

DATE: 1-14-11 fri.

PROJECT NAME Lorain County Landfill
PROJECT# 202-10-136

DRILLING	CONSTRUCTION
LINEAR FEET OF DRILLING	HEADER # _____ PIPE DIA. _____
LINEAR FEET OF DRILLING-ABANDONMENT	STATION _____ LINEAR FT. _____
LINEAR FEET OF WELL COMPLETION	TRENCH DEPTH _____
PERFORATED PIPE-DIA.	HEADER # _____ PIPE DIA. _____
SOLID PIPE -DIA.	STATION _____ LINEAR FT. _____
COMPLETION: (WELL NUMBERS)	TRENCH DEPTH _____
	SUBHEADER # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	LATERAL: # _____ PIPE DIA. _____
	STATION _____ LINEAR FT. _____
	RISER HEIGHT _____ TRENCH DEPTH _____
	SUMPS _____ VALVES _____
GENERAL INFORMATION	
WEATHER CONDITIONS cold/snow	
START TIME <u>7:00 A.M.</u>	
STOP TIME <u>6:00 P.M.</u>	

COMMENTS:

Today we started with our safety meeting. We then started dressing up 24" header line. While we were doing that we also reflector taped all wells and vacuum risers. We also cleaned up all trash around staging area and loaded up trailers. We also went around and made sure all pipe was off the hill. We also sent a couple of guys to help litter lug the 18" line that we installed. We then cleaned all tracks on equipment and left for the day.

BROWN AND CROWELL 1/14/11
CLIENT REPRESENTATIVE DATE

Billy Brown 1-14-11
AEGLE SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Appendix B: Construction Photographs and Description Logs

(CD Enclosed)

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2010 GCCS - Phase 3 Construction Certification Report - Photograph Log			
Date	Photo ID	Direction	Description
8/25/2010	082510-1.jpg	Northeast	Drill rig installing GCCS Extraction Well EW-26R
8/25/2010	082510-2.jpg	North	Well casing installed for GCCS Extraction Well EW-26R
8/25/2010	082510-3.jpg	East	Placement of gravel pack for GCCS Extraction Well EW-115R
8/27/2010	082710-1.jpg	East	Construction of GCCS Extraction Well EW-100R
9/9/2010	090910-1.jpg	North	Tie-in for GCCS Extraction Well EW-115R
9/10/2010	091010-1.jpg	West	Isolation of airline and force main tie-in points by "pinching" the pipe
9/11/2010	091110-1.jpg	West	6-inch lateral for EW-166R installed above geosynthetic component of final cover system
9/15/2010	091510-1.jpg	Southwest	6-inch lateral for EW-125R installed outside of final cover area
10/8/2010	100810-1.jpg	North	Completed repair to geosynthetic component of final cover system at EW-166R
11/19/2010	111910-1.jpg	Northwest	Partially backfilled section of 24-inch header
11/19/2010	111910-2.jpg	North	Butt-fusion welding 24-inch by 18-inch tee with 18-inch access riser to 24-inch header pipe
12/7/2010	120710-1.jpg	South	Installation of East Slope horizontal collector
12/9/2010	120910-1.jpg	North	No. 4 washed non-carbonate stone bedding placed in East Slope horizontal collector trench
12/9/2010	120910-2.jpg	South	60-mil FML and geocomposite placed above East Slope horizontal collector trench
12/28/2010	122810-1.jpg	Northwest	East tie-in for 24-inch headers to existing 24-inch header near LR5

Appendix C: Resumes for CQA Certifying Engineer and Inspectors

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Richard A. Isaac, P.E.

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Experience Summary

Rick Isaac has 32 years of extensive experience managing, performing, and certifying engineering design, permitting, and construction quality assurance (CQA) programs for new land disposal and other solid and hazardous waste management facilities. Mr. Isaac's CQA experience includes landfills in Ohio, Virginia, West Virginia, Pennsylvania, and Maryland for new cell construction, final cover system construction and final landfill closure, and landfill gas collection and control system (GCCS) installations. Mr. Isaac has prepared and certified construction quality assurance plans (CQAPs) for landfills used as the basis for performing field oversight and CQA services. Mr. Isaac has managed and certified the CQA activities on recent projects for Republic in Ohio at the Lorain County II Landfill, County Environmental of Wyandot Landfill, County Land Development (CLD) Landfill, and Lewis Landfill (Closed). He has successfully completed and received approval of Construction Certification Reports from the Ohio Environmental Protection Agency (Ohio EPA) for various types of construction at each of these landfills.

In addition, Mr. Isaac brings to his work extensive experience in managing feasibility studies (FS) and remedial design/remedial action (RD/RA) for Superfund sites under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and state-led remedial sites, as well as managing corrective measures studies (CMS) and implementation of remediation systems for operating facilities under Resource Conservation and Recovery Act (RCRA). He also possesses extensive experience with bid procurement services including preparation of contract documents, technical specifications, and construction drawings for a wide variety of projects including solid and hazardous waste facilities, remediation, and the cleaning and demolition of buildings, both municipal and industrial. He participates in and/or conducts pre-bid and pre-construction meetings, bid review, evaluation, recommendation, and contract award.

Assignment

Certifying Engineer

Education

B.S. Civil Engineering, West Virginia University, Morgantown, 1978

Registration

Professional Engineer in Ohio, Pennsylvania, Michigan, Mississippi, and Louisiana; West Virginia (retired status); Virginia (retired status); Colorado (retired status); Wyoming (retired status); and Montana (retired status)

Experience

33 years

Joined Firm

2007

Training

OSHA 29 CFR 1910.120, Health and Safety Training

Relevant Expertise

- Solid and Hazardous Waste Management
- CERCLA, RCRA, and Remediation
- Site Assessments and Investigations
- Regulatory Compliance
- Storm Water/Surface Water Management
- Abandoned Mine Lands and Mining

Solid and Hazardous Waste Management

County Land Development Landfill Closure CQA Services, Republic Services, Inc., Salem, Ohio

Managed the CQA for the implementation of final closure activities at a sanitary/construction demolition debris (C&DD) landfill in Salem, Ohio. Provided direction to the field inspectors who were onsite full-time throughout the duration of the final closure implementation including final cover construction, landfill gas management system expansion, and storm water controls. Managed and assisted in the preparation, performed quality assurance (QA) review, and served as the "Engineer of Record" for the Final Closure Certification Report submitted to the Ohio EPA to document the implementation of the final landfill closure construction.

County Environmental of Wyandot Landfill Gas Design and CQA Services, Republic Services, Inc., Carey, Ohio

Managed the CQA for the expansion of the landfill gas management system at a landfill in Carey, Ohio. Provided direction to the field inspectors who were onsite full-time throughout the duration of the expansion implementation activities. The expansion activities included installation of an enclosed flare station, condensate sumps, 24-inch diameter high-density polyethylene (HDPE) header pipeline, laterals to new and re-drilled gas extraction wells, condensate and airlines, and road crossings. Managed the preparation and provided QA review of the construction drawings for the landfill gas management system expansion. Assisted in the preparation, performed QA review, and served as the "Engineer of Record" for the Certification Report submitted to the Ohio EPA to document the landfill gas system expansion installation.

Lorain County II Landfill Gas Design and CQA Services, Republic Services, Inc., Oberlin, Ohio

Managed the CQA for the expansion of the landfill gas management system at a landfill in Oberlin, Ohio. Provided direction to the field inspectors who were onsite full-time throughout the duration of the expansion implementation activities. The expansion activities included installation of an enclosed flare station, condensate sumps, 24-inch and 18-inch diameter HDPE header pipelines, laterals to new and re-drilled gas extraction wells, condensate and airlines, and road crossings. Managed the preparation and provided QA review of the construction drawings for the landfill gas management system expansion. Assisted in the preparation, performed QA review, and served as the "Engineer of Record" for the Certification Report submitted to the Ohio EPA to document the landfill gas system expansion installation.

Lorain County I Landfill Gas CQA Services, Allied Waste Industries, Inc., Oberlin, Ohio

Managed the CQA for the expansion of the landfill gas management system at a closed landfill in Oberlin, Ohio. Provided direction to the field inspectors who were onsite full-time throughout the duration of the expansion implementation activities. The expansion activities included installation of 8-inch diameter HDPE header pipelines, laterals to new and re-drilled gas extraction wells, installation of Landtec combination wellheads, leachate system force main, condensate and airlines, and road crossings. Assisted in the preparation, performed QA review, and served as the "Engineer of Record" for the Certification Report submitted to the Ohio EPA to document the landfill gas system expansion installation.

Cherokee Run Landfill Gas Design Services, Republic Services, Inc., Bellefontaine, Ohio

Managed the design of the expansion of the landfill gas management system at a landfill in Bellefontaine, Ohio. Provided direction to the design engineers who prepared the construction drawings and details for use by the installer to construct the landfill gas management system expansion. The expansion activities included installation of a condensate sump, 18-inch diameter HDPE header pipeline, laterals to new and re-drilled gas extraction wells, and condensate and airlines. Provided QA review of the construction drawings for the landfill gas management system expansion.

Noble Road Landfill Vertical Expansion Perimeter Berm Design, Republic Services, Inc., Shiloh, Ohio

Managed the design of a perimeter berm used to expand the available air space at a landfill in Shiloh, Ohio. Provided direction and assisted staff engineers in the preparation of "construction-ready" design drawings for use by contractors in preparation of bids. The drawings included grading plans, construction sequence plans, leachate management system plans, storm water management plans, and details. Prepared the contract documents and technical specifications for use by contractors in preparing bids. Participated in the bid procurement, bid review, and contractor selection for construction of the perimeter berm. Performed QA review, and served as the "Engineer of Record" for the berm design.

Hazardous Waste Landfill Remediation, Laufen International, Inc., East Sparta, Ohio

As part of a RCRA Corrective Action through a Consent Decree with the U.S. EPA Region 5, prepared an Interim Measures Work Plan for the remediation of a hazardous waste landfill at a facility in eastern Ohio. The Interim Measures included landfill cap enhancements, leachate management system modifications, construction of a flood protection levee, modification of the perimeter surface drainage system, and modification of the settlement monitoring program. Managed and prepared the contract documents, technical specifications, and drawings to procure a geosynthetics installer for the synthetic components of the new final cover system. Managed the implementation and CQA for the construction of the Interim Measures including construction of a new final cover system to encapsulate the existing landfill and the geotechnical program and construction of the flood protection levee. Prepared the construction certification report for submittal to the U.S. EPA following completion of the remediation activities.

Design, Permitting, and Construction of a Solid Waste Transfer Station, Rumpke Waste, Inc., Ironton, Ohio

Managed the design, permitting, and construction of a solid waste transfer station for a major solid waste company in southeast Ohio. The facility permit was through the Ohio EPA Southeast District Office in accordance with the Ohio Administrative Code rules and regulations pertaining to transfer stations. Coordinated and managed the transfer facility design by assembling a team of design professionals including site work, geotechnical and structural, environmental management systems, architectural, and mechanical,

electrical, and plumbing including both wet and dry fire suppression systems. Prepared and obtained the required building permits through the Ohio Department of Commerce, Bureau of Building Code Compliance office. Managed the preparation of the contract documents, technical specifications, and construction drawings including QA/QC of the final bid documents and was responsible for the bid procurement including pre-bid meeting, bid evaluation, recommendation, and contract award. Performed limited CQA during the facility construction including project progress meetings, contractor requests for information, pay application review and approval, and change order requests.

Design and Permitting for a Type I Restricted Waste Landfill, Mittal Steel USA, Burns Harbor, Indiana

Managed the design and permit preparation for a Type I Restricted Waste Landfill for disposal of secondary wastewater treatment plant sludge at a major steel manufacturing facility in Indiana. Performed the leachate management system evaluation including landfill floor configuration, HELP Model to determine leachate volumes, and design calculations for pipe sizes, perforation openings, sumps, and pumps. Assisted with the preparation of the Special Exception to the Zoning Application required for the facility.

C&DD Landfill Closure Certification, Stambaugh Properties Ravenna, Ohio

Managed the closure and closure certification of a C&DD landfill in Ravenna, Ohio. Performed field oversight services including soil sample collection for geotechnical analysis. Prepared the Closure Certification Report and served as the Engineer-of-Record. Submitted the Closure Certification Report to the Portage County Health Department.

Hazardous Waste Facility Post – Closure Plan, ESAB Welding & Cutting Ashtabula, Ohio

Prepared and submitted to the Ohio EPA a hazardous waste facility post-closure plan for former lime ponds and associated impoundments at a welding wire manufacturer in Northeast Ohio. Post-closure plan included discussions on site security, inspection plan, monitoring plan, maintenance plan, and financial assurance.

Design and Permitting of a Solid Waste Transfer Station, Waste Management, Inc., Wooster, Ohio

Managed the design and permitting of a solid waste transfer station for a major solid waste company in central Ohio. The design included grading and storm water control plans, vehicle sequencing and staging plans, and detailed design of the transfer building structure and operating pad.

Design and Permitting for the Vertical Expansion of a Sanitary Landfill, Mid-American Waste Systems, Gary, Indiana

Managed the design and permitting for the vertical expansion of an existing sanitary landfill. Project included the design of leachate management, gas management, grading, closure and post-closure, and erosion and sediment control plans. Coordinated site remediation activities, including a toe drain collection and conveyance system and a groundwater cut-off slurry wall.

Design and Permitting for the Upgrade and Compliance of a Large Sanitary Landfill, City of Virginia Beach, Virginia

Managed the design and permitting for upgrade and compliance of a large existing sanitary landfill located in the Tidewater region of Virginia with new Subtitle D regulations. The design included plans for grading, leachate collection system and groundwater underdrain, closure and post-closure, and storm water management. Wetlands associated with expansion were permitted through the US Army Corps of Engineers Nationwide 26 Permit process.

Design and Closure of an On-Site Waste Disposal Site at an Aluminum-Processing Facility, Alcoa Cleveland Works, Cleveland, Ohio

Managed the design and closure of an on-site waste disposal site at an aluminum processing facility. Closure plan included grading, storm water management, gas management, post-closure care, and land-use plans.

Design and Permitting for Closure of Three Disposal Units at a Coke Facility, Wheeling-Pittsburgh Steel, Follansbee, West Virginia

Managed the design and permitting for the closure of three disposal units located at a coke facility along the Ohio River. Closure plans included grading, storm water management, gas management, and post-closure care

and land use plans. Designed the closure plans and prepared permit applications as “fast track” projects in order to meet imposed regulatory deadlines.

Closure of a Hazardous Ash Disposal Impoundment at a Paint Pigment Facility, Cytec Industries, Inc., Washington, West Virginia

Managed the closure of a hazardous ash disposal impoundment at a paint pigment facility located along the Ohio River in West Virginia. The closure included final grading plan; final cover system configuration, including geogrids to allow construction equipment access to the ash material during the construction phase; and surface water management.

Design and Preparation of Permit Application Drawings for the Vertical Expansion of a Landfill, City of Barnstable, Massachusetts

Managed the design and preparation of permit application drawings for the vertical expansion of an existing landfill in Massachusetts. The project included the design of grading plans, disposal cell phase and sequence plans, storm water management, leachate collection and treatment systems, landfill gas management system, liner and fill cap system configurations, and closure and post-closure care plans. The existing site is located on Cape Cod within a Zone II Aquifer system, which required specialized engineering designs to ensure zone environmental protection of the groundwater systems at the site.

Preparation of a Waste Alternatives Study for a Large Paper Mill Facility, WESTVACO, Luke, Maryland

Managed the preparation of a Waste Alternatives Study for a large paper mill facility located in western Maryland. The study compared the development, design, permit preparation, and construction of two potential landfill sites: one located in West Virginia and the second located in Maryland. The study evaluated operations, design, permitting, material hauling to each site, and construction of each potential site for a study period of 20 years, with present worth analysis performed to determine capital required to finance the project. Each potential site was also compared to contract waste collection, transportation, and disposal by an independent waste contractor.

Design and Permitting for a Construction and Demolition Debris Landfill, Warren Recycling, Inc., Warren, Ohio

Managed the design and permitting for a C&DD landfill located in Warren, Ohio. The project included License Application forms, grading plans, leachate management plans, storm water management plans, and fill sequence plans. Applied for and received a variance from groundwater monitoring from the City Health Department.

Design and Permitting for a Construction and Demolition Debris Landfill, Iron Valley, Chesapeake, Lawrence County, Ohio

Managed the design and permitting for a C&DD landfill located in Lawrence County, Ohio. The project included License Application forms, grading plans, leachate management plans, storm water management plans, and fill sequence plans.

Design and Permitting of the Closure for a Residual Carbon Waste Disposal Facility, The Stackpole Corporation, St. Marys, Pennsylvania

Managed the design and permitting of the closure for a residual carbon waste disposal facility in Pennsylvania. Design included a combination RCRA-style final cover system and standard State of Pennsylvania cover system.

CERCLA, RCRA, and Remediation

Bid Documents, Technical Specifications and Construction Drawings for a Hydraulic Barrier Wall and Groundwater Extraction and Treatment System for a Site in Holland, Michigan

Prepared the bid documents, technical specifications, and construction drawings for the installation of a hydraulic barrier wall and groundwater extraction and treatment system at a former manufacturing site. The hydraulic barrier wall consists of a soil-bentonite (SB) slurry wall and blast furnace slag- cement-bentonite (BFSCB) slurry wall. Groundwater extraction and treatment system consists of five extraction wells, water

filtration treatment, and deep well injection under high pressure. Bid documents and technical specification were prepared to following the CSI 2004 format. Participated in pre-bid meetings, bid evaluation, and contractor recommendation and contract award. Served as the Engineer-of Record for the design and assisted with the field CQA program including contractor oversight, project progress meetings, and contractor requests for information.

Preparation of RD/RA for Former Tar and Chemical Facility, Reilly Industries, Inc., Dover, Ohio

Managed the preparation of the RD/RA for a former tar and chemical facility located in Dover, Ohio. The remedial design included excavation of on-site soils and sediments contaminated with polycyclic aromatic hydrocarbons (PAHs), and benzene, toluene, ethylbenzene, and xylene (BTEX) for either off-site treatment by thermal destruction and disposal or placement within an on-site building foundation closed by the construction of an Ohio EPA- compliant solid waste final cover system; construction of a groundwater recovery trench with recovered groundwater discharged to the local publically owned treatment works (POTW); and placement of soil cover.

Hydrogeologic Site Investigation and Preparation of a Focused FS for a Lagoon at a Major Coke-Producing Facility, US Steel, Clairton, Pennsylvania

Managed the performance of a hydrogeologic site investigation and preparation of a "focused" FS for a lagoon contaminated with polynuclear aromatic hydrocarbons, volatile organic compounds (VOCs), and semi-volatile organic compounds (SVOCs) at a major coke- producing facility. Performed the FS to adhere to the requirements of the Pennsylvania Department of Environmental Protection (PADEP). Alternatives evaluated included augmenting the existing groundwater pump and treat with lagoon sediment solidification/stabilization and construction of a PADEP-compliant final cover system.

Site Investigation, Permitting, Remedial Design, and Remediation Implementation at a Creosote Wood Treating Facility, Southern Wood Piedmont, Benson, North Carolina

Managed the site investigation, permitting, remedial design, and remediation implementation at a creosote wood treating facility in North Carolina. Surface impoundments used for disposal of creosote and surface water were remediated by stabilization/solidification of the resulting sludge and covering with a solid-waste-style final cover system.

Preparation of a Feasibility Study for a Large Primary Aluminum Facility, Ormet, Hannibal, Ohio

Managed the preparation of a FS for a large primary aluminum facility located along the Ohio River in the State of Ohio. Five impoundments, a former potash disposal area, a former spent carbon disposal area, a former construction material and demolition debris area, and the backwash area required remediation for fluoride, cyanide, and VOCs. The final proposed remedy included construction of RCRA-style final cover systems; soil washing/soil flushing aided by a Ranney well, which influenced the flow of groundwater; and river sediment dredging.

Preparation of a "Focused" Corrective Measures Study for a Hazardous Measures Recycling Facility, Safety-Kleen, Hebron, Ohio

Managed the preparation of a "focused" CMS for a hazardous materials recycling facility in the State of Ohio. Implemented interim corrective measures including groundwater recovery wells and low-profile air stripper with a groundwater cut-off wall. The CMS evaluated alternatives for remediating VOCs that had entered the soils and groundwater as a result of a fire at the facility.

Design of an Ultraviolet Peroxidation Groundwater Treatment System, Honeywell, Annapolis, Maryland

Managed the design of an ultraviolet (UV) peroxidation groundwater treatment system. The design included the UV system and associated groundwater recovery system for the remediation of VOCs, and SVOCs. Prepared contract documents, technical specifications, and construction drawings for use in the contractor bid procurement process.

Paint Sludge and Sediment Remediation in Lake Michigan, Flanders Industries, Inc., Menominee, Michigan

Managed the design and preparation of contract documents, technical specifications, and construction drawings for paint sludge and sediment remediation in Lake Michigan. Project included the design and construction of an impermeable dike built in Lake Michigan to isolate the contaminated sediments, sediment removal plans, sediment staging and sequencing plans, sediment testing plans, and site restoration plans.

Design and Construction of a Recovery and Treatment System at a Carbon Graphitizing Facility, The Stackpole Corporation, St. Marys, Pennsylvania

Provided QA/QC and senior oversight for the design and construction of a recovery and treatment system at a carbon graphitizing facility in Pennsylvania. The system included 14 groundwater recovery wells and soil vapor extraction for chlorinated organics.

General Engineering

Implementation of Design/Build Services for Building Demolition, TRW, Inc., Cleveland, Ohio

Lead Engineer responsible for providing direction and oversight to the onsite CQA inspector throughout the performance of the building demolition for a former automobile parts manufacturing facility. Site activities included asbestos abatement, multi-story building complex demolition consisting of steel and wood frame, concrete, block and brick buildings including removal, cleaning, and off-site disposal of tanks and pipelines containing residual materials, removal, cleaning, and off-site disposal of PCB-containing transformers, and segregation and recycling of steel, concrete, and brick materials. Provided interpretation of project specifications and conducted bi-monthly project progress meetings.

Design, Technical Specifications and Construction Drawings for Filter Press Installation, Whirlpool Corporation, Marion, Ohio

Project Manager for the design and preparation of technical specifications and construction drawings for the installation of a filter press in an existing water treatment building. Prepared the civil component of the specifications and drawings and managed the preparation of the structural, mechanical, electric, and plumbing (MEP) components of the project. Installed the filter press in the existing filter press building by retrofitting the inside of the building and the existing structural components and MEP. Installation of the filter press allowed the client to realize a two-fold increase in filtering the effluent from the onsite wastewater treatment plant (WWTP).

Technical Specifications and Construction Drawings for Building Demolition, City of Dayton, Office of Economic Development, Dayton, Ohio

Prepared the contract documents, bidding documents, technical specifications, and construction drawings for the demolition of a 845,000 square foot, multi-story building complex consisting of steel frame, concrete, block and brick buildings including removal and off-site disposal of tanks and pipelines containing residual materials. Contract and bidding documents were prepared to adhere to client's (municipal) preferred formats. Participated in pre-bid and pre-demolition meetings, bid evaluation, and contractor recommendation and contract award. Managed the CQA program including contractor oversight, project progress meetings, and contractor requests for information.

Technical Specifications and Construction Drawings for Building Demolition, Columbus Recreation and Parks, Columbus, Ohio

Prepared the contract documents, bidding documents, technical specifications, and construction drawings for the demolition of a 25,500 square foot, three-story, steel frame, concrete, block and brick building including removal and off-site disposal of an underground storage tank (UST). Contract and bidding documents were prepared to adhere to client's (municipal) preferred formats. Participated in pre-bid and pre-demolition meetings, bid evaluation, and contractor recommendation and contract award. Project included field survey and verification of existing utilities associated with the building and preparation of a site grading plan following removal of the building debris from the site.

Cleaning, Asbestos Abatement, and Demolition of Aboveground Storage Tanks, Buildings, Process Equipment, and Pipelines at a Large Coal Tar Refining Facility, Reilly Industries, Inc., Cleveland, Ohio

Managed the cleaning, asbestos abatement, and demolition of aboveground storage tanks (500 to 1,000,000 gallons) and pipelines and demolition of facility buildings and process equipment at a large coal tar refining facility under the Ohio EPA Cessation of Regulated Operations (CRO) Program. Products produced at the site included coal tar and coal tar distillates, creosote, naphthalene, and oils. Directly prepared technical specifications and construction drawings for use in bid procurement, conducted pre-bid and pre-demolition meetings, bid review and evaluation and assisted client with contract award. Managed the field oversight services throughout performance of the field activities.

Site Assessments and Investigations

Preparation of Phase I Environmental Site Assessment, City of Steubenville, City Engineer, Steubenville, Ohio

Project Manager. Performed the Phase I Environmental Site Assessment (ESA) in accordance with ASTM E1527-00 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process. The Phase I ESA included environmental database searches, interviews with past property owners, limited title searches, site reconnaissance, agency information reviews, and report preparation.

Preliminary Phase II Site Screening, Whittier Peninsula Properties, Columbus Recreation and Parks, Columbus, Ohio

Project Manager. The purpose of the site screening was to review historical information and data related to environmental issues and concerns associated with the Peninsula properties, develop a site ranking system, and develop preliminary recommendations and costs for performing Phase II site investigation activities to identify potential impacts to the soils and groundwater at the Whittier Peninsula.

Phase II Environmental Site Investigation, Whittier Peninsula Properties, Columbus Recreation and Parks, Columbus, Ohio

Project Manager. The Phase II ESI included field work, laboratory analysis, and reporting writing in accordance with the Ohio EPA Voluntary Action Program (VAP) rules and regulations. Field work included collection of soil samples using the Geoprobe® Direct-Push Technology and installation and sampling of groundwater monitoring wells. Prepared the report narrative text, tables, and drawings.

Preparation of Phase I Environmental Site Assessment, City of Columbus, Street Design Department, Columbus, Ohio

Managed and provided QA/QC for a Phase I ESA of Short Street in Columbus, Ohio. Performed the Phase I ESA for the City of Columbus Street Design Department as part of the street-widening program. Used ASTM E1527-00 Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process in the performance and preparation of the Phase I ESA report.

Preparation of Phase II Environmental Site Investigation, City of Columbus, Street Design Department, Columbus, Ohio

Managed and provided QA/QC for a site investigation performed at Reynolds Avenue in the City of Columbus, Ohio. Performed work for the City of Columbus Street Design Department as part of the street-widening program. The site investigation included the performance of Geoprobe holes to collect soil samples for laboratory analysis prior to initiation of construction activities. Prepared a Phase II Environmental Site Investigation Report presenting the results of the investigation and conclusions that no subsurface contamination was present within the construction limits.

Preparation of Phase II Environmental Site Investigation, City of Columbus, Street Design Department, Columbus, Ohio

Managed and provided QA/QC for a site investigation at an intersection along Hudson Street in the City of Columbus, Ohio. The intersection was being modified to include turning lanes and Geoprobe holes were performed to collect subsurface soil samples. Performed work for the City of Columbus Street Design Department as part of the street-widening program.

Phase II Environmental Site Investigation and Remediation, City of Columbus, Street Design Department, Columbus, Ohio

Managed and performed QA/QC for a site investigation and remediation of a former dry-ice manufacturing facility along McKinley Avenue in Columbus, Ohio. The City of Columbus Street Design Department was widening McKinley Avenue. Used Geoprobe technology to collect subsurface soil samples for purposes of determining the presence of contamination within the construction limits. A former dry ice manufacturing facility, located along the revised road centerline, required remediation of an existing concrete vault prior to demolition to allow construction to proceed. Cleaned the vault by power washing and vacuuming with off-site disposal of the resulting sludge and rinsate waters.

Compliance

Spill Prevention, Control, and Countermeasure Plan, The Ohio State University, Columbus, Ohio

Performed the “five-year” review and evaluation of existing Spill Prevention, Control, and Countermeasure (SPCC) Plans for re-certification in accordance with the requirements of 40 CFR 112 as amended in December 2006 for The Ohio State University (OSU) in Columbus, Ohio. Reviewed, revised, and re-certified the Master SPCC Plan for the OSU main campus. Reviewed facility specific SPCC Plans, performed facility inspections, and revised the SPCC Plans using the “poster-format” with cross-references and supporting documents for four facilities within the OSU main campus: Center for Automotive Research, McCracken Power Plant, Transportation and Parking Services, and the Scarlet and Gray Golf Course. Also reviewed the SPCC Plan for the Wooster Campus of OSU in Wooster, Ohio, performed a site inspection, and prepared and certified the “poster-format” with cross-references and supporting documents.

Integrated Contingency Plan (ICP), The Ohio State University, Don Scott Field, Columbus, Ohio

Prepared an ICP for The Ohio State University Airport, Don Scott Field. Combined the existing Storm Water Pollution Prevention Plan (SWP3) and the existing SPCC Plan into one document that also included a new emergency response plan for the airport. The ICP addressed the onsite Avgas and Jet A aviation fuel storage facility, mobile aircraft refuelers, and two maintenance facilities resident on the airport property. Prepared the ICP in accordance with the National Interagency Incident Management System (NIIMS) Incident Command System (ICS) that is a nationally recognized system that provides a commonly understood framework that allows for effective interaction among response personnel, thus facilitating its ease of use during an emergency situation.

Spill Prevention, Control, and Countermeasure Plan, Denison Hydraulics, Marysville, Ohio

Prepared SPCC Plan to bring the Denison Hydraulics facility in compliance with the requirements of 40 CFR 112 for a specialty hydraulic equipment manufacturing facility in Marysville, Ohio. Prepared the SPCC Plan text, drawings, and appendices based on review of historic records, conversations with facility personnel, and site inspections. Served as the “Engineer-of-Record” for certification of the SPCC Plan.

Spill Prevention, Control, and Countermeasure Plan, Koneta Rubber, Wapakoneta, Ohio

Prepared SPCC Plans to bring two facilities in compliance with the requirements of 40 CFR 112 for a specialty rubber manufacturing facility in Wapakoneta, Ohio. Prepared the SPCC Plan text, drawings, and appendices based on review of historic records, conversations with facility personnel, and site inspections. Served as the “Engineer-of-Record” for certification of the SPCC Plans.

Notice of Intent and Storm Water Pollution Prevention Plan, United Precast, Mount Vernon, Ohio

Prepared and submitted the Notice of Intent (NOI) for a concrete manufacturing facility in central Ohio to provide coverage of the facility under the General Permit Authorization to discharge Storm Water Associated with Industrial Activity (General Permit No. OHR000003) Under the National Pollutant Discharge Elimination System (NPDES) as administered by the Ohio EPA. As a condition of the General Permit, prepared the SWP3 for the facility including a site walk over, material inventory, preliminary development of “Best Management Practices (BMPs)”, certification of non-storm water discharges, and recommendations for implementing BMPs to minimize contact with storm water.

Spill Prevention, Control, and Countermeasure Plan, Campbell Soup Company, Napoleon, Ohio

Reviewed and revised existing SPCC Plan for re-certification in accordance with the requirements of 40 CFR 112 for a food manufacturing facility in Napoleon, Ohio. Prepared revisions to the SPCC Plan based on the site inspection and updated the existing plan to adhere to the revised SPCC Plan Rules and Regulations effective as of August 16, 2002.

Spill Prevention, Control, and Countermeasure Plan, Lumi-Lite Candle Factory, Norwich, Ohio

Reviewed and revised existing SPCC Plan for re-certification in accordance with the requirements of 40 CFR 112 for a candle manufacturing facility in Norwich, Ohio. Prepared revisions to the SPCC Plan based on the site inspection and updated the existing plan to adhere to the revised SPCC Plan Rules and Regulations effective as of August 16, 2002.

Spill Prevention, Control, and Countermeasure Plan, Confidential Client, Bucyrus, Ohio

Reviewed and revised existing SPCC Plan for re-certification in accordance with the requirements of 40 CFR 112 for a rubber and plastic hose manufacturing facility in Bucyrus, Ohio. Prepared revisions to the SPCC Plan based on the site inspection and updated the existing plan to adhere to the revised SPCC Plan Rules and Regulations effective as of August 16, 2002.

Conditional No Exposure Exclusion for Industrial Activity, Delphi Automotive Systems, Warren, Ohio

Performed site inspections and developed inspection forms for five automotive parts manufacturing facilities to determine compliance with the NPDES, Storm Water Phase II Final Rule – Conditional No Exposure Exclusion for Industrial Activity as administered by the Ohio EPA. Used the initial facility inspections to develop forms that the client could use to perform subsequent annual compliance inspections. Provided a summary of issues to be addressed prior to submitting Conditional No Exposure Exclusion requests to the Ohio EPA.

Spill Prevention, Control, and Countermeasures Plan Re-Certification, Delphi Automotive Systems, Warren, Ohio

Perform review, prepared revisions, and re-certified SPCC Plans in accordance with the requirements of 40 CFR 112 for a major automotive parts manufacturer in Northeast Ohio. Performed site inspections for two facilities, updated the SPCC Plans, and signed as the "Engineer of Record".

Storm Water Pollution Prevention Plans, Delphi Automotive Systems, Warren, Ohio

Performed site inspections, review of existing plans, and prepared required revisions of SWP3s for a major automotive parts manufacturer in Northeast Ohio. Reviewed and revised the SWP3s in accordance with the facilities General Permit Authorization to Discharge Storm Water Associated with Industrial Activity under the NPDES.

Aboveground Tank Compatibility Certification, Yenkin-Majestic Paint Corporation, Columbus, Ohio

Certified the compatibility of an aboveground storage tank (AST) for use in storing waste solvents in accordance with Ohio Administrative Code (OAC) Rules and Regulations, Chapter 3745-66-92. Certification included inspection of the AST including overflow and automatic shut-off controls, preparation of the certification report and submittal to the Ohio EPA.

Storm Water/Surface Water Management

Design and Implementation of a "Class A" Trout Stream, Cerro Metal Products, Company, Bellefonte, Pennsylvania

Managed the design and implementation of a "Class A" trout stream in central Pennsylvania. Lead, copper, zinc, and PCBs contaminated the stream banks and sediment. Modeled 20+ square mile drainage area utilizing SEDCAD 4 software for the design of riprap/gabion baskets to stabilize the stream banks, following excavation and off-site removal of the contaminated soils and sediments. Prepared contract documents, technical specifications, and construction drawings. Completed the project on a "fast track" schedule due to strict regulatory deadlines.

Evaluation of Sedimentation Basin at a Sanitary Landfill, Private Landfill in Minnesota

Prepared the evaluation of an existing sedimentation basin at a sanitary landfill utilizing SEDCAD+ computer software. Modeled the watershed for the basin and added 1000 GPM of inflow from a groundwater recovery/treatment system. Treated the basin as an infiltration structure, which saved the client \$200,000 by not having to construct a second basin to handle water from the groundwater recovery/treatment system.

Abandoned Mine Lands and Mining

Acid Mine Drainage, Investigation and Remedial Design, Meigs County, Ohio, Ohio Department of Natural Resources, Columbus, Ohio

Managed the investigation and remedial design for acid mine drainage (AMD) from old underground mine openings in Meigs County, Ohio. Basements of houses located within 30- to 50-feet of the toe of the slope were flooding during rainfall events due to saturation of the soils caused by AMD from the mine openings. Resealed the openings and employed an underdrain system to drain the back yards of the houses and former mine openings. Designed the underdrain system and constructed taking into account the proximity of the toe of the slope and the need to protect the integrity of the slope by preventing slope failure. Technical specifications and drawings were prepared in accordance with the Ohio Department of Natural Resources (ODNR) protocols.

Reclamation and Surface Erosion Remediation, Gallia County, Ohio, Ohio Department of Natural Resources, Columbus, Ohio

Managed the reclamation and surface erosion remediation at an abandoned mine land site in Gallia County, Ohio. The reclamation design involved the regrading of the site, including highwall and slope reduction to minimize future potential surface erosion problems. Developed technical specifications, prepared in accordance with the ODNR protocols, grading plans, and surface water control plans, in a format suitable for contractors to perform the reclamation work.

Mine Reclamation and Surface Erosion Remediation, Gallia County, Ohio, Ohio Department of Natural Resources, Columbus, Ohio

Managed the reclamation and surface erosion remediation at an abandoned mine land site in Gallia County, Ohio. The reclamation design involved the regrading of the site, including highwall and slope reduction to minimize future potential surface erosion problems. The grading plans were required to incorporate access to an active natural gas well located on the site. Developed topsoil borrow area plans (from adjacent undisturbed properties), including sampling plans, volume estimates, grading plans, and surface water control plans. Developed technical specifications, prepared in accordance with the ODNR protocols, grading plans, and surface water control plans, in a format suitable for contractors to perform the reclamation work.

Reclamation Design for Control of Acid Mine Drainage, Peabody Coal Company, St. Louis, Missouri

Prepared the reclamation design for control of AMD from an old abandoned auger mining pit in Missouri. AMD from the auger pit was flowing into the Clairton River and causing discoloration problems. The reclamation design included the construction of a sedimentation basin at the mouth of the valley leading from the old auger pit and prior to entering the river. Sedimentation basin outfall was a corrugated pipe down the slope to the river to minimize potential surface erosion attributed to the outfall.

Mine Plans and Reclamation Plans for Two Large Coal Mines, Powder River Coal Company, Bill, Wyoming

Prepared mine plans and reclamation plans for two large coal mines in Wyoming (6,000,000 tons/year and 8,000,000 tons/year). Plans included sequencing of strip pits, overburden handling, backfill, and grading plans. Storm water management included design of sedimentation basins, diversion ditches, containment berms, and ditches.

Permit Revisions to an Existing Mine Plan, Powder River Coal Company, Bill, Wyoming

Managed the preparation of permit revisions to an existing mine plan to include the construction of a concentric loop track, silo, slot storage, and conveyor system for increased coal handling, storage, and loading capacity. Following approval of the permit revision, managed the preparation of technical specifications and

construction drawings for the required facility upgrades, the bidding and contractor procurement activities, and construction oversight activities throughout the construction of the project.

Underdrain System to Control Groundwater Flow at a Mine in the Rocky Mountains, Peabody Coal Company, Denver, Colorado

Designed an underdrain system to control groundwater flow beneath backfilled overburden at a mine in the Rocky Mountains. The underdrain allowed mining of the coal seam from the bottom of the mountain to the top, instead of contour mining, which increased the amount of recoverable coal. Used the slope stability program REAME developed by the University of Kentucky to aid in the design and backfill placement of underdrain materials and overburden to create a stable backfill as part of the reclamation.

Major Channel Relocation/Remediation, Powder River Coal Company, Bill, Wyoming

Participated in the design, material handling, stockpiling, and backfilling of a major channel relocation/remediation. During the early stages of opening a new mine, relocated a major creek to allow for maximum recovery of the coal seam. As the creek was being stripped, selectively handled and stockpiled the material comprising the creek, i.e., sands, gravels, etc., for reconstruction during the reclamation process for this area. Following coal removal, reconstructed the stream in its former location, with each lithologic unit replaced to recreate the stream before mining events took place.

Publications

"Construction and Demolition Debris Rules in Ohio," Concrete Connection, Ohio Ready Mixed Concrete Association (ORMCA), November 1998

"Simplifying Environmental Planning Requirements," FOUNDRY Management & Technology, pp. 20-23, April 1999.

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Elena Goodhall, P.E.

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Experience Summary

Ms. Goodhall is a Project Manager with 16 years of experience in landfill environmental management and environmental remediation. For the five years prior to coming to Brown and Caldwell, she was the Ohio Environmental Manager and Regional Environmental Manager for Republic Services Inc. (Republic, formerly Allied Waste Services, Inc.). Ms. Goodhall began with Allied Waste as an Environmental Manager in Ohio and has successfully developed an excellent relationship with all levels of Ohio EPA personnel. As Regional Manager, Ms. Goodhall addressed compliance, engineering, and construction issues for the region and developed and implemented leachate tracking logs; soil tracking, soil usage and tonnage policy; and aerial calculation review procedures for the region. Ms. Goodhall has successfully handled environmental permitting, including solid waste and air permits-to-install and zoning and wetland permitting. She also obtained the first and second Director's Exemptions granted in Ohio for siting landfills over 100-gpm aquifers. Ms. Goodhall has served in an engineering and management role on landfill construction and development projects, including waste relocation, cell construction and expansion, landfill gas and leachate management systems, and hazardous waste landfill management. Ms. Goodhall also served as lead Compliance and Quality Assurance manager and lead Liner Manager on several construction and development projects. Her landfill management experience includes groundwater monitoring programs, stormwater management programs, and the development of emergency action plans. Prior to her solid waste work for Republic, Ms. Goodhall had 10 years of experience investigating hazardous waste and brownfield sites, developing corrective actions, and overseeing the implementation of corrective measures at numerous sites in California, Michigan, and Ohio.

Assignment

Project Manager

Education

*M.S., Hazardous Waste Management,
Wayne State University, 2003*

*B.S. Civil Engineering, University of
Michigan, 1994*

Registration

Professional Engineer, Michigan

Certifications

*40-hour HAZWOPER with current 8-hour
Refresher*

First Aid and CPR Training

Nuclear Densometer Gauge Certification

Experience

16 years

Joined Firm

2009

Relevant Expertise

- Solid Waste Facility Design and Construction
- Hazardous Waste Management
- Brownfield Redevelopment

Countywide Recycling & Disposal Facility Isolation Break, Gas System, and Leachate Construction Quality Assurance (CQA) Services, Republic Services, Inc., East Sparta, Ohio

Project Manager. Managed the oversight and documentation for this United States Environmental Protection Agency (USEPA) required project to create complete separation between the 88-acre remediation area and the remainder of the cells at the Facility. This project was necessary due to a chemical reaction that is believed to be attributed to aluminum dross waste that the facility historically received. The project involved the installation of 52 landfill gas wells and associated headers and laterals, relocation of the site flares, installation of 24 acres of high-density polyethylene (HDPE) geomembrane, construction of 2 pump stations and complete isolation of the remediation leachate system. To document this work 4 separate certification reports were required due to various regulatory drivers. The facility's Division Manager commended Ms. Goodhall on how she took care of the client at this facility and dealt with the ever-changing staffing needs during the course of this 9-month long project

Lorain County Landfill Gas Construction Drawings and CQA Services, Republic Services, Inc., Oberlin, Ohio

Project Manager. Ms Goodhall served as the project manager for the development of landfill gas construction drawings for this facility and the related construction quality assurance for the project. This project involved

the installation of additional gas wells, header and lateral piping, isolation valves and the second enclosed flare for the facility.

County Environmental of Wyandot Landfill, Gas Construction Drawings and CQA Services, Republic Services, Inc., Carey, Ohio

Project Manager. Ms Goodhall served as the project manager for the development of landfill gas construction drawings for this facility and the related construction quality assurance for the project. This project involved the installation of additional gas wells, header and lateral piping, air and force main piping and the 2nd utility flare for the facility.

Cherokee Run Landfill, Gas Construction Drawings and CQA Services, Republic Services, Inc., Bellefontaine, Ohio

Project Manager. Ms Goodhall served as the project manager for the development of landfill gas construction drawings for this facility and the related construction quality assurance for the project. This project involved the installation of additional gas wells and additional header and lateral piping. In addition, BC provided oversight of repair work to the site's utility flare condensate sump and associated piping.

Conestoga Landfill, Allied Waste, Inc., Pennsylvania

Environmental Manager and Construction Manager. Managed a 22-acre time-critical cell construction project, initiated in 2008. Numerous challenges were encountered and successfully overcome during construction in early spring, and the cell was certified in time to prevent waste diversion to another facility. Ground water seeps encountered in the cell floor required redesign in the field. Responsible for pursuing and obtaining permit modifications, saving the facility approximately \$4,000,000. After the merger between Allied Waste and Republic Services, she continued to provide construction management services to the facility on their 2009 17-acre time critical cell construction involving 500,000 CY of structural fill placement.

Gas System Assessments, Republic Services, Inc., Nationwide

Project Manager and Assessor. Conducted landfill gas system assessments at 14 Republic landfills to determine compliance Republic's national Standard Operating Procedures for Landfill Gas Operations and Maintenance. These assessments involve a thorough review of landfill gas monitoring data, reporting, and maintenance followed by recommendations to the facility on how to improve the implementation of the SOP and the operations of the gas system.

Allied Waste Services, Inc., Erie, Michigan

As a **Regional Environmental Manager** for Allied Waste Services, responsible for the regional management of landfill capital, closure and post-closure budgets, landfill development and construction, environmental compliance, and facility expansions for the 27 active landfills, 36 closed landfills, two closed hazardous waste landfills, 44 transfer stations/recycling stations and 62 hauling companies located in the Northeast and Eastern regions of the United States. Also developed and implemented regional

initiatives to conduct training sessions for environmental managers, operations personnel, and consultants.

In this role, accomplished several key activities including:

- Developing and implementing leachate tracking log spreadsheets for 35 active landfills,
- Drafting and enforcing regional soil tracking, soil usage, and non-deplete tonnage policies,
- Developing, implementing and reviewing aerial calculation review spreadsheets for 35 landfills.

Lorain II and Lorain I Landfills, Allied Waste Services, Inc., Oberlin, Ohio

Engineer. Completed a 20-acre closure project and substantial gas system improvements to address odor complaints at the Lorain County II Landfill. At Lorain I, completed engineering oversight on a cap improvement project to minimize infiltration and leachate generation from this landfill. Also completed installation of combination gas wells and publically owned treatment works (POTW) projects involving leachate collection and disposal systems.

County Environmental of Wyandot Landfill, Inc., Allied Waste, Inc., Carey, Ohio

Engineer. Managed the relocation of approximately 1.4 million cubic yards of waste from an unlined portion of the facility to the lined portion of the facility. This waste relocation was successful in reducing the groundwater impacts identified at the facility.

Celina Sanitary Landfill, Allied Waste, Inc., Celina, Ohio

Engineer. Efforts resulted in successful expansion of the Celina Sanitary Landfill, adding nine years of site life to the facility. This work included obtaining a host agreement, a zoning permit, solid waste and air permits-to-install, and the first Director's exemption for siting a landfill over a 100-gpm aquifer granted in Ohio.

Cherokee Run Landfill, Allied Waste, Inc., Bellefontaine, Ohio

Engineer. Responsible for the successful expansion of Cherokee Run Landfill, adding 10 years of site life to the facility. This work included obtaining solid waste and air permits-to-install, and the second Director's exemption for siting a landfill over a 100-gpm aquifer granted in Ohio.

Noble Road Landfill, Allied Waste, Inc., Shiloh, Ohio

Engineer. Responsible for the continued pursuit of a vertical expansion, including design completion, hydrogeologic investigations, and wetland and air permitting. Permit to install (PTI) approval is expected in March 2009. Managed the permitting, design, construction, and startup of the gas system at Noble Road Landfill, which recently triggered regulatory requirements for an active gas system.

Celina and Cherokee Landfills, Allied Waste, Inc., Ohio

Engineer. Responsible for the continued pursuit of two lateral expansions, including design completion, hydrogeologic investigations, and wetland, air, and zoning permitting.

Landfill Construction, Allied Waste, Inc.

Engineer. Managed landfill construction projects, including eight cells, three caps, ten landfill gas systems, two flare installations, and three leachate system improvements. Three of these were time-critical off-season cell construction projects. As Ohio District Engineer, responsible for the permitting, construction, and compliance for six active landfills, three closed landfills, seven transfer stations, and two recycling facilities. In this role, she completed landfill expansions and construction projects, and delivered cost savings and improvements to several landfill sites.

Type III Landfill Cell Redesign, Construction, and Interim Cover Staking Plan, CEMEX, Inc., Charlevoix, Michigan

Technical Lead and Certifying Engineer. Served as Technical Lead for this 8-acre cell construction for a cement kiln dust landfill that is located just north of CEMEX's limestone quarry on Lake Michigan. Responsible for a fast-track redesign of the Phase II cell due required by verification surveying revealing that the quarry wall had been mined 150 feet into the Phase II cell area. The redesign was accomplished while the contractor continued onsite work, with no resulting downtime. Also served as the Lead Liner during installation of the geosynthetic clay liner and 60-mil HDPE geomembrane.

Fort Gratiot Type II Landfill Remedial Design, Michigan Department of Environmental Quality, Port Huron, Michigan

Technical Lead, Engineer of Record. Served as **Project Manager** for remedial activities at this 18-acre Part 201 Landfill. These activities included installation of a passive landfill gas venting control system, geosynthetic cover system, storm water controls, and leachate control system. Also served as Lead Liner during installation of the 40-mil linear low-density polyethylene (LLDPE) geomembrane and geocomposite layer.

Gratiot County Landfill Cap Repair and Emergency Methane Corrective Action, Michigan Department of Environmental Quality, Gratiot County, Michigan

Project Manager for remedial activities at this 42-acre landfill containing municipal and industrial waste including polybrominated biphenyl wastes. Identified methane concentrations in the explosive range at the property boundaries, developed design of an emergency corrective action, and coordinated monitoring of the corrective action. Also responsible for the coordination of quarterly groundwater sampling associated with the operating groundwater extraction treatment system, and supervising cap repairs that were necessary due to differential settlement.

Tobico Marsh State Game Area Landfill Characterization Survey and Decommissioning Plan, Michigan Department of Natural Resources, Kawkawlin Township, Michigan

Responsible for the completion of the radiological characterization survey and decommissioning plan in pursuit of the termination of the client's Nuclear Regulatory Commission license at a three-acre low-level radioactive waste landfill. Served as Field Operations Leader during the six-month site characterization field work, which was completed in Level B PPE with radiological controls.

Citizens Disposal Landfill Peat and Marl Removal, Cell Excavation, and Berm Construction, Allied Waste, Inc., Grand Blanc, Michigan

Project Manager and Certifying Engineer for the removal of a non-regulated wetland within the footprint of the landfill, as well as cell excavation and berm construction.

Former Eaton Transmission Facility Brownfield Redevelopment, Michigan Department of Environmental Quality, Kalamazoo, Michigan

Technical Lead. This demolition project involved a 645,000-sq. ft. former transmission facility. Served as the Field Operations Leader during the pre-demolition sampling event, which involved coordinating activities for two sampling crews and two Geoprobe® rigs across the 50-acre site. Also coordinated the preparation of the demolition bid specifications and assisted the client during the procurement process for the demolition Trade Contractor. Acted as a liaison between the client and the contractor, monitoring compliance with contract specifications, reviewing and negotiating change orders, and reviewing and approving payment requests and associated documentation.

Welcome Center for Ambassador Properties Brownfield Redevelopment, Michigan Department of Environmental Quality, Detroit, Michigan

Technical Lead. This Brownfield project encompassed nearly 200 residential and commercial lots that were proposed for development as a Michigan Department of Transportation (MDOT) Welcome Center. Developed the Focused Feasibility Study for the parcels identified as Michigan Part 201 facilities, coordinated additional sampling at the site to determine the boundaries of the area to be excavated, and prepared of bid specifications for the contaminated soil removal. Provided construction oversight services during the soil removal.

Toledo Tie Treatment Site, Kerr-McGee Corporation, Toledo, Ohio
Project Engineer. Supervised construction quality control and documentation of all field activities for a \$7 million Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) directed, time-critical removal action. Negotiated with regulators during the implementation of the time critical removal action, and designed appropriate engineering controls to mitigate remaining contamination.

Miscellaneous Solid Waste Landfills in Michigan and Ohio

Design Engineer. Served as a Design Engineer for several landfill sites throughout Michigan and Ohio. Responsibilities included:

- Performing landfill construction quality assurance during geosynthetic liner installation,
- Designing landfill staking plans and landfill stormwater improvement projects,
- Preparing landfill construction documentation reports, and
- Performing engineering calculations required for landfill permit applications.

U.S. Army Forces Command Installation Restoration Program Support Manager

- Developed and analyzed Forces Command's Cost to Complete Budget totaling \$550 million.
- Developed 26 Installation Action Plans to address 5,000 former hazardous waste disposal sites.
- Provided technical and program support to 28 Installation Restoration Project Managers.

Fort Irwin Installation Restoration Program Manager

- Investigated former hazardous waste disposal sites at Fort Irwin, a 1,000 square mile installation.
- Managed over \$14.5 million of Defense Environmental Restoration Program funds.
- Negotiated with various California regulatory agencies on behalf of Fort Irwin and the U.S. Army.
- Developed and implemented the Installation Action Plan.
- Implemented the Community Relations Plan for the Installation Restoration Program.
- Coordinated the field work for site inspections, remedial investigations, and remedial actions.

Bridge Scour Analyses, Michigan Department of Transportation, Various Michigan Sites

Performed 160 Level I and 37 Level II Bridge Scour Analyses. These included developing cross sections of the river upstream and downstream of the bridge, calculating the depth of scour, comparing to bridge foundation depth, and determining if corrective actions are required.

Vandevenne Drain Improvements, City of New Baltimore, Michigan

Modeled the existing conditions using HEC-2 program and designed improvements to the drain cross section to facilitate additional development in the area.

**Rouge River Valley Combined Sewer Overflow (CSO) Study,
Southeast Michigan**

Evaluated proposed surface water monitoring locations, installed sampling equipment, and conducted sampling events during rain events. Also conducted CSO studies for Michigan municipalities.

Nate Givens

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Experience Summary

Nate Givens recently joined Brown and Caldwell as an Engineer I in Solid Waste. Mr. Givens has over fourteen years of experience in construction. His experience includes construction of surface and subsurface drainage systems, wetlands, storm water detention basins, underground utilities and roadways. He brings exceptional attention to detail, proven understanding and is driven to provide quality services.

Assignment

Field CQA Inspector

Education

B.S., Civil Engineering, Ohio University, 2009

Registration

Engineer Intern, Ohio

Experience

14 years

Joined Firm

2010

Relevant Expertise

- *Hydraulics & Hydrology*
- *Water & Wastewater Treatment*
- *Construction Quality Assurance*
- *Field Testing*
- *Soil and Groundwater Sampling*

2010 Temporary Closure, Imperial Landfill, Republic Services, Inc., Imperial, Pennsylvania

CQA Technician. Duties included observation, documentation and testing of Interim Cap Gas Collection and Control System (GCCS) and forty acres of geotextile and 40-mil high-density polyethylene (HDPE) geomembrane. Observed construction of surface water channels, surface water culverts and sedimentation basins.

2010 Landfill GCCS, Imperial Landfill, Republic Services, Inc., Imperial, Pennsylvania

CQA Technician. Observed and documented installation of 31 vertical gas extraction wells and GCCS piping.

2010 New Cell Construction, Imperial Landfill, Republic Services, Inc., Imperial, Pennsylvania

CQA Technician. Provided oversight and daily documentation on the construction of a 3.8-acre, dual-lined solid waste disposal cell.

Site Closure Activities – Historical Document Review, Confidential Client, Ohio

Document Reviewer. Reviewed 20+ years of historical documents related to closure activities for the site. Attributed the client provided documents by document type, date, author and subject making them easily retrievable for future use. Also entered historical analytical data into spreadsheets, so that we could begin trending.

Landfill Gas Pipeline CQA, Lorain Landfill, BFI, Inc., Oberlin, Ohio

Monitored the installation of 18- and 24-inch headers. Documented installation of valves and a new sump. Observed dual extraction well pumps for proper function.

Sludge Lagoon Closure CQA, ArvinMeritor, Inc., Grenada, Mississippi

Field CQA Inspector. Duties included observation and documentation of the installation of the vegetative soil cover component of the final cover system for the closure of a former sludge lagoon. Responsibilities also included providing direction to the contractor for expansion of the onsite soil borrow area.

Residential Land Development

Senior Designer. Designed a residential subdivision, requiring knowledge of boundary and topographic surveying, lot layout, pavement design, grading plan development, storm and sanitary sewer design, detention pond design and municipal code.

Putnam/Gunkelman Drainage Project, Frankfort, Ohio

Designer. Designed and installed systematic subsurface drainage consisting of approximately fifteen miles of corrugated plastic tubing.

Kensington Residential Subdivision and Rosewood Villas Residential Subdivision, Chillicothe, Ohio
Project Superintendent and Heavy Equipment Operator during construction of streets and stormwater detention basins.

Peter Schlater

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Experience Summary

Peter Schlater provides construction quality assurance (CQA) during the installation of landfill cover system components and landfill gas collection systems. Mr. Schlater also provides technical field support on environmental and geologic investigations including supervision of drilling operations, soil and groundwater sampling, operation and maintenance of remediation systems, and health and safety monitoring. Lastly, Mr. Schlater supports reporting efforts including preparing boring and well construction logs, generating groundwater and/or bedrock contour maps, data management, and preparation of CQA certification reports.

Assignment

Field CQA Inspector

Education

M.S. Geology, Wright State University, Dayton, Ohio

B.S. Geology, 2004, North Dakota State University, Fargo, North Dakota

A.S. Mechanical Engineering, 2001, Cincinnati State Technical and Community College, Cincinnati, Ohio

Training

40-Hour OSHA Health & Safety Training

Troxler Nuclear Density Gauge Certified

*OSHA Site Supervisor Training
CPR/First Aid*

Experience

3 year

Joined Firm

2006

Relevant Expertise

- *Construction Quality Assurance (CQA)*
- *Soil and Groundwater Sampling*
- *Field Support*

County Land Development Landfill Closure CQA Services, Salem, Ohio

Geologist II. Performed on-site CQA activities during the construction, installation, and placement of the final cover and landfill gas collection system and all associated system upgrades and repairs. Responsible for on-site field monitoring to ensure that the new system was constructed in accordance with the design plans and technical specifications. Prepared Certification Report for submission to Ohio Environmental Protection Agency (Ohio EPA).

Countywide Recycling & Disposal Facility Isolation Break CQA Services, East Sparta, Ohio

Geologist. Performed on-site CQA activities during the construction and installation and placement of liner landfill gas collection system and all associated system upgrades and repairs. Responsible for on-site field monitoring to ensure that the new system was constructed in accordance with the design plans and technical specifications. Prepared Certification Report for submission to Ohio EPA and United States Environmental Protection Agency (USEPA).

Lorain County Landfill Gas System CQA Services, Oberlin, Ohio

Geologist. Provided CQA oversight for the installation of landfill gas extraction systems. This included air monitoring, high-density polyethylene (HDPE) well installation, extraction pipe fusion welding installation, pipe pressure testing and tie-ins. After completion of the project, assisted in preparing the Certification Reports for submission to Ohio EPA.

County Environmental of Wyandot Landfill Gas CQA Services, Carey, Ohio

Geologist. Performed on-site CQA activities during the construction and installation of the landfill gas collection system and all associated system upgrades and repairs. Responsible for on-site field monitoring to ensure that the new system was constructed in accordance with the design plans and technical specifications. Prepared Certification Report for submission to Ohio EPA.

Biannual Groundwater Sampling, OxyChem (Durez), Kenton, Ohio

Geologist. Participated in groundwater sampling event of monitoring wells, in addition to gathering field measurements of capped sludge lagoons.

Recovery System, ArvinMeritor, Heath, Ohio

Geologist. Performed operations and maintenance tasks associated with the in-situ groundwater bioremediation system and polychlorinated biphenyl (PCB) contaminated non-aqueous phase liquid (NAPL) recovery system at the operating industrial facility.

LCP, Inc., Superfund Site, Linden, New Jersey

Geologist. Project included the sampling of soil gas, groundwater, surface water, and sediments at this former chlor-alkali manufacturing facility. The primary constituents of concern include free metallic mercury, polycyclic aromatic hydrocarbons (PAHs), and includes extensive distribution of PCBs in shallow soils as a result of the numerous, large electrical substations that were part of the former manufacturing operation. Groundwater sampling at this site required extensive use of the following procedures: New Jersey Field Lab Method, Ultra Low Flow Groundwater Sampling Method, and Clean Hands/Dirty Hands Sampling Method.

New Lyme Landfill Superfund, New Lyme, Ohio

Geologist. Assisted in quarterly groundwater sampling at a closed landfill in accordance with the Ohio EPA-approved Post-Closure Plan.

Remedial Investigation, ArvinMeritor, Grenada, Mississippi

Geologist. Assisted in the installation of several up and down gradient piezometers associated with a Permeable Reactive Barrier (PRB) wall using a Geoprobe direct push rig. Collected groundwater level measurements from the piezometers in order to map the hydraulic gradient through the PRB wall.

Monitoring Well Deepening, Rockwood Landfill – Allied Waste Services, Newport, Michigan

Geologist. Conducted oversight of monitoring well deepening activities around the perimeter of a C/D landfill to meet the regulations set forth by Michigan Department of Environmental Quality (MDEQ). Responsible for revising the associated well logs, resetting the depths of the pumps, and coordinating all on-site drilling activities associated with the project.

Bi-Annual Groundwater Sampling, North Cove Landfill – Ohio Department of Transportation, Toledo, Ohio

Geologist. Conducted the bi-annual groundwater monitoring, landfill site inspection and reporting for the sanitary landfill per Ohio EPA Solid Waste Regulations. Drafted groundwater-contour maps, project documentation, record keeping and assisted with report writing.

Phytoremediation Tree Planting, ArvinMeritor, Heath, Ohio

Geologist. Headed up and organized the phytoremediation tree-planting project used to offset contaminated groundwater with PCB contaminated NAPL.

Remedial Investigation, Westway Terminals, Saint Paul, Minnesota

Geologist. Conducted oversight during the installation of several monitoring wells up and down gradient of a B100 Bio-Diesel spill site using a PowerProbe 9630 (Direct Push Rig). Collected groundwater and product thickness level measurements and groundwater samples from the monitoring wells in order to characterize the site and determine the extent of the B100.

Old Mill Superfund Site, Rock Creek, Ohio

Geologist. Assisted in quarterly groundwater sampling at a former industrial site in accordance with the Ohio EPA Long-Term Monitoring Program Work Plan and describes the Enhanced

Pilot Remediation System, Arbor Hills, Northville, Michigan

Geologist. Performed operations and maintenance tasks associated with the PCB contaminated leachate remediation system at the operating landfill.

Aquifer Analysis, Occidental Chemical Corporation, Geismar, Louisiana

Geologist. Installed transducers in onsite product recovery wells to record water levels and temperatures during several pumping tests at the site in order to collect data to analyze the underlying aquifer system.

Pfizer – Holland Barrier Wall, Holland, Michigan

Geologist. Conducted groundwater sampling at a closed production facility in accordance with the Ohio EPA-approved Post-Closure Plan.

ArvinMeritor, Grenada, Mississippi

Geologist. Assisted in groundwater and surface water sampling at a closed landfill and industrial site. Assisted in a project optimization effort in order to streamline the field activities. Drafted groundwater-contour maps and assisted with report writing.

National Grid, Troy, Former MGP, Troy, New York

Geologist. Assisted in providing drilling oversight and subsurface geologic characterization for soil borings and monitoring well installation. Other field activities included well development, and hydraulic conductivity testing.

T-Mobile/Wayne Switch, Wayne, New Jersey

Geologist. Provided drilling oversight and subsurface geologic characterization for soil borings and monitoring well installation including well development. Conducted a full round of groundwater sampling using low-flow sampling techniques. Performed downhole geophysics on four newly installed bedrock monitoring wells to characterize bedrock structure, particularly the location and orientation of the bedrock's fractures, which would be the primary conduit for groundwater transport. Borehole geophysics provides a continuous record of subsurface conditions (e.g., lithology, fractures, and flow zones) which may be compared to, or correlated from one borehole to the next. Parameters logged at each borehole included natural gamma, single point resistance/spontaneous potential, caliper, temperature/fluid resistivity, optical televiewer, acoustic televiewer and heat pulse flow meter. Drafted groundwater-contour maps, well construction and geophysical logs, geologic cross-section, boring logs and assisted with report writing.

El Paso, Fords, New Jersey

Geologist. Duties included a cross section of regional geology and boring logs review. Field tasks included collecting soil samples and groundwater samples. Performed downhole geophysics on several existing overburden monitoring wells to characterize clay and sand zones, which would be the primary conduit for groundwater transport. Borehole geophysics (natural gamma) provides a continuous record of subsurface conditions lithology, which may be compared to, or correlated from one borehole to the next.

AZC Site, Langeloth, Pennsylvania

Geologist. Provided drilling oversight and subsurface geologic characterization for soil borings and monitoring well installation including well development. Conducted a full round of groundwater sampling using low-flow sampling techniques. Performed downhole geophysics on four newly installed bedrock monitoring wells to characterize bedrock structure, particularly the location and orientation of the bedrock's fractures, which would be the primary conduit for groundwater transport. Borehole geophysics provides a continuous record of subsurface conditions (e.g., lithology, fractures, and flow zones) which may be compared to, or correlated from one borehole to the next. Parameters logged at each borehole included natural gamma, single point resistance/spontaneous potential, caliper, temperature/fluid resistivity, optical televiewer, acoustic televiewer and heat pulse flow meter. Drafted groundwater-contour maps, well construction and geophysical logs, geologic cross-section, boring logs and assisted with report writing.

Memberships

Geological Society of America

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Julie McGowan

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Experience Summary

Julie McGowan has eight years experience providing technical field support on solid waste and environmental investigation and construction projects, including construction quality assurance (CQA) oversight of earthwork contractor's geosynthetic installation contractors and drilling contractors. Her experience also includes environmental sampling, field testing, and health and safety monitoring. Her responsibilities include quality assurance monitoring and testing during the installation of geosynthetic and clay liners at landfill sites. Ms. McGowan has provided soil component monitoring including moisture density testing of low permeability soil and preparation of subgrade for geosynthetic installation. She has conducted geosynthetic quality assurance monitoring for various materials including geosynthetic clay liners (GCL), geomembrane, geonet, geotextile and geocomposite. Monitoring and testing are performed to fulfill and document compliance with project requirements including destructive testing for trial welds and field seams, panel placement logs, documentation of air test and vacuum tests, and as-built drawings. Her experience includes air and vacuum testing seams, material deployment, and wedge or extrusion testing. She has conducted monitoring of explosive gases and leachate temperatures. She also supports reporting efforts including preparation of QA/QC certification reports, documenting cover integrity in daily reports, and entry of information into databases.

Assignment

Field CQA Inspector

Education

Polaris Career Center, 2007

Meadowbrook High School, 2000

Registration/Certification

OSHA Construction Safety, 10-Hour

HAZWOPER, 40-Hour trained per 29 CFR 1910.120

Troxler Nuclear Density Gauge Certified

First Aid and CPR

Experience

8 years

Joined Firm

2009

Relevant Expertise

- Construction Quality Assurance (CQA) Oversight
- Solid Waste
- Environmental Investigation

Solid Waste and Geotechnical Experience

Lewis Landfill Cap CQA Services, Mahoning County, Ohio

CQA Technician responsible for on-site field monitoring to ensure that the final cover system maintenance activities were constructed in accordance with the design plans and technical specifications for the Lewis Landfill (Closed). Responsibilities included the monitoring of daily landfill construction activities including placement of the TENSAR geogrid material, structural fill, and low permeability soil material, and vegetation. Performed compaction testing of the structural fill and moisture/density testing of the low permeability soil material utilizing a Troxler Nuclear Density Gauge. Prepared daily documentation including field notes, CQA forms, and photographs. Worked on the Construction Certification Report for submission to the Ohio EPA.

County Land Development Landfill Closure CQA Services, Salem, Ohio

CQA Technician responsible for on-site field monitoring to ensure that the new final cover system was constructed in accordance with the design plans and technical specifications for the County Land Development (CLD) Landfill Closure Area 4. Responsibilities included the monitoring of daily landfill construction activities including placement of the re-compacted soil barrier (RSB) material, vegetative/protective cover material, landfill gas system pipeline laterals, and storm water controls. Performed compaction and moisture testing utilizing a Troxler Nuclear Density Gauge. Prepared daily documentation including field notes, CQA forms, and photographs. Worked on the Final Closure/Construction Certification Report for submission to the Ohio EPA.

Countywide Recycling & Disposal Facility Cell Construction CQA Services, East Sparta, Ohio

CQA Technician responsible for the monitoring of daily landfill construction activities for a constant term, providing soil testing for compaction and moisture utilizing a Troxler Nuclear Density Gauge, providing daily documentation for three Cell construction projects (Cells 8B, 8C, and 16). Cell components include a 36-inch recompacted soil liner, geosynthetic clay liner, 60-mil textured high-density polyethylene (HDPE) geomembrane, double-sided

geocomposite, and protective cover. Cell also has a leachate collection system. Responsibilities also include working in accordance with project specifications and permit guidelines. Monitored construction of landfill gas and leachate collection system as well as gas line road crossing, toe drains and other ancillary features on-site.

Also performed monthly monitoring of landfill gas on all probes and punch bars for the entire site, as well as explosive gas monitoring in all buildings where Sierra monitors were not available. Provided CQA on the Area N Geosynthetics section of the temporary capping (seven anchors). Provided CQA oversight on 30,000 foot of underground piping on 39 anchors of the landfill. Utilized a GX-2001 gas meter for all activities.

Liner Installation Quality Control, Various Sites, Nationally

Quality Control Technician. Provided quality control for a national liner installation company that installed 10 million square feet of geosynthetics annually. Types of geosynthetics installed included Smooth and Textured HDPE and LLDPE, PVC, Polypropylene, and XR5. Responsible for documenting all quantitative and qualitative testing of the geosynthetics including panel layouts, seam logs, air testing, destructive testing, repair logs and vacuum box testing.

Environmental Services Experience

Former AZC Site Remedial Investigation, Slovan, Pennsylvania

Environmental Technician responsible for overseeing and documenting drilling activities, including monitoring well installations, down hole packer testing and down hole geophysical logging. Additional responsibilities include well development, groundwater sampling, surface water sampling and flow measurements, and sediment sampling.

Old Mill Superfund Site Monitored Natural Attenuation (MNA) Pilot Study, Rock Creek, Ohio

Environmental Technician responsible for sampling monitoring wells and hydrogen release compound-advanced (HRCA) application trenches to evaluate the effectiveness of MNA during the MNA Pilot Study. In addition to collecting groundwater samples for laboratory analysis, also uses field test kits to analyze the groundwater samples for a suite of bioparameters, including iron, manganese, chloride, nitrate and carbon dioxide.

Janet Todia

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Experience Summary

Janet Todia recently joined Brown and Caldwell. Ms. Todia brings 12 years of experience in landfill operation and maintenance.

Assignment

Field CQA Inspector

Experience

12 years

Joined Firm

2010

Relevant Expertise

- Solid Waste Management
- Landfill Gas Systems
- Air Compliance

Landfill Operation and Maintenance Experience

Cuyahoga Regional Sanitary Landfill, Solon, Ohio

Project Manager for landfill gas services to supply a 3.8 megawatt power plant on site and a 72 mmbtu boiler system to Nestle USA. Managed coordination of field operations with pipeline and compression skid construction activities for the start up of the Nestle Gas to Energy Project.

Epperson Waste Disposal, Republic Services, Williamstown, Kentucky

Supervisor for well field technicians. Aided in the installation of pneumatic pumps for well dewatering purposes. Responsible for environmental compliance reporting.

Hazel Road Landfill, Akron, Ohio

Project Manager for landfill gas field services. Assisted field technicians in trouble shooting potential landfill gas migration issues and pneumatic pump installation.

Hoffman Road Landfill, City of Toledo, Toledo, Ohio

Project Manager for landfill gas field services. Managed environmental compliance and reporting, assisted site technicians in small-scale construction repairs, installation of pneumatic pumps, potential site migration issues, and routine well field tuning. Responsible for routine and non-routine construction budgets.

Lake County RDF, Waste Management, Chesterland, Ohio

Project Manager for landfill gas field services. Managed small-scale construction repairs, submitted proposals for small-scale construction projects, and coordinated well field compliance with Environmental Specialists, Inc.

Oakland Heights Development, Allied Waste Industries, Inc., Auburn Hills, Michigan

Project Manager for landfill gas project that provides methane to the GM Lake Orion boiler system. Managed budget and non-routine activities. Worked with Air Quality Specialists, Inc. to maintain environmental compliance.

Pine Tree Acres Landfill, Inc., Waste Management, Lenox Township, Michigan

Project Manager for well field technicians and aided in routine well field tuning to increase flow to the gas energy plant on site. Worked with Air Quality Specialists, Inc. to maintain environmental compliance.

Statewide Landfill, Waste Management, Canton, Ohio

Project Manager for well field technicians and aided in routine well field tuning, installation of pneumatic pumps, small scale construction repairs, and troubleshooting potential landfill gas migration issues.

Valley View Landfill, Republic Services, Sulpher, Kentucky

Supervisor for well field technicians. Managed routine and non-routine budgets. Responsible for environmental compliance reporting.

Landfill Air Compliance Reporting Experience

Deercroft Recycling and Disposal Facility, Waste Management, Michigan City, Indiana

Prepared semiannual Title V reports, semiannual new source performance standards (NSPS) reports, and semiannual startup, shutdown, and malfunction (SSM) reports. Submitted variance requests/alternative timeline requests, Title V annual compliance certification, and well decommissioning requests and Deviation Occurrence Reports.

Douglas County Recycling and Disposal Facility, Waste Management, Bennington, Nebraska

Prepared semiannual Title V reports, semiannual NSPS reports, semiannual SSM reports, and Title V annual compliance certifications.

ELDA Recycling and Disposal Facility, Waste Management, Cincinnati, Ohio

Prepared quarterly/semiannual Title V reports, semiannual EG reports, and semiannual SSM reports. Submitted variance requests/alternative timeline requests and well decommissioning requests.

Epperson Waste Disposal, Republic Services, Williamstown, Kentucky

Prepared semiannual NSPS reports and semiannual SSM reports. Submitted alternative variance requests/alternative timeline requests and well decommissioning requests.

Greene Valley Recycling and Disposal Facility, Waste Management, Naperville, Illinois

Prepared semiannual EG reports, semiannual SSM reports, semiannual Clean Air Act Permit Program (CAAPP) reports, and annual CAAPP compliance certifications. Submitted CAAPP Form 405s on an as need basis.

Hardy Road Sanitary Landfill, Waste Management, Akron, Ohio

Prepared semiannual NSPS reports, semiannual SSM reports, quarterly/semiannual Title V reports, annual Title V compliance certifications, and annual solid waste report. Maintained operating records.

Hoffman Road Landfill, City of Toledo, Toledo, Ohio

Prepared semiannual NSPS reports, semiannual SSM reports, and quarterly/semiannual Title V reports.

Lake County RDF, Waste Management, Chesterland, Ohio

Prepared semiannual EG reports, semiannual SSM reports, quarterly/semiannual Title V reports, annual Title V compliance certifications, and annual solid waste report.

Lake Landfill, Waste Management, Northbrook, Illinois

Prepared semiannual EG reports, semiannual SSM reports, semiannual CAAPP reports, and annual CAAPP compliance certifications. Submitted CAAPP Form 405s on an as need basis.

Metro Park East Landfill, Waste Management, Mitchellville, Iowa

Prepared semiannual NSPS reports, semiannual SSM reports, semiannual Title V reports, and annual Title V compliance certifications.

Valley View Landfill, Republic Services, Sulpher, Kentucky

Prepared semiannual NSPS reports, semiannual SSM reports, semiannual Title V reports, and annual compliance certifications. Submitted variance requests/alternative timeline requests, and well decommissioning requests.

Wheeler Recycling and Disposal Facility, Waste Management, Wheeler, Indiana

Prepared semiannual EG reports, semiannual SSM reports, quarterly/semiannual Part 70 compliance certifications, and annual Part 70 compliance certifications. Submitted variance requests/alternative timeline requests, well decommissioning requests, and Deviation Occurrence Reports.

Woodland Recycling and Disposal Facility, Waste Management, South Elgin, Illinois

Prepared semiannual EG reports, semiannual SSM reports, semiannual Title V reports, and annual compliance certifications. Submitted variance requests/alternative timeline requests, and well decommissioning requests.

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APR 05 2011
OHIO EPA NEDO

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Appendix D: Project Record Drawings

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NOTES:

1. EXTRACTION WELLS ABANDONED IN PLACE BY THE FOLLOWING METHOD: EXCAVATE DOWN TO REFUSE OR A MAXIMUM OF 4 FEET. IF REFUSE IS NOT ENCOUNTERED, CUT OFF EXISTING WELL CASING AND INSTALL A PVC CAP BY APPLYING A BEAD OF SILICONE GEL INSIDE THE PVC CAP AND ATTACH TO THE WELL CASING WITH 3 LAG SCREWS. ON SITE SOIL BACKFILL TO BE USED TO FILL IN AREA TO GROUND SURFACE.
2. TOPOGRAPHIC MAP REPRESENTS THE 01/21/2010 AERIAL PHOTOGRAPH PREPARED BY KEDDAL AERIAL MAPPING.
3. TOPOGRAPHIC MAP OF CELL 4 EAST IS A COMPOSITE OF A SURVEY CONDUCTED BY THE WELLET CORPORATION ON OCTOBER 7, 2010 AND PERMITTED TOP OF WASTE CONTOURS DEVELOPED BY THE MANINK & SMITH GROUP, INC.

BROWN AND CALDWELL

COLUMBUS, OHIO

SUBMITTED: _____ DATE: _____

APPROVED: _____ DATE: _____

LINE(S) INCHES AT FULL SIZE (IF NOT " SCALE ACCORDINGLY)	EXTERNAL REFERENCES	IMAGE REFERENCES
	CORE WALLS	
	Waste Limits and Gap dwg.	
	EX GC-PS general dwg.	
	EX GC-PS foundation dwg.	
	Preliminary Design dwg.	
	Loran II Topo. 01-20.0.dwg	
	Cell A Final 2010a_xref.dwg	
DESIGNED: BKK		
DRAWN: BKK		
CHECKED: RI		
CHECKED:		
APPROVED:		

[illegible][illegible]

LORAIN COUNTY | LANDFILL
OBERLIN, OHIO

2010 GCCS - PHASE 3
PROJECT RECORD DRAWINGS
PLAN VIEW

FILENAME	RD-1 PLAN VIEW
BC PROJECT NUMBER	138764
CLIENT PROJECT NUMBER	
DRAWING NUMBER	RD-1
SHEET NUMBER	1 OF 5

LORAIN II - PHASE 3 GCCS WELL SCHEDULE
REVISION DATE: December 6, 2010

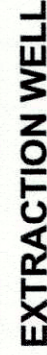
NOTES:

Diagram illustrating the components of a pipe flange assembly:

- NEOPRENE FULL FACE FLANGE GASKET
- CARBON STEEL OR DUCTILE IRON BACK-UP RING (TYP)
- ZINC PLATED NUTS, BOLTS, AND WASHERS
- SDR 11 HDPE FLANGE ADAPTER
- SCH-80 PVC BLIND FLANGE
- HDPE PIPE

DETAIL

SCALE: NOT TO SCALE



NOTES:

1.
 - Da = DEPTH OF REFUSE
 - Ds = DEPTH OF BORING
 - Ds = DEPTH OF SOLID PIPE (BELOW GRADE)
 - Ds = LENGTH OF PERFORATED PIPE
2. MINIMUM 20 FEET SEPARATION BETWEEN BASE OF BORING AND TOP OF LNER SYSTEM.
3. WELL DRILLING DID NOT COMMENCE UNTIL BOTTOM LNER ELEVATIONS WERE IDENTIFIED AND VERIFIED BY PROJECT SURVEYOR, DESIGN ENGINEER, AND COA REPRESENTATIVE.
4. WELL DRILLING TABLE WAS MANAGED BY ENVIRONMENTAL MANAGER. DEDAL DRILLER IDENTIFIED WELL DEPTHS WERE PRESENT AND THAT THE DRILLER AND COA REPRESENTATIVE HAVE THE IDENTICAL INFORMATION PRIOR TO DRILLING.
5. COORDINATES, ELEVATIONS, AND WELL DEPTHS ARE BASED ON INFORMATION OBTAINED FROM AN AERIAL PHOTOGRAPH INFORMATION FROM 1-21-10 BY KEDAL AERIAL MAPPING.
6. EXTRACTION WELL LOCATIONS AND ELEVATIONS WERE FIELD VERIFIED BY CHANGES TO THE WELL SCHEDULE WERE APPROVED BY ENGINEER.



NOTES:

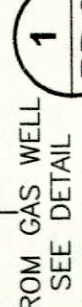
- WELLHEAD
SEE DETAIL



DETAIL

SCALE: NOT TO SCALE

5 RD-2



DETAIL

SCALE: NOT TO SCALE

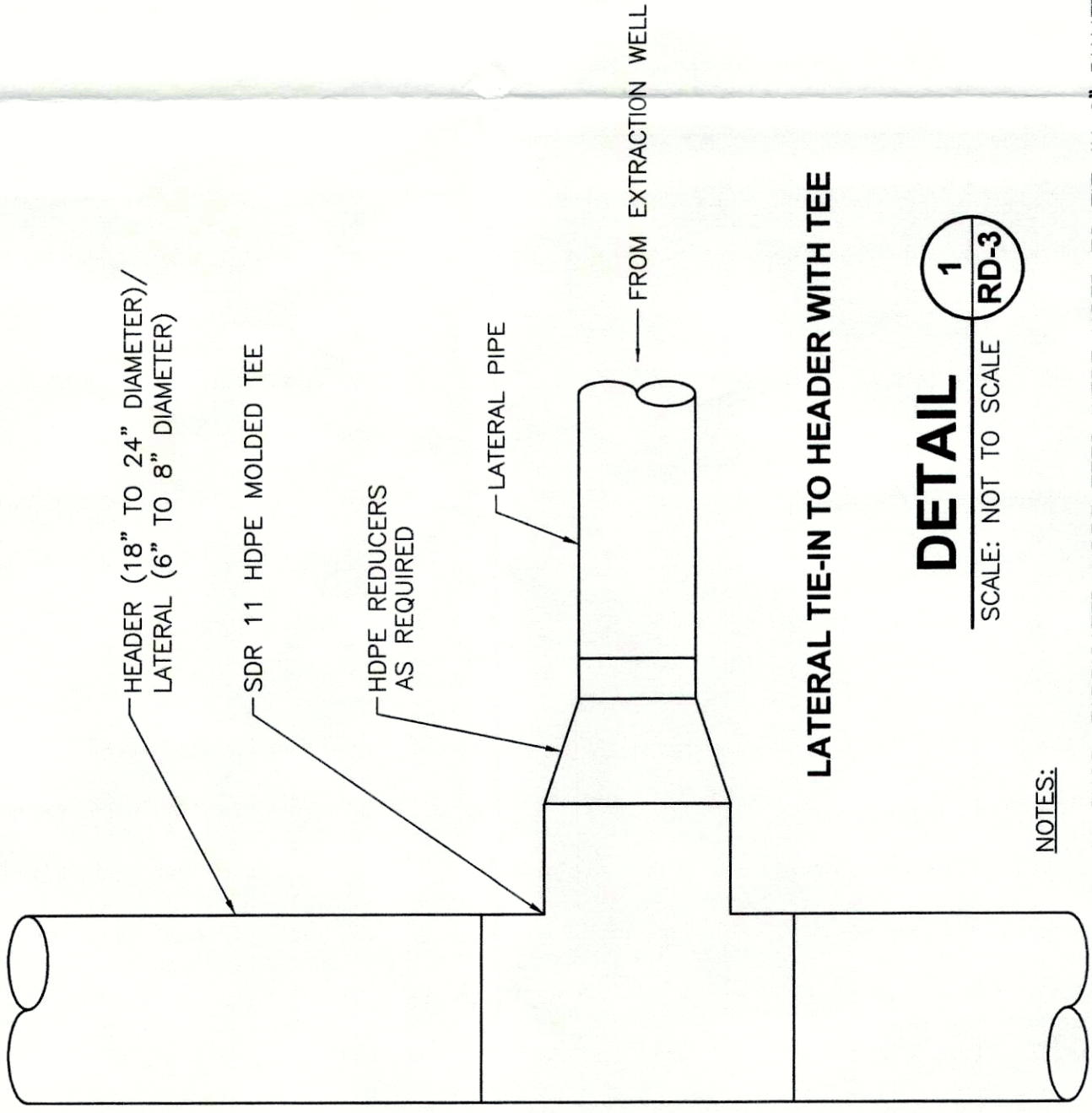
6 RD-2

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" SCALE ACCORDINGLY)	EXTERNAL REFERENCES (COVER APP.)	IMAGE REFERENCES
DESIGNED: BKK		
DRAWN: BKK		
CHECKED: RI		
CHECKED:		
APPROVED:		

[illegible]

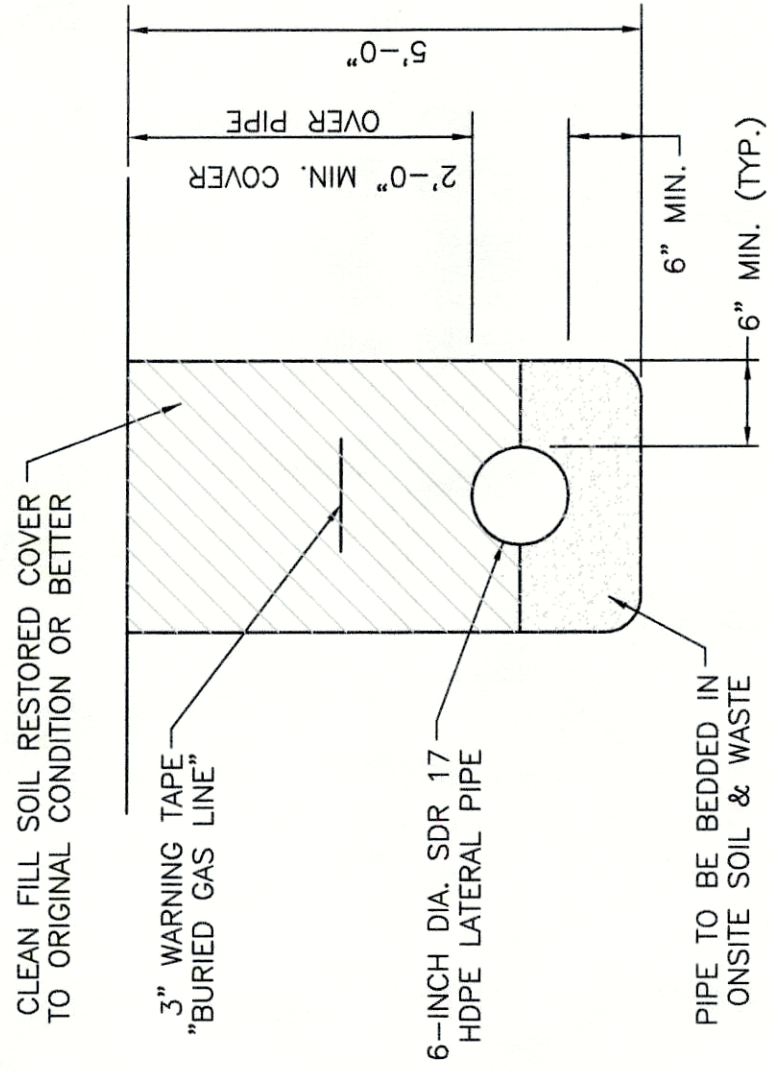
LORAIN COUNTY II LANDFILL
OVERLIN, OHIO
2010 GCCS - PHASE 3
PROJECT RECORD DRAWING
DETAILS

FILENAME	C-2 DEATAILS
OC PROJECT NUMBER	138764
ENT PROJECT NUMBER	
DRAWING NUMBER	RD-2
SHEET NUMBER	2 OF 5



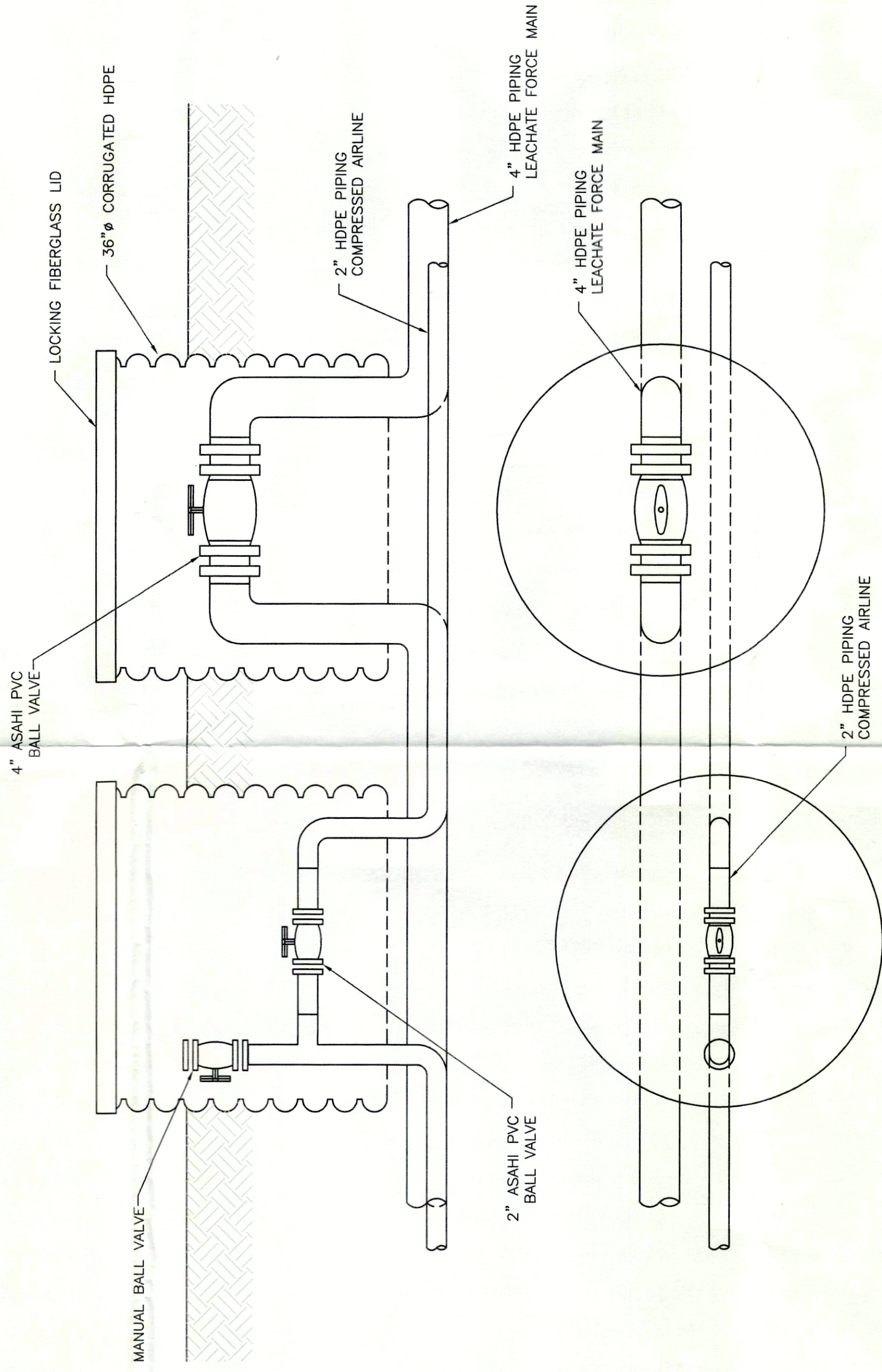
DETAIL 1
SCALE: NOT TO SCALE
RD-3

- NOTES:
- SHOP-FABRICATED HDPE TEES WERE USED TO TIE-IN 6" DIAMETER AND 8" DIAMETER LFG LATERALS TO 18" DIAMETER AND 24" DIAMETER HEADERS.

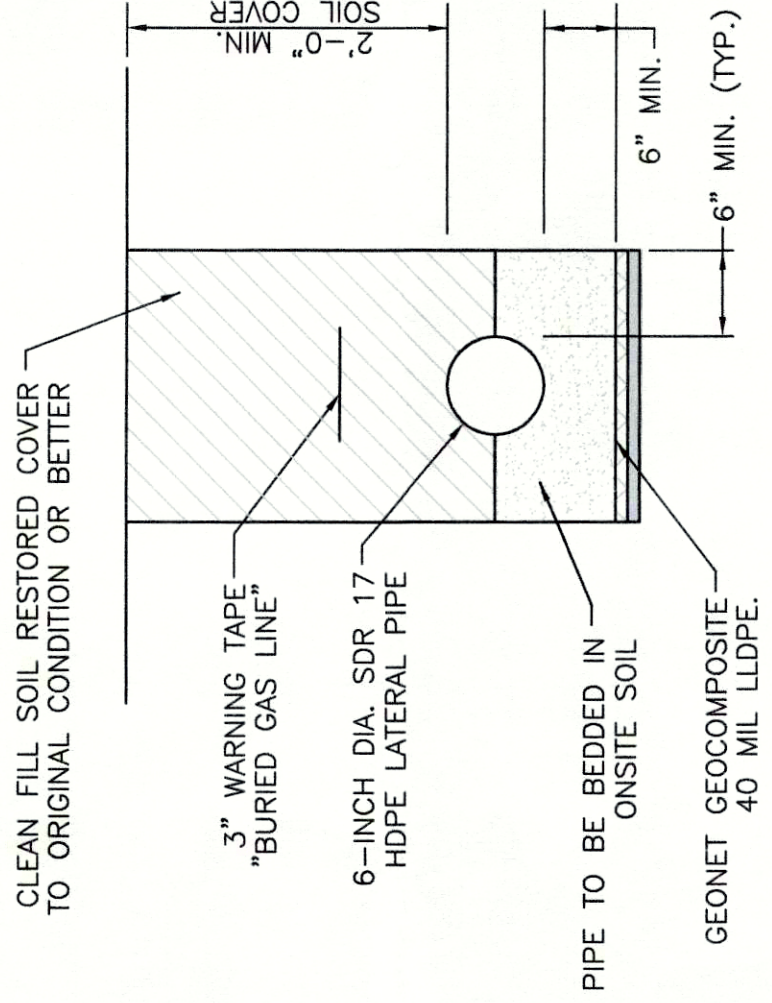


LATERAL TRENCH
DETAIL 2
SCALE: NOT TO SCALE
RD-3

- NOTES:
- COMPACTED ONSITE SOIL & WASTE PROVIDED SOLID BEDDING FOR PIPING.

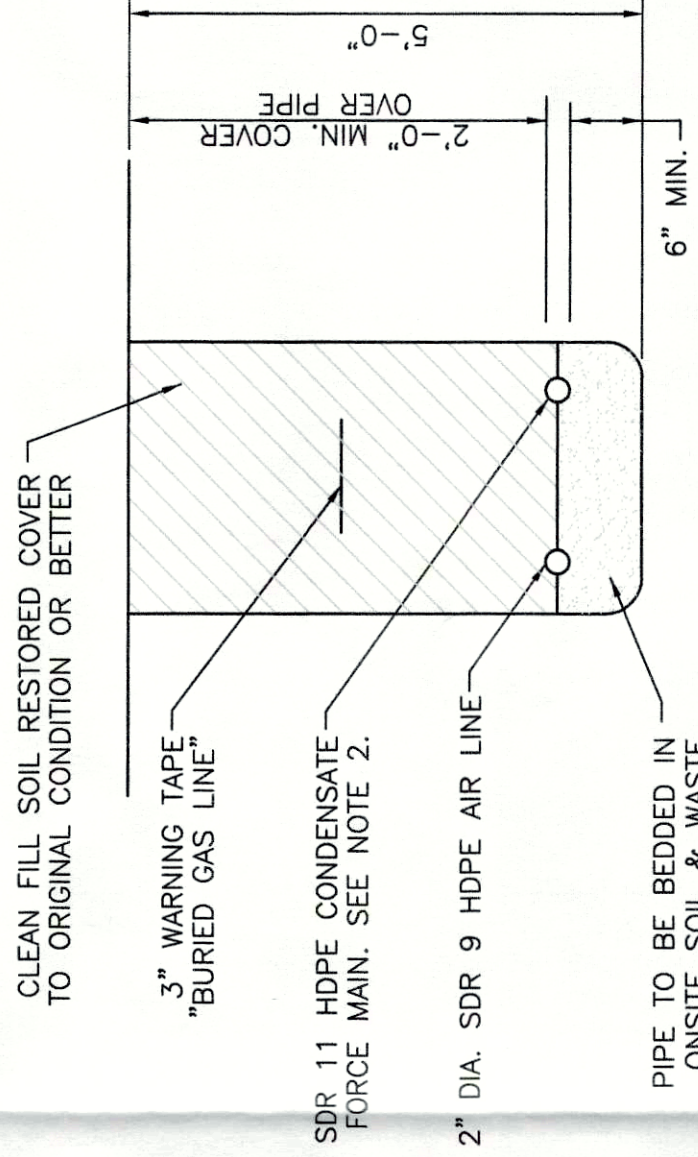


DETAIL 5
SCALE: NOT TO SCALE
RD-3



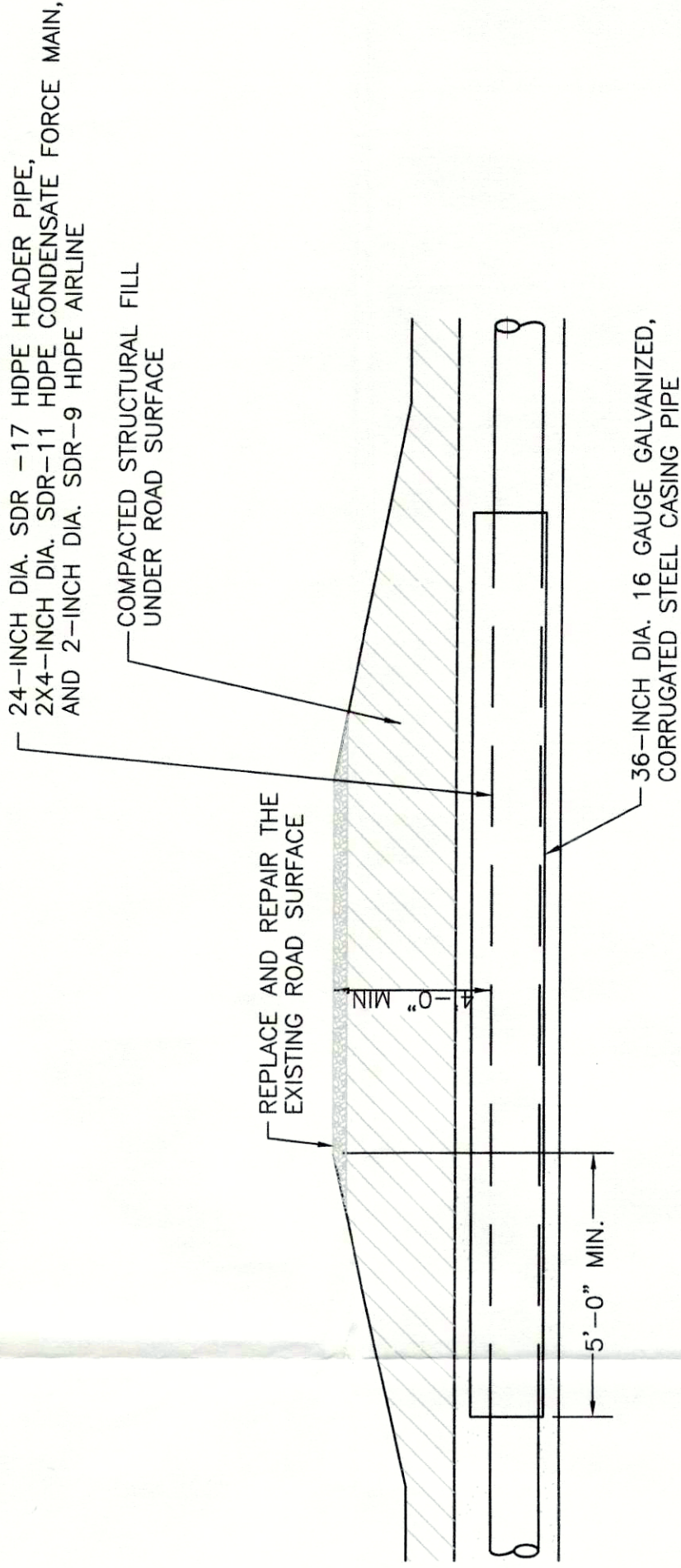
LATERAL TRENCH IN FINAL COVER AREA
DETAIL 3
SCALE: NOT TO SCALE
RD-3

- NOTES:
- COMPACTED ONSITE SOIL PROVIDED SOLID BEDDING FOR PIPING.

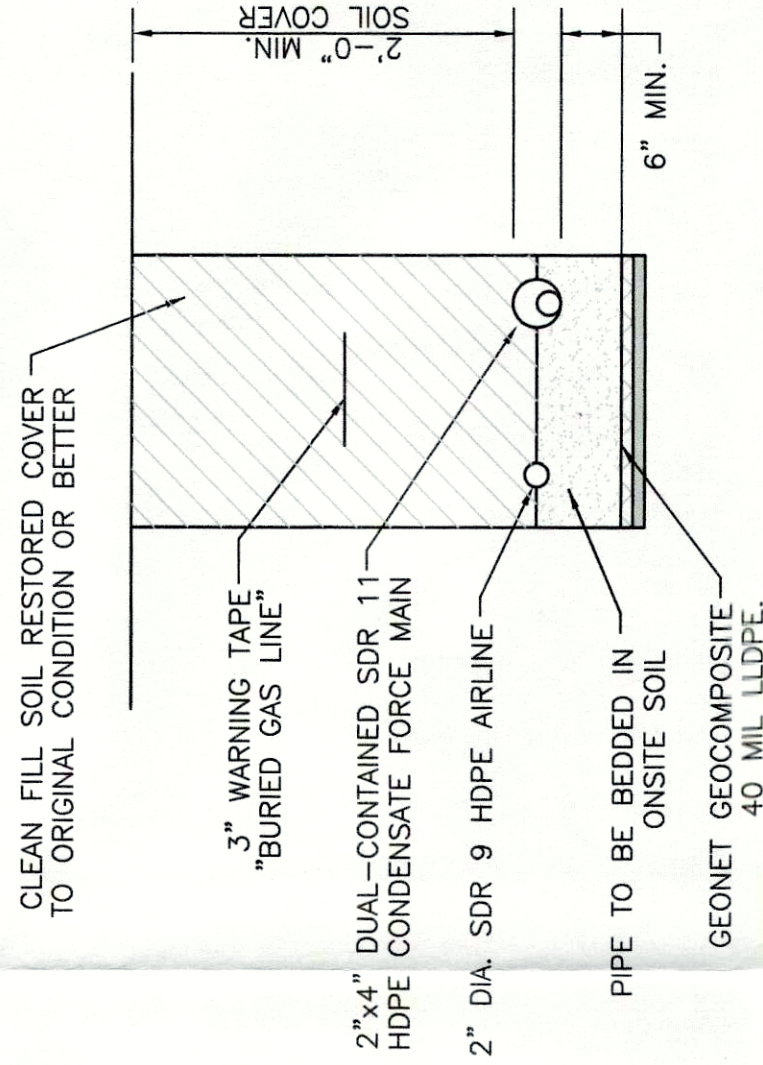


FORCE MAIN/AIRLINE TRENCH
DETAIL 6
SCALE: NOT TO SCALE
RD-3

- NOTES:
- COMPACTED ONSITE SOIL & WASTE TO PROVIDE SOLID BEDDING FOR PIPING.
 - CONDENSATE FORCEMAIN: 2" DIAMETER WHEN PLACED INSIDE THE LIMITS OF WASTE PLACEMENT AND 2"x4" DIAMETER DUAL-CONTAINED WHEN PLACED OUTSIDE THE LIMITS OF WASTE PLACEMENT.



TRENCHED ROAD CROSSING
DETAIL 4
SCALE: NOT TO SCALE
RD-3



FORCE MAIN/AIRLINE TRENCH IN FINAL COVER AREA
DETAIL 7
SCALE: NOT TO SCALE
RD-3

- NOTES:
- COMPACTED ONSITE SOIL PROVIDED SOLID BEDDING FOR PIPING.

BROWN AND CALDWELL

COLUMBUS, OHIO

SUBMITTED: PROJECT MANAGER

APPROVED: BROWN AND CALDWELL

DESIGNED: BKK

DRAWN: BKK

CHECKED: RI

APPROVED: RI

LINE IS 2 INCHES AT FULL SIZE (IF NOT 2" SCALE ACCORDINGLY)	EXTERNAL REFERENCES	IMAGE REFERENCES
DESIGNED: BKK		
DRAWN: BKK		
CHECKED: RI		
APPROVED: RI		

ZONE	REV	DESCRIPTION	BY	DATE	APP



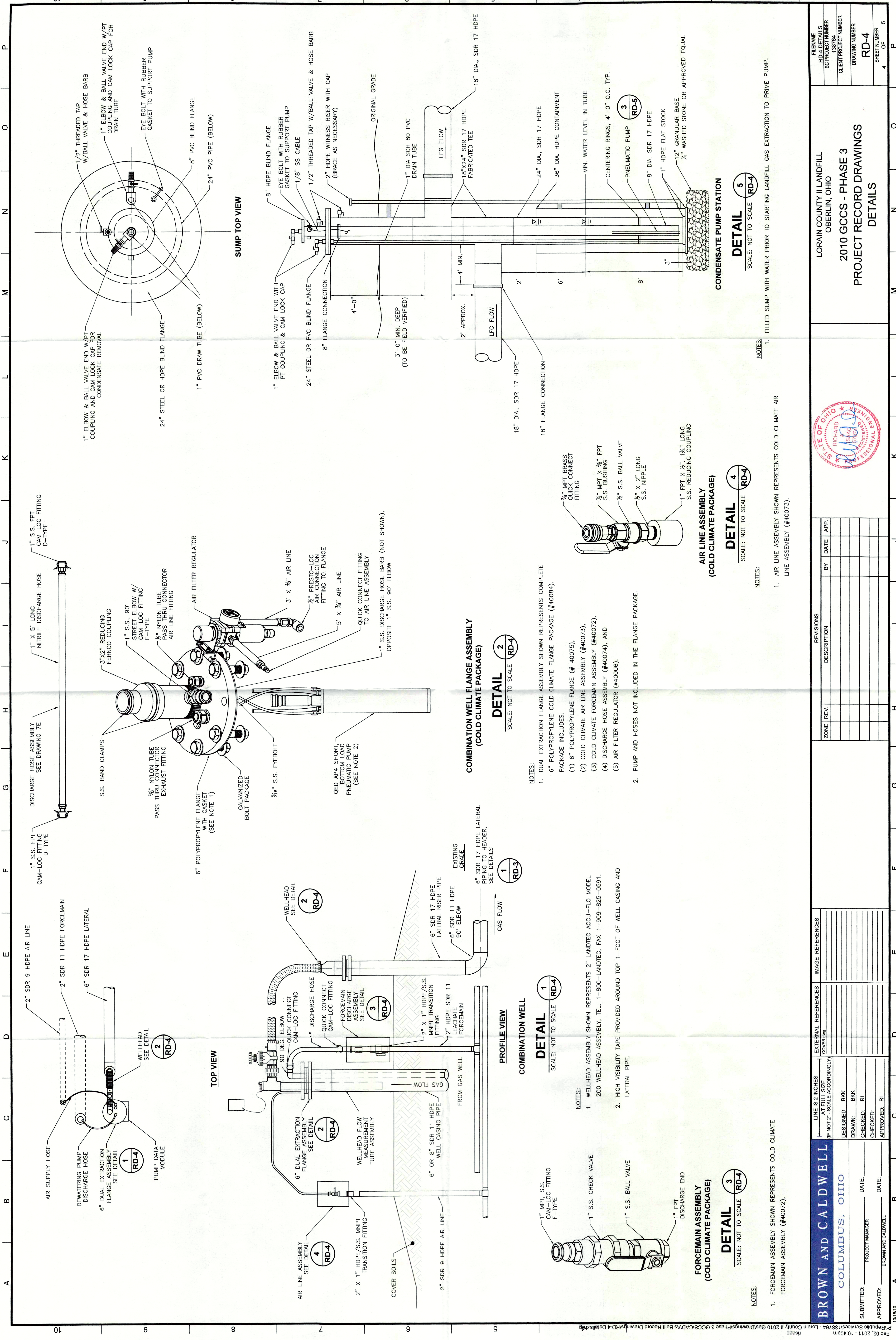
LORAIN COUNTY II LANDFILL
OBERLIN, OHIO

2010 GCCS - PHASE 3

PROJECT RECORD DRAWINGS
DETAILS

RD-3

SHEET NUMBER 3 OF 5



NOTES:

- DUAL EXTRACTION FLANGE ASSEMBLY SHOWN REPRESENTS COMPLETE 6" POLYPROPYLENE COLD CLIMATE FLANGE PACKAGE (#40084).

PACKAGE INCLUDES:

- 6" POLYPROPYLENE FLANGE (# 40075).
- COLD CLIMATE AIR LINE ASSEMBLY (#40073).
- COLD CLIMATE FORCEMAIN ASSEMBLY (#40072).
- DISCHARGE HOSE ASSEMBLY (#40074), AND
- AIR FILTER REGULATOR (#40006).

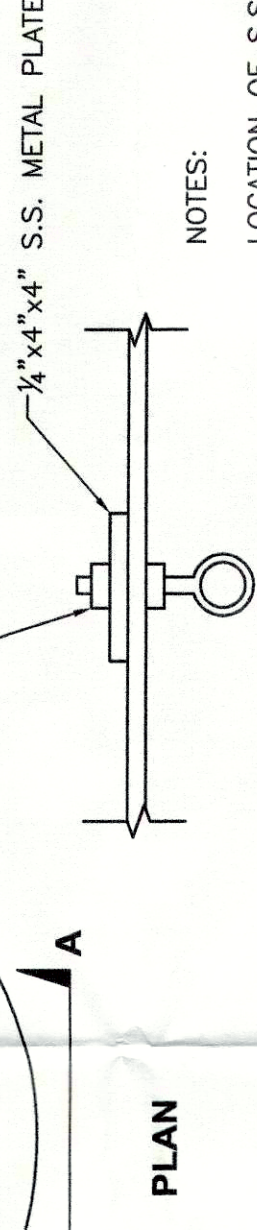
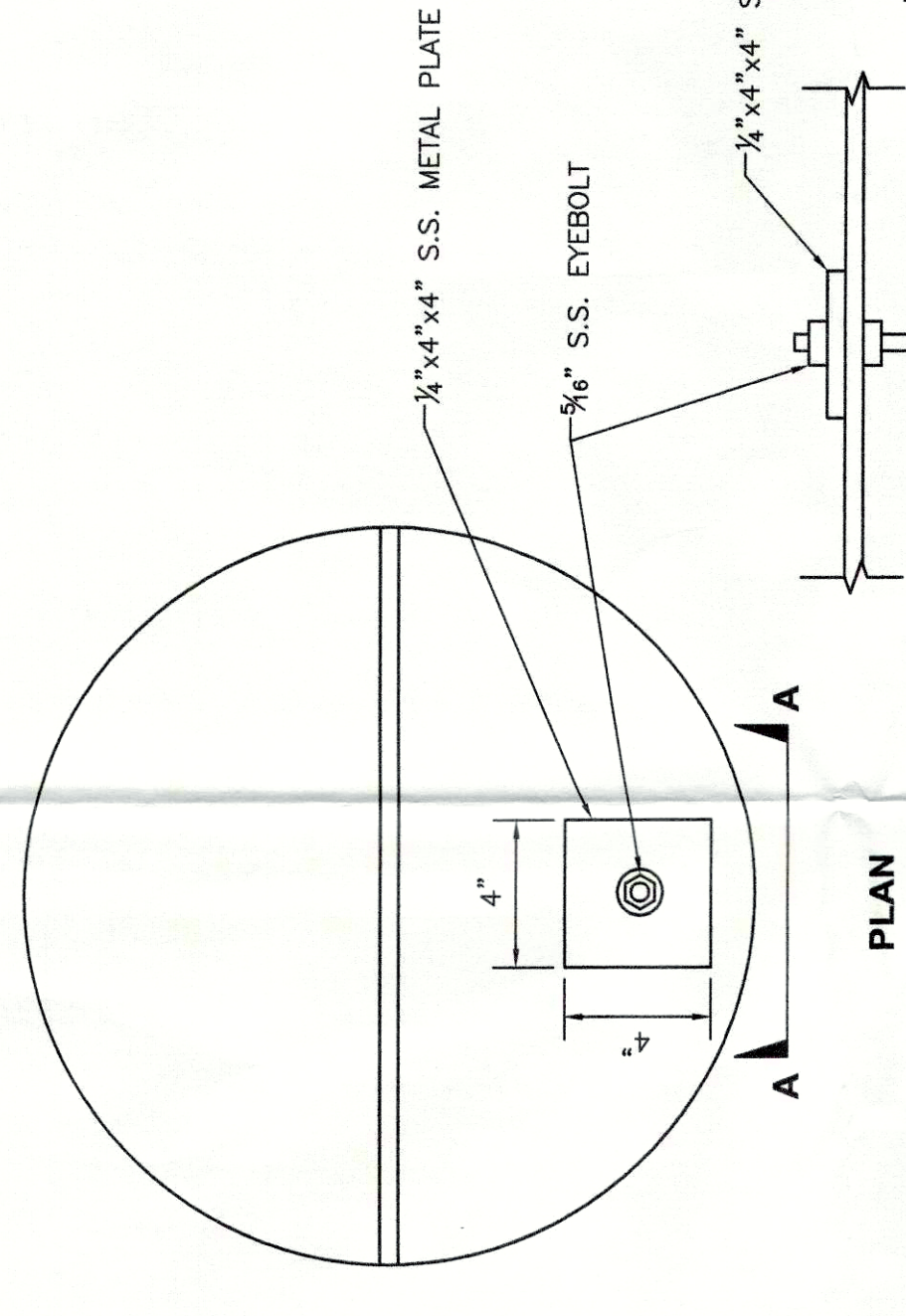
2. PUMP AND HOSES NOT INCLUDED IN THE FLANGE PACKAGE.

NOTES:

- FORCEMAIN ASSEMBLY SHOWN REPRESENTS COLD CLIMATE FORCEMAIN ASSEMBLY (#40072).

1. FILLING SUMP WITH WATER PRIOR TO STARTING LANDFILL GAS EXTRACTION TO PRIME PUMP.

BROWN AND CALDWELL COLUMBUS, OHIO										LORAIN COUNTY II LANDFILL OBERLIN, OHIO										2010 GCCS - PHASE 3 PROJECT RECORD DRAWINGS DETAILS										FILENAME RD-4 DETAILS		PROJECT NUMBER 138764		CLIENT PROJECT NUMBER		DRAWING NUMBER RD-4		SHEET NUMBER 4 OF 5																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
SUBMITTED: _____ DATE: _____ PROJECT MANAGER										DESIGNED: BKK DRAWN: BKK CHECKED: RI										DRAWN: _____ CHECKED: _____ APPROVED: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: _____										DATE: _____ DATE: _____ DATE: 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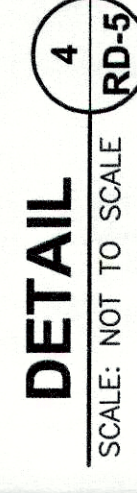


NOTES:

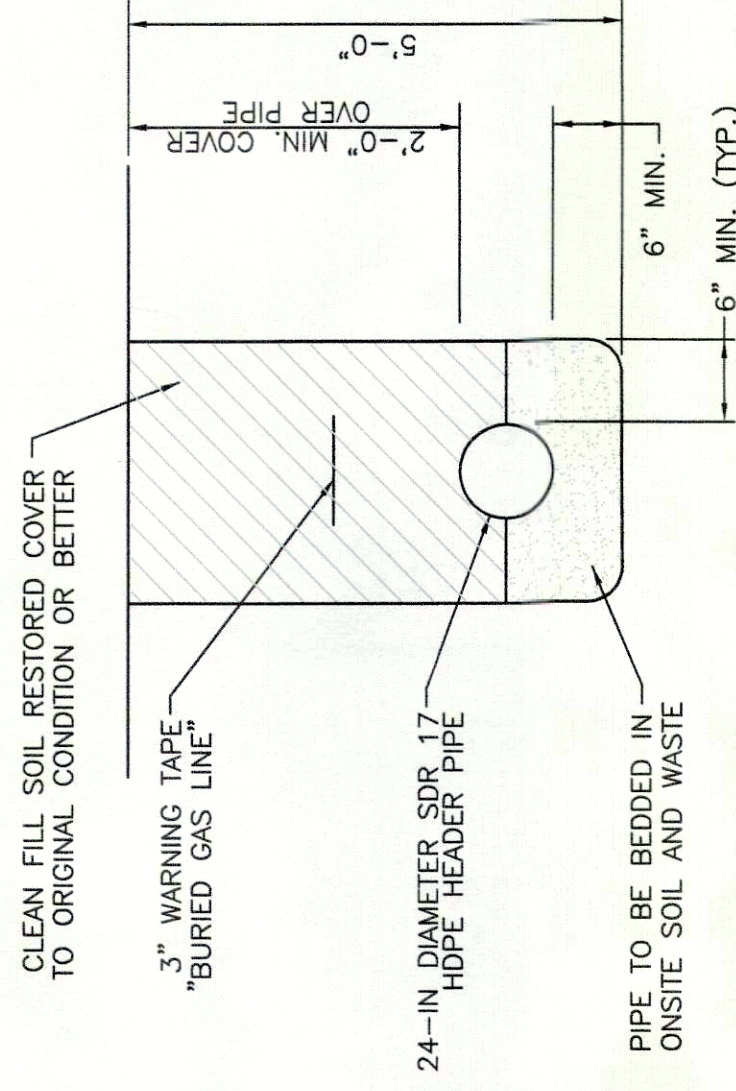
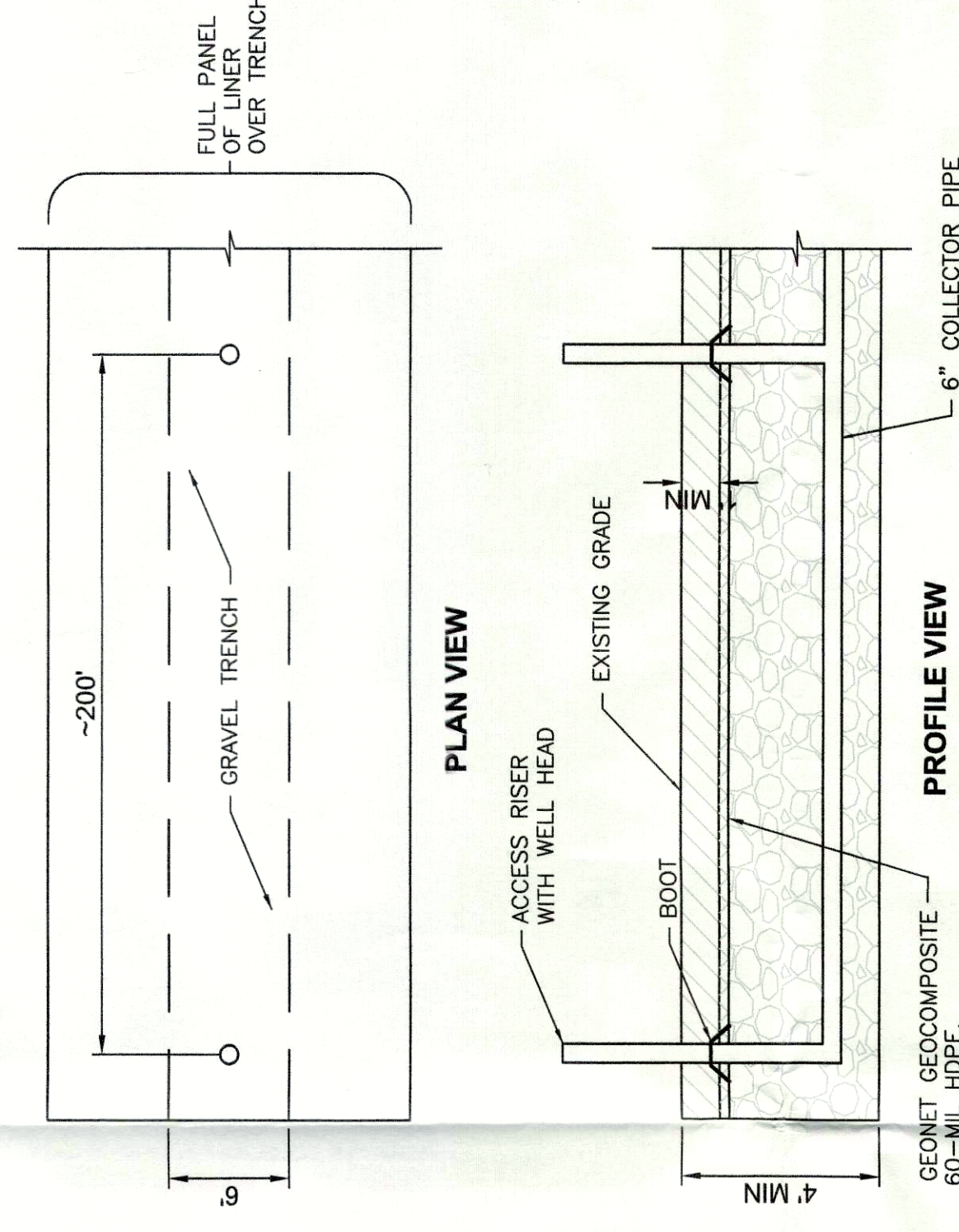
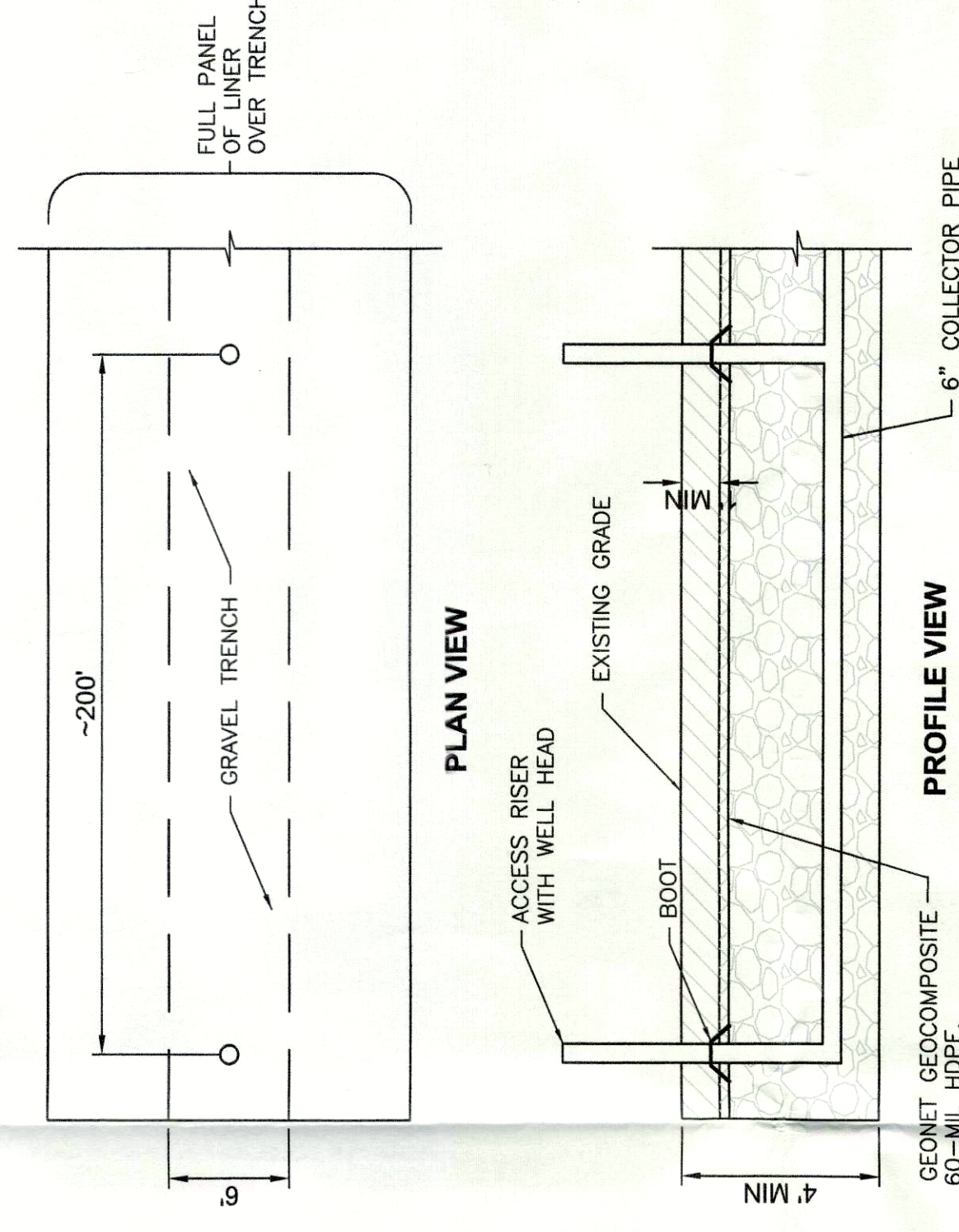
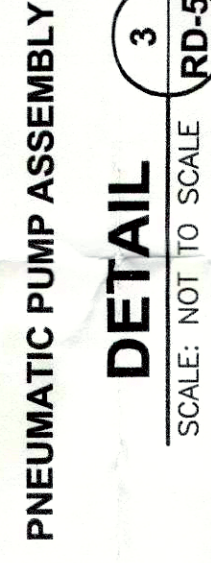
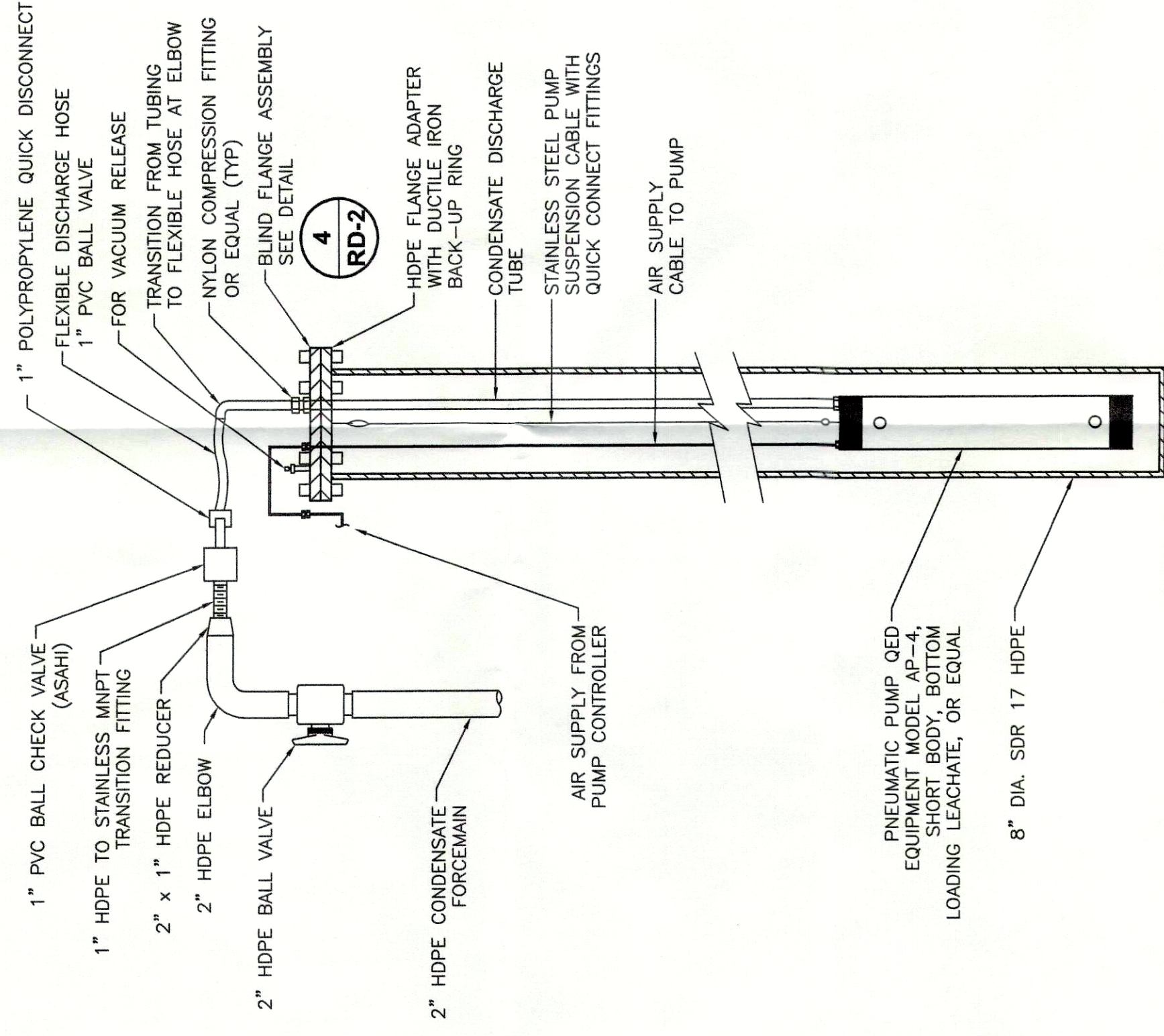
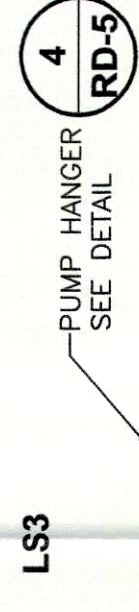
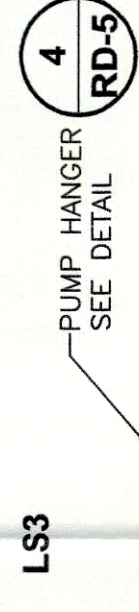
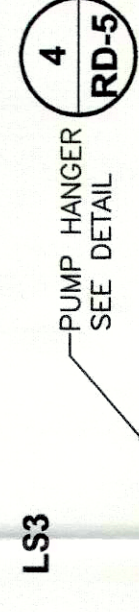
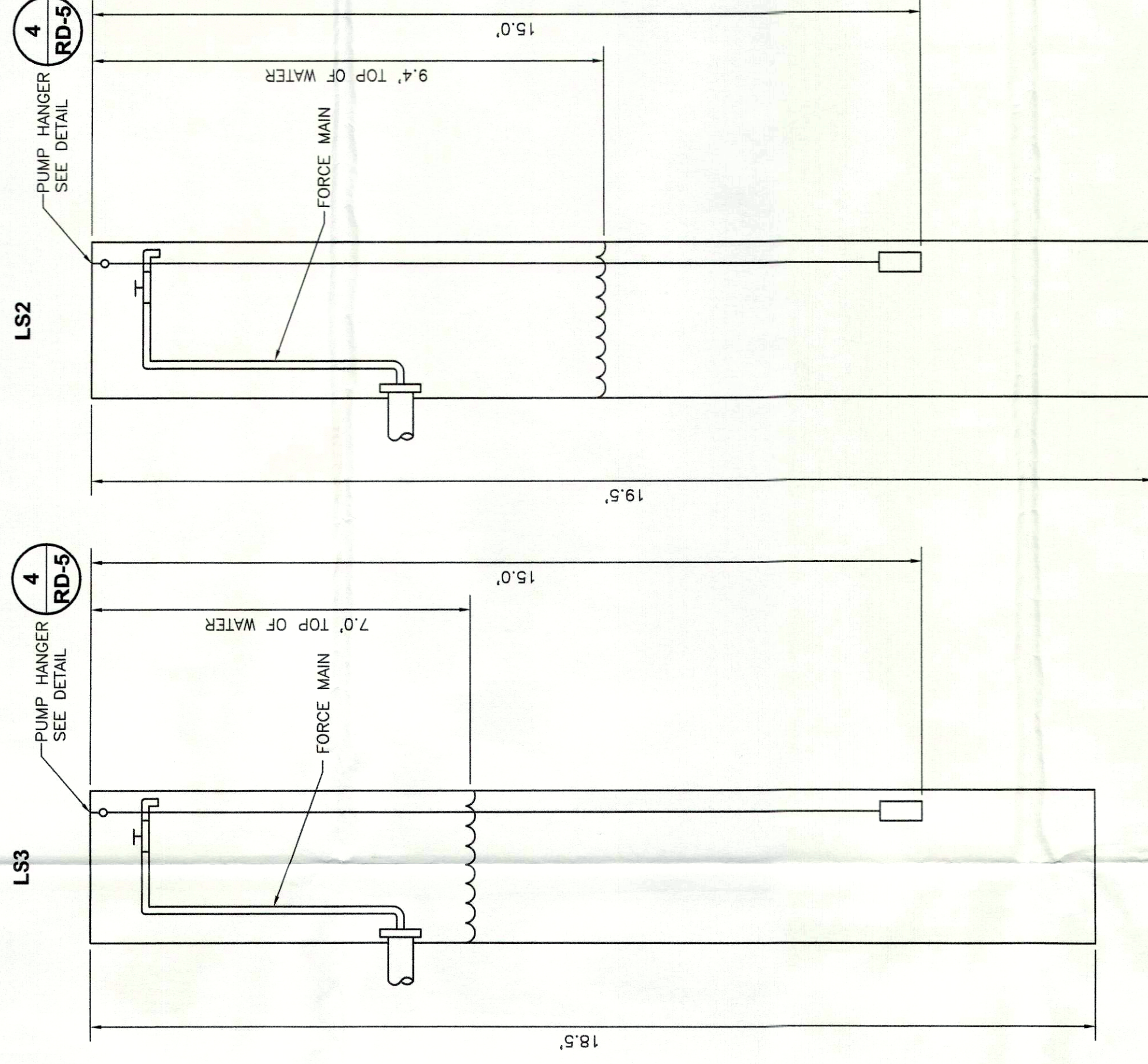
LOCATION OF S.S. EYEBOLT DETERMINED IN THE FIELD BASED ON LOCATION OF FORCE MAIN PIPING INSIDE MANHOLE.

INSTALLED ONE EYEBOLT PUMP HANGER ASSEMBLY EACH IN LS1, LS2, AND LS3 AS SHOWN.

PROVIDED NEW PUMPS FOR LS2 AND LS3;
POSITIONED EXISTING PUMP IN LS1
FOLLOWING INSTALLATION OF THE EYEBOLT
PUMP HANGER ASSEMBLY.

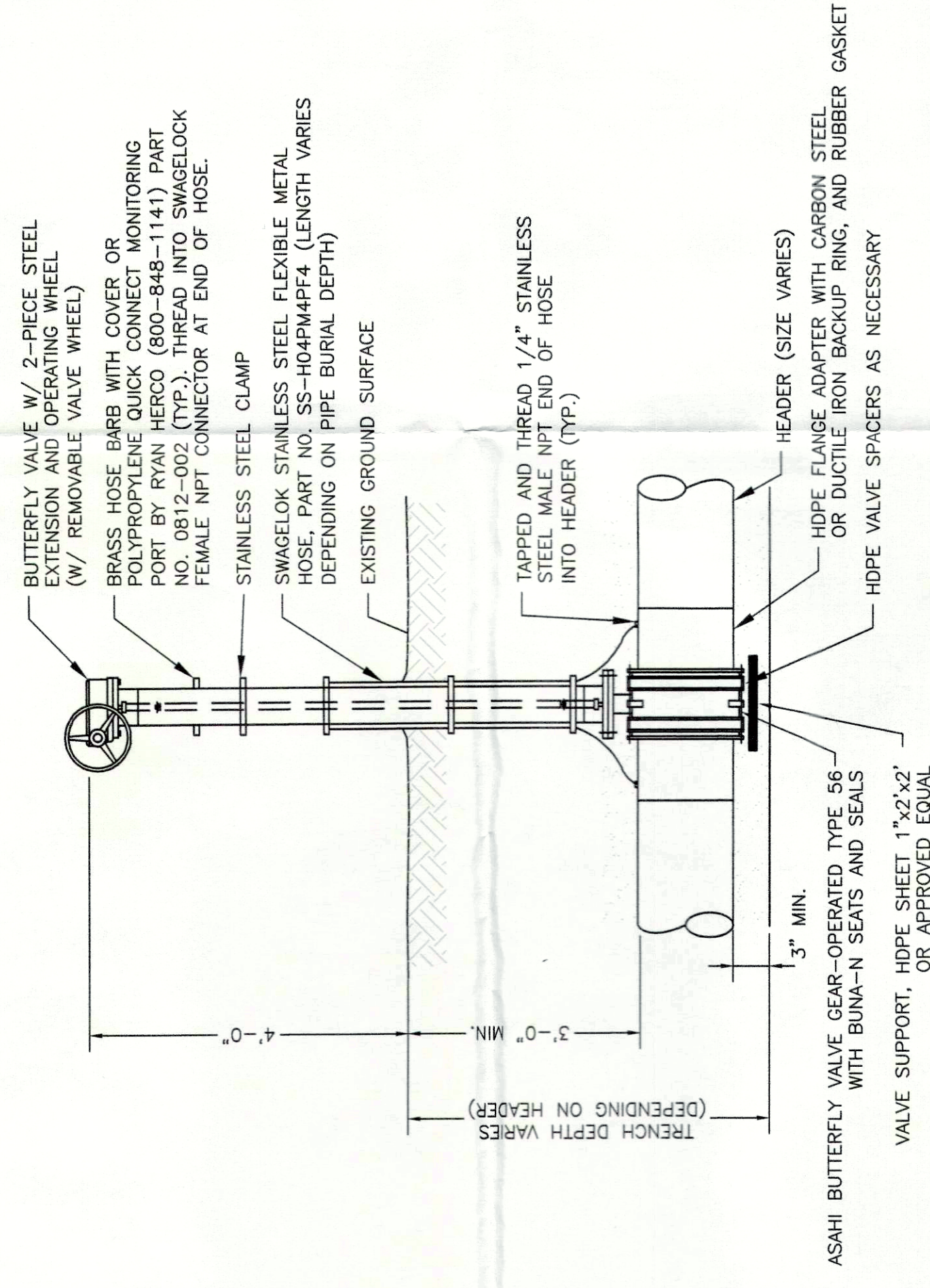


LEACHATE MANHOLE PUMP HANGER



NOTES:

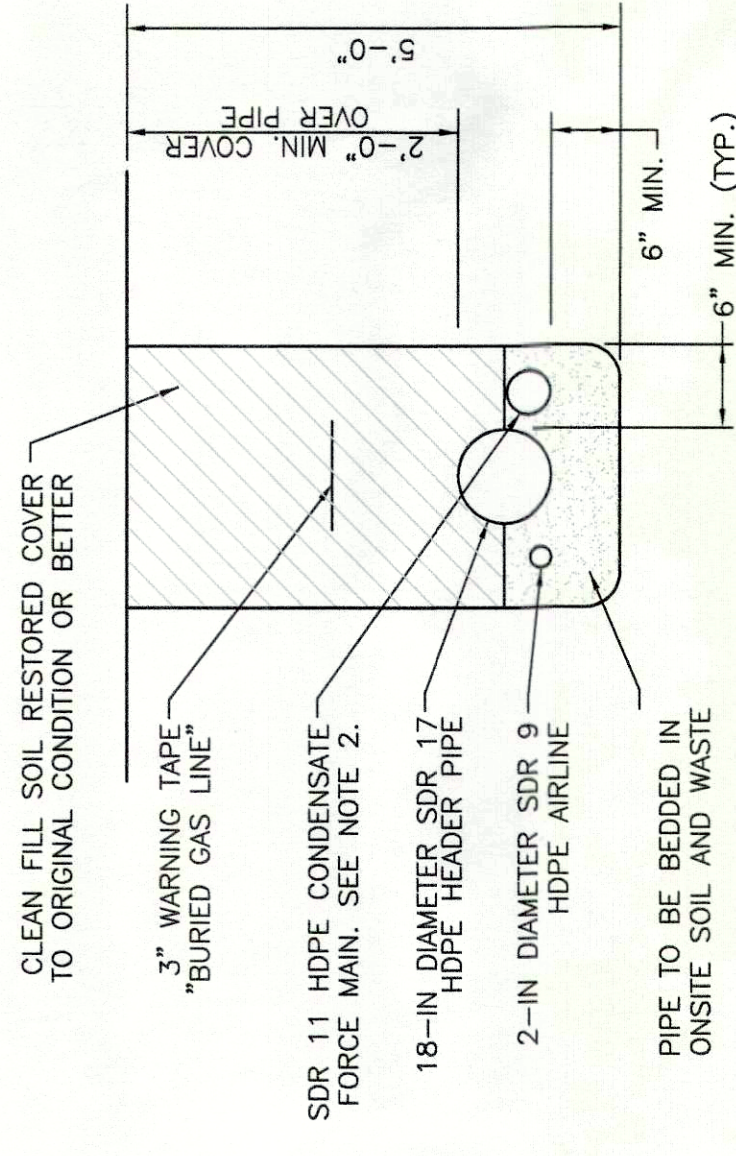
1. COMPACT ONSITE SOIL AND WASTE PROVIDED SOLID BEDDING FOR PIPING.



NOTES:

1. THOROUGHLY COAT ENTIRE SURFACE OF BOLTS, WASHERS, NUTS, AND BACKUP RINGS W/ POLYCOAT RUBBERIZED PRIMER, OR EQUAL, AFTER TIGHTENING BOLTS. COATING SHALL HAVE NO "HOLIDAYS", OR GAPS IN ITS APPLICATION.
2. WRAP FLANGE IN PLASTIC WRAP PRIOR TO BACKFILLING.

2. WRAP FLANGE IN PLASTIC WRAP PRIOR TO BACKFILLING.

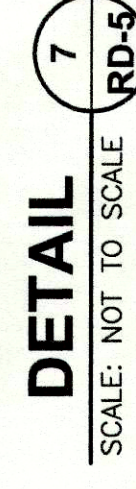


NOTES:

1. COMPACT ONSITE SOIL AND WASTE PROVIDED SOLID BEDDING FOR PIPING.
2. CONDENSATE FOREMAN WAS 2" DIAMETER WHEN PLACED INSIDE THE LIMITS OF WASTE PLACEMENT, AND 2"x4" DIAMETER DUAL-CONTAINED WHEN PLACED OUTSIDE THE LIMITS OF WASTE PLACEMENT.

2. CONDENSATE FORCEMAIN WAS 2" DIAMETER WHEN PLACED INSIDE THE LIMITS OF WASTE

HORIZONTAL COLLECTOR



LEACHATE MANHOLES



RECEIVED

APR 05 2011

OHIO EPA NEDO

[illegible]

LINE IS 2 INCHES AT FULL SIZE (IF NOT "2" SCALE ACCORDINGLY)	EXTERNAL REFERENCES COVER sheet	IMAGE REFERENCES
DESIGNED: BKK		
DRAWN: BKK		
CHECKED: RI		
CHECKED:		
APPROVED: RI		

BROWN AND CALDWELL

COLUMBUS, OHIO

SUBMITTED: _____ DATE: _____
PROJECT MANAGER

APPROVED: _____ DATE: _____
BROWN AND CALDWELL

LORAIN COUNTY II LANDFILL
OBERLIN, OHIO
2010 GCCS - PHASE 3
PROJECT RECORD DRAWING
DETAILS

FILENAME	RD-5 DETAILS
BC PROJECT NUMBER	
CLIENT PROJECT NUMBER	138764
DRAWING NUMBER	RD-5
SHEET NUMBER	5 OF 5

Appendix E: Landfill Gas Extraction Well Boring Logs

American Environmental Group, Ltd.

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American Environmental Group, Ltd

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LORAIN II - PHASE 3 GCCS WELL SCHEDULE
REVISION DATE: December 6, 2010

WELL ID	NORTHING	EASTING	EXISTING ELEVATION	LINER ELEVATION	REFUSE DEPTH	BORING DEPTH	SOLID PIPE	PERFORATED PIPE
EW-26R	596308.05	2057209.91	876	757	119	99	20	78
EW-26R	595984.24	2059532.54	816	760	56	36	20	15
EW-36R	597470.33	2059790.66	832	760	72	52	20	31
EW-45R	597603.37	2059087.09	825	760	65	45	20	24
EW-47R	597409.87	2056785.18	881	757	124	104	20	83
EW-58R2	596873.83	2058148.67	909	766	143	123	20	102
EW-73R	597045.88	2056628.14	824	752	72	52	20	31
EW-82R	597200.00	2056373.54	823	754	69	49	20	28
EW-100R	596254.93	2057045.27	873	757	116	96	20	75
EW-115R	596364.72	2058666.76	878	758	120	100	20	79
EW-124R	596676.39	2059576.85	880	753	127	108	20	87
EW-125R	596585.89	2059325.86	885	754	131	103	20	82
EW-142R	597486.18	2056461.28	871	753	118	98	20	77
EW-144R	597415.60	2057017.43	875	756	119	99	20	78
EW-148	597337.95	2056760.22	853	754	99	79	20	58
EW-151	597525.99	2058203.52	876	761	115	95	20	74
EW-152	597236.59	2058223.85	923	764	159	139	20	118
EW-153	597261.37	2058636.43	913	762	151	103	20	82
EW-154	597260.49	2058831.55	892	759	133	113	20	92
EW-155	596854.01	2059878.54	817	768	49	29	20	8
EW-163R	597778.15	2057394.63	853	768	85	65	20	44
EW-165R	597700.73	2056854.48	873	760	113	93	20	72
EW-166R	597711.30	2056623.60	873	752	121	101	20	80
TEW-7R2	596718.67	2059256.65	892	760	132	114	20	93
TEW-10R2	597154.94	2059363.13	893	763	130	110	20	89
EW-52R2	597173.60	2058433.80	925	768	157	110	20	89
EW-112S	598415.99	2059487.47	878	766	122	41	20	20
EW-113S	596363.27	2059183.21	879	757	122	41	20	20
EW-114S	596344.55	2058938.08	878	758	120	41	20	20
EW-116S	596337.78	2058399.07	875	759	116	41	20	20
EW-117S	596347.72	2058158.89	876	759	117	41	20	20
EW-118S	596363.50	2057898.18	877	768	119	41	20	20
EW-119S	596372.91	2057626.73	878	757	121	41	20	20
EW-146R	597485.80	2057601.25	891	767	124	104	20	83
EW-149	597059.56	2057645.44	912	760	152	132	20	111
EW-150	596793.03	2057668.70	915	781	134	114	20	93
EW-301	597860.40	2059924.68	826	747	79	69	10	58
EW-302	597660.40	2059774.68	829	735	94	84	10	73
EW-303	597860.40	2059624.68	811	744	67	57	10	46
EW-304	597860.40	2059474.68	811	753	58	48	10	37
EW-305	598010.40	2059924.85	831	742	89	79	10	68
EW-306	598010.40	2059774.85	828	730	98	88	10	77
EW-307	598010.40	2059624.85	806	732	74	64	10	53
EW-308	598010.40	2059474.85	806	733	73	63	10	52
EW-309	598160.40	2059925.01	806	741	65	55	10	44
EW-310	598160.40	2059775.01	807	730	77	67	10	56
EW-311	598150.40	2059625.01	804	730	74	64	10	53
EW-312	598160.40	2059475.01	803	730	73	63	10	52
					TOTAL	3753	840	2665



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 8/25/2010

Drilling		Well Asbuild	
EW 26 R WELL NUMBER OR NAME			
36	LINEAR FEET OF DRILLING		
36	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____		Top of ground elev. 816 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 20 Backfill Material 10 2' Bent Seal 2 1' Soil 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 18 Lgth of Perf. Pipe 15 Bore diameter 36-Inch Bottom of bore 36	TOP 1 3 15 17 18 35 36

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	89
8:00				10-20	Res Waste/dirt	Moderate	dry	92
9:00				20-30	Res Waste/dirt	Moderate	dry	94
10:00				30-40	Res Waste/dirt	Moderate	dry	99
11:00				40-50	TD 36'			
12:00				50-60				
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CHILD 8/25/10
CLIENT REPRESENTATIVE DATE
NATHAN GILKINS OWNER 2
NAME & TITLE

Dakk 8/25/2010
AEGLE SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County

DATE: 8/25/2010

PROJECT# 101-10-121

Drilling		Well Asbuild	
EW 115 R WELL NUMBER OR NAME			
100	LINEAR FEET OF DRILLING		
100	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service: <u>Raidiator</u> <u>Grease</u>			
NOTES:			
Total Benching Time:.			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	88
8:00				10-20	Res Waste/dirt	Moderate	dry	91
9:00				20-30	Res Waste/dirt	Moderate	dry	99
10:00				30-40	Res Waste/dirt	Moderate	dry	103
11:00				40-50	Res Waste/dirt	Moderate	damp	101
12:00				50-60	Res Waste/dirt	Moderate	damp	99
1:00				60-70	Res Waste/dirt	Moderate	damp	99
2:00				70-80	Res Waste/dirt	Moderate	damp	98
3:00				80-90	Res Waste/dirt	Moderate	damp	96
4:00				90-100	Res Waste/dirt	Moderate	damp	98
5:00				100-110	TD 100'			
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND COLDWELL 8/25/10
 CLIENT REPRESENTATIVE DATE
NATHAN GILKUS ENGINEER I
 NAME & TITLE

Dokk 8/25/2010
 AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County

DATE: 8/27/2010

PROJECT# 101-10-121

[illegible]

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	88
8:00				10-20	Res Waste/dirt	Moderate	dry	90
9:00				20-30	Res Waste/dirt	Moderate	dry	93
10:00				30-40	Res Waste/dirt	Moderate	dry	93
11:00				40-50	Res Waste/dirt	Moderate	dry	94
12:00				50-60	Res Waste/dirt	Moderate	dry	93
1:00				60-70	Res Waste/dirt	Moderate	dry	98
2:00				70-80	Res Waste/dirt	Moderate	dry	99
3:00				80-90	Res Waste/dirt	Moderate	dry	100
4:00				90-100	Res Waste/dirt	Moderate	dry	100
5:00				100-110	TD 96'			
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 8/27/10
CLIENT REPRESENTATIVE DATE

Dokk	8/27/2010
AEGL SITE SUPERVISOR	DATE

NATHAN GIVENS SARGENT I
NAME & TITLE



Well Log

PROJECT NAME Lorain County

DATE: 8/27/2010

PROJECT# 101-10-121

Drilling		Well Asbuild	
EW 2BR WELL NUMBER OR NAME			
99	LINEAR FEET OF DRILLING		
99	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time In: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Batching Time: _____		Top of ground elv. <u>876</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>20</u> Backfill Material <u>10</u> 2' Bent Seal <u>2</u> 1' Soil <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>81</u> Lgth of Perf. Pipe <u>78</u> Bore diameter <u>38-Inch</u> Bottom of bore <u>99</u>	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	89
8:00				10-20	Res Waste/dirt	Moderate	dry	90
9:00				20-30	Res Waste/dirt	Moderate	dry	90
10:00				30-40	Res Waste/dirt	Moderate	dry	96
11:00				40-50	Res Waste/dirt	Moderate	dry	99
12:00				50-60	Res Waste/dirt	Moderate	dry	99
1:00				60-70	Res Waste/dirt	Moderate	dry	101
2:00				70-80	Res Waste/dirt	Moderate	dry	104
3:00				80-90	Res Waste/dirt	Moderate	dry	102
4:00				90-100	Res Waste/dirt	Moderate	dry	102
5:00				100-110	TD 99'			
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 8/27/10
CLIENT REPRESENTATIVE DATE

Dokk 8/27/2010
AEGL SITE SUPERVISOR DATE

NATHAN GAVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 8/31/2010

Drilling		Well Asbuild	
EW 73R WELL NUMBER OR NAME			
52 LINEAR FEET OF DRILLING			
52 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time In: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Benching 2hrs		Top of ground elev. <u>824</u> Backfill Material <u>4</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>20</u> Backfill Material <u>9</u> 2' Bent Seal <u>2</u> 1' Soil <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>34</u> Lgth of Perf. Pipe <u>31</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>52</u>	4 6 15 17 18 51 52

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	89
8:00				10-20	Res Waste/dirt	Moderate	dry	93
9:00				20-30	Res Waste/dirt	Moderate	dry	97
10:00				30-40	Res Waste/dirt	Moderate	dry	99
11:00				40-50	Res Waste/dirt	Moderate	dry	99
12:00				50-60	Res Waste/dirt	Moderate	dry	99
1:00				60-70	TD 52'			
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 8/31/10
CLIENT REPRESENTATIVE DATE

Dokk 8/31/2010
AEGL SITE SUPERVISOR DATE

NATHAN GUNNS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 8/31/2010

Drilling		Well Asbuild	
EW 166R WELL NUMBER OR NAME			
101	LINEAR FEET OF DRILLING		
101	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service:	Raidiator Grease		
NOTES:			
Total Batching Time:		Top of ground elv. 873 Backfill Material 4 2' Bentonite Seal 2 Length of Solid 20 Backfill Material 9 2' Bent Seal 2 1' Soil 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 83 Lgth of Perf. Pipe 80 Bore diameter 36-Inch Bottom of bore 101	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	90
8:00				10-20	Res Waste/dirt	Moderate	dry	97
9:00				20-30	Res Waste/dirt	Moderate	dry	113
10:00				30-40	Res Waste/dirt	Moderate	dry	113
11:00				40-50	Res Waste/dirt	Moderate	dry	119
12:00				50-60	Res Waste/dirt	Moderate	dry	107
1:00				60-70	Res Waste/dirt	Moderate	dry	106
2:00				70-80	Res Waste/dirt	Moderate	dry	106
3:00				80-90	Res Waste/dirt	Moderate	dry	108
4:00				90-100	Res Waste/dirt	Moderate	dry	110
5:00				100-110	TD 101'			
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 8/31/10
CLIENT REPRESENTATIVE DATE

Dokk 8/31/2010
AEGLE SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER
NAME & TITLE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/1/2010

Drilling		Well Asbuild	
EW 144R WELL NUMBER OR NAME			
99	LINEAR FEET OF DRILLING		
99	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Benching		Top of ground elv. <u>875</u> Backfill Material <u>4</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>20</u> Backfill Material <u>9</u> 2' Bent Seal <u>2</u> 1' Soil <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>81</u> Lgth of Perf. Pipe <u>78</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>99</u>	4 6 15 17 18 98 99

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	89
8:00				10-20	Res Waste/dirt	Moderate	dry	97
9:00				20-30	Res Waste/dirt	Moderate	dry	99
10:00				30-40	Res Waste/dirt	Moderate	dry	102
11:00				40-50	Res Waste/dirt	Moderate	dry	102
12:00				50-60	Res Waste/dirt	Moderate	dry	101
1:00				60-70	Res Waste/dirt	high	wet	107
2:00				70-80	Res Waste/dirt	high	wet	109
3:00				80-90	Res Waste/dirt	high	wet	111
4:00				90-100	Res Waste/dirt	high	wet	109
5:00				100-110	TD 99'			
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/1/10
CLIENT REPRESENTATIVE DATE
NATHAN GINGUS ENGINEER I
NAME & TITLE

Dokk 9/1/2010
AEGIL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/3/2010

Drilling		Well Asbuild	
EW 142 R WELL NUMBER OR NAME			
98	LINEAR FEET OF DRILLING		
98	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service: Radiator Grease			
NOTES:			
Total Benching Time:			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	89
8:00				10-20	Res Waste/dirt	Moderate	dry	90
9:00				20-30	Res Waste/dirt	Moderate	dry	93
10:00				30-40	Res Waste/dirt	Moderate	dry	93
11:00				40-50	Res Waste/dirt	Moderate	dry	93
12:00				50-60	Res Waste/dirt	Moderate	dry	96
1:00				60-70	Res Waste/dirt	Moderate	dry	100
2:00				70-80	Res Waste/dirt	Moderate	dry	101
3:00				80-90	Res Waste/dirt	Moderate	dry	104
4:00				90-100	Res Waste/dirt	high	wet	106
5:00				100-110	TD 98'			
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 09/03/10
CLIENT REPRESENTATIVE DATE

Dokk 9/3/2010
AEGLE SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/7/2010

Drilling		Well Asbuild	
EW 165 R WELL NUMBER OR NAME			
93	LINEAR FEET OF DRILLING		
93	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____	Raidiator Grease		
NOTES: _____			
Total Benching Time: _____			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	89
8:00				10-20	Res Waste/dirt	Moderate	dry	94
9:00				20-30	Res Waste/dirt	Moderate	dry	94
10:00				30-40	Res Waste/dirt	Moderate	dry	97
11:00				40-50	Res Waste/dirt	Moderate	dry	99
12:00				50-60	Res Waste/dirt	Moderate	dry	104
1:00				60-70	Res Waste/dirt	Moderate	dry	107
2:00				70-80	Res Waste/dirt	Moderate	dry	111
3:00				80-90	Res Waste/dirt	Moderate	dry	113
4:00				90-100	Res Waste/dirt	Moderate	dry	117
5:00				100-110	TD 93'			
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/7/10
CLIENT REPRESENTATIVE DATE

Dokk 9/7/2010
AEGLE SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER
NAME & TITLE



Well Log

PROJECT NAME Lorain County

DATE: 9/7/2010

PROJECT# 101-10-121

Drilling		Well Asbuild	
EW 82 R WELL NUMBER OR NAME			
49	LINEAR FEET OF DRILLING		
49	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____ Raidiator _____ Grease _____			
NOTES: _____			
Total Benching Time: 2hrs		TOP 4' Top of ground elev. 823 Backfill Material 4 2' Bentonite Seal 2 Length of Solid 20 Backfill Material 9 2' Bent Seal 2 1' Soil 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 31 Lgth of Perf. Pipe 28 Bore diameter 36-inch Bottom of bore 49	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	94
8:00				10-20	Res Waste/dirt	Moderate	dry	92
9:00				20-30	Res Waste/dirt	Moderate	dry	96
10:00				30-40	Res Waste/dirt	Moderate	dry	96
11:00				40-50	Res Waste/dirt	Moderate	dry	97
12:00				50-60	TD 49'			
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 09/07/10
CLIENT REPRESENTATIVE DATE

Dokk 9/7/2010
AEGLE SITE SUPERVISOR DATE

NATHAN GUNDS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/8/2010

Drilling		Well Asbuild	
EW 148 WELL NUMBER OR NAME			
79 LINEAR FEET OF DRILLING			
79 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions:			
Site conditions:			
Rig hrs:			
Service: <u>Raidiator</u> <u>Grease</u>			
NOTES:			
Total Benching Time: 2hrs			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	91
8:00				10-20	Res Waste/dirt	Moderate	dry	93
9:00				20-30	Res Waste/dirt	Moderate	dry	99
10:00				30-40	Res Waste/dirt	Moderate	dry	97
11:00				40-50	Res Waste/dirt	Moderate	dry	102
12:00				50-60	Res Waste/dirt	Moderate	dry	101
1:00				60-70	Res Waste/dirt	Moderate	dry	100
2:00				70-80	Res Waste/dirt	high	wet	99
3:00				80-90	TD 79'			
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 09/08/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 9/8/2010
AEGIL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/9/2010

Drilling		Well Asbuild	
EW 163R WELL NUMBER OR NAME			
65	LINEAR FEET OF DRILLING		
65	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: 4hrs		Top of ground elv. 853	
		Backfill Material 1	1
		2' Bentonite Seal 2	3
		Length of Solid 20	
		Backfill Material 12	
		2' Bent Seal 2	15
		1' Soil 1	17
		Gravel Extend 2 Ft Above Perf.	18
		Iso. Ring on top of rock	
		Lgth of Gravel Pk 47	
		Lgth of Perf. Pipe 44	
		Bore diameter 36-Inch	54
		Bottom of bore 65	65

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	93
8:00				10-20	Res Waste/dirt	Moderate	dry	93
9:00				20-30	Res Waste/dirt	Moderate	dry	95
10:00				30-40	Res Waste/dirt	Moderate	dry	99
11:00				40-50	Res Waste/dirt	Moderate	dry	103
12:00				50-60	Res Waste/dirt	high	saturated	102
1:00				60-70	Res Waste/dirt	high	saturated	103
2:00				70-80	TD 65'			
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes northing 597778.15 easting 2057394.63				120-130				
				130-140				
				140-150				

BROWN AND CALDWELL 9/9/10
CLIENT REPRESENTATIVE DATE
NATHAN GUKUS ENGINEER I
NAME & TITLE

Dokk 9/9/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/10/2010

Drilling		Well Asbuild	
EW 38R WELL NUMBER OR NAME			
52	LINEAR FEET OF DRILLING		
52	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Benching 2hrs			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	90
8:00				10-20	Res Waste/dirt	Moderate	dry	97
9:00				20-30	Res Waste/dirt	Moderate	dry	102
10:00				30-40	Res Waste/dirt	Moderate	dry	101
11:00				40-50	Res Waste/dirt	Moderate	dry	106
12:00				50-60	Res Waste/dirt	high	damp	107
1:00				60-70	TD 52'			
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/10/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER II
NAME & TITLE

Dokk 9/10/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/10/2010

Drilling	Well Asbuild
EW 46R WELL NUMBER OR NAME	
45 LINEAR FEET OF DRILLING	
45 LINEAR FEET OF COMPLETION	
LINEAR FEET OF ABANDONMENT	
Time in: _____ Time out: _____	
Weather conditions: _____	
Site conditions: _____	
Rig hrs: _____	
Service: <u>Radiation</u> <u>Grease</u>	
NOTES:	
Benching 2hrs	Top of ground elev. 825 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 20 Backfill Material 12 2' Bent Seal 2 1' Soil 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 27 Lgth of Perf. Pipe 24 Bore diameter 36-Inch Bottom of bore 45

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	88
8:00				10-20	Res Waste/dirt	Moderate	dry	91
9:00				20-30	Res Waste/dirt	Moderate	dry	94
10:00				30-40	Res Waste/dirt	Moderate	dry	97
11:00				40-50	Res Waste/dirt	high	damp	99
12:00				50-60	TD 45'			
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/10/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 9/10/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County

DATE: 9/10/2010

PROJECT# 101-10-121

Drilling		Well Asbuild	
EW 155 WELL NUMBER OR NAME			
29 LINEAR FEET OF DRILLING			
29 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____ Radiator Grease			
NOTES: _____			
Benching 2hrs		Top of ground elev. 817 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 20 Backfill Material 12 2' Bent Seal 15 1' Soil 17 Gravel Extend 2 Ft Above Perf. 18 Iso. Ring on top of rock Lgth of Gravel Pk 11 Lgth of Perf. Pipe 8 Bore diameter 36-Inch Bottom of bore 29	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	90
8:00				10-20	Res Waste/dirt	Moderate	damp	95
9:00				20-30	Res Waste/dirt	Moderate	damp	94
10:00				30-40	TD 29'			
11:00				40-50				
12:00				50-60				
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/10/10
CLIENT REPRESENTATIVE DATE

Dokk 9/10/2010
AEG SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/13/2010

Drilling		Well Asbuilt	
EW 124R WELL NUMBER OR NAME			
108	LINEAR FEET OF DRILLING		
108	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____	Raidiator Grease		
NOTES: _____			
Total Benching Time: _____			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	89
8:00				10-20	Res Waste/dirt	Moderate	dry	92
9:00				20-30	Res Waste/dirt	Moderate	dry	91
10:00				30-40	Res Waste/dirt	Moderate	dry	96
11:00				40-50	Res Waste/dirt	Moderate	dry	97
12:00				50-60	Res Waste/dirt	Moderate	dry	99
1:00				60-70	Res Waste/dirt	high	damp	101
2:00				70-80	Res Waste/dirt	high	saturated	105
3:00				80-90	Res Waste/dirt	high	saturated	104
4:00				90-100	Res Waste/dirt	high	saturated	105
5:00				100-110	Res Waste/dirt	high	saturated	115
6:00				110-120	TD 108'			
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/13/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 9/13/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/14/2010

Drilling		Well Asbuild	
EW 125R WELL NUMBER OR NAME			
103 LINEAR FEET OF DRILLING			
103 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____		Top of ground elev. <u>886</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>20</u> Backfill Material <u>12</u> 2' Bent Seal <u>2</u> 1' Soil <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>85</u> Lgth of Perf. Pipe <u>82</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>103</u>	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	91
8:00				10-20	Res Waste/dirt	Moderate	dry	93
9:00				20-30	Res Waste/dirt	Moderate	dry	93
10:00				30-40	Res Waste/dirt	Moderate	dry	96
11:00				40-50	Res Waste/dirt	Moderate	dry	95
12:00				50-60	Res Waste/dirt	Moderate	dry	99
1:00				60-70	Res Waste/dirt	high	damp	99
2:00				70-80	Res Waste/dirt	high	saturated	101
3:00				80-90	Res Waste/dirt	high	saturated	102
4:00				90-100	Res Waste/dirt	high	saturated	101
5:00				100-110	Res Waste/dirt	high	saturated	99
6:00				110-120	TD 103'			
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/14/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 9/14/2010
AEGIL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County

DATE: 9/15/2010

PROJECT# 101-10-121

Drilling		Well Asbuild	
EW 7R2 WELL NUMBER OR NAME			
114 LINEAR FEET OF DRILLING			
114 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____		Top of ground elev. <u>893</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>20</u> Backfill Material <u>12</u> 2' Bent Seal <u>2</u> 1' Soil <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>76</u> Lgth of Perf. Pipe <u>73</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>114</u>	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	89
8:00				10-20	Res Waste/dirt	Moderate	dry	89
9:00				20-30	Res Waste/dirt	Moderate	dry	94
10:00				30-40	Res Waste/dirt	Moderate	dry	93
11:00				40-50	Res Waste/dirt	Moderate	dry	93
12:00				50-60	Res Waste/dirt	Moderate	dry	97
1:00				60-70	Res Waste/dirt	high	saturated	98
2:00				70-80	Res Waste/dirt	high	saturated	99
3:00				80-90	Res Waste/dirt	high	saturated	99
4:00				90-100	Res Waste/dirt	high	saturated	99
5:00				100-110	Res Waste/dirt	high	saturated	101
6:00				110-120	Res Waste/dirt	high	saturated	103
Notes <u>Made to push pipe 15' through sludge.</u>				120-130	TD 114'			
northing <u>596718.67</u>				130-140				
easting <u>2059256.85</u>				140-150				

BROWN AND CALDWELL 9/15/10
CLIENT REPRESENTATIVE DATE

Dokk 9/15/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIBENS ENGINEER T
NAME & TITLE



Well Log

PROJECT NAME Lorain County

DATE: 9/17/2010

PROJECT# 101-10-121

Drilling		Well Asbuilt	
EW 152	WELL NUMBER OR NAME		
139	LINEAR FEET OF DRILLING		
139	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service:	Raidiator Grease		
NOTES:			
Total Benching Time:.			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	90
8:00				10-20	Res Waste/dirt	Moderate	dry	92
9:00				20-30	Res Waste/dirt	Moderate	dry	93
10:00				30-40	Res Waste/dirt	Moderate	dry	96
11:00				40-50	Res Waste/dirt	Moderate	dry	98
12:00				50-60	Res Waste/dirt	Moderate	dry	99
1:00				60-70	Res Waste/dirt	Moderate	dry	99
2:00				70-80	Res Waste/dirt	Moderate	dry	99
3:00				80-90	Res Waste/dirt	high	dry	101
4:00				90-100	Res Waste/dirt	high	damp	104
5:00				100-110	Res Waste/dirt	high	damp	111
6:00				110-120	Res Waste/dirt	high	damp	114
Notes				120-130	Res Waste/dirt	high	damp	116
northing				130-140	Res Waste/dirt	high		
easting				140-150	TD 139'			

BROWN AND COLDWELL 9/17/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

DOKK 9/17/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/20/2010

Drilling		Well Asbuild	
EW 58 R2 WELL NUMBER OR NAME			
123	LINEAR FEET OF DRILLING		
123	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service:	Raidiator Grease		
NOTES:			
Total Benching Time:.			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	89
8:00				10-20	Res Waste/dirt	Moderate	dry	93
9:00				20-30	Res Waste/dirt	Moderate	dry	94
10:00				30-40	Res Waste/dirt	Moderate	dry	97
11:00				40-50	Res Waste/dirt	Moderate	dry	110
12:00				50-60	Res Waste/dirt	Moderate	dry	104
1:00				60-70	Res Waste/dirt	Moderate	dry	119
2:00				70-80	Res Waste/dirt	Moderate	dry	118
3:00				80-90	Res Waste/dirt	Moderate	dry	121
4:00				90-100	Res Waste/dirt	Moderate	dry	120
5:00				100-110	Res Waste/dirt	high	damp	121
6:00				110-120	Res Waste/dirt	high	damp	124
Notes				120-130	Res Waste/sludge	high	wet	123
northing				130-140	TD 123'			
easting				140-150				

BROWN AND CALDWELL 9/20/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER
NAME & TITLE

Dokk 9/20/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/21/2010

Drilling		Well Asbuild	
EW 151 WELL NUMBER OR NAME			
95 LINEAR FEET OF DRILLING			
95 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: 2hrs		Top of ground elev. 876 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 20 Backfill Material 12 2' Bent Seal 2 1' Soil 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 77 Lgth of Perf. Pipe 74 Bore diameter 36-Inch Bottom of bore 95	TOP 1 3 15 17 18 94 95

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	91
8:00				10-20	Res Waste/dirt	Moderate	dry	90
9:00				20-30	Res Waste/dirt	Moderate	dry	96
10:00				30-40	Res Waste/dirt	Moderate	dry	98
11:00				40-50	Res Waste/dirt	Moderate	dry	97
12:00				50-60	Res Waste/dirt	Moderate	dry	99
1:00				60-70	Res Waste/dirt	Moderate	dry	98
2:00				70-80	Res Waste/dirt	Moderate	dry	100
3:00				80-90	Res Waste/dirt	Moderate	dry	101
4:00				90-100	Res Waste/dirt	Moderate	damp	100
5:00				100-110	TD 95'			
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/21/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS SARGINER I
NAME & TITLE

Dokk 9/21/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/22/2010

Drilling		Well Asbuild	
EW 10R2 WELL NUMBER OR NAME			
110	LINEAR FEET OF DRILLING		
110	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service:	Radiator Grease		
NOTES:			
Total Benching Time:.		TOP 893 1 2 20 12 2 1 92 89 36-Inch 110	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	88
8:00				10-20	Res Waste/dirt	Moderate	dry	92
9:00				20-30	Res Waste/dirt	Moderate	dry	94
10:00				30-40	Res Waste/dirt	Moderate	dry	95
11:00				40-50	Res Waste/dirt	Moderate	dry	94
12:00				50-60	Res Waste/dirt	Moderate	dry	97
1:00				60-70	Res Waste/dirt	Moderate	dry	99
2:00				70-80	Res Waste/dirt	Moderate	dry	101
3:00				80-90	Res Waste/dirt	high	damp	104
4:00				90-100	Res Waste/dirt	high	damp	104
5:00				100-110	Res Waste/dirt	high	wet	107
6:00				110-120	TD 110'			
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/22/10
CLIENT REPRESENTATIVE DATE

Dokk 9/22/2010
AEG SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain County

DATE: 9/23/2010

PROJECT# 101-10-121

Drilling		Well Asbuild	
EW 47R WELL NUMBER OR NAME			
104	LINEAR FEET OF DRILLING		
104	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Raidiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: 2hrs		Top of ground elv. <u>881</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>20</u> Backfill Material <u>12</u> 2' Bent Seal <u>2</u> 1' Soil <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>86</u> Lgth of Perf. Pipe <u>83</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>104</u>	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	91
8:00				10-20	Res Waste/dirt	Moderate	dry	91
9:00				20-30	Res Waste/dirt	Moderate	dry	91
10:00				30-40	Res Waste/dirt	Moderate	dry	95
11:00				40-50	Res Waste/dirt	Moderate	dry	93
12:00				50-60	Res Waste/dirt	Moderate	dry	96
1:00				60-70	Res Waste/dirt	Moderate	dry	99
2:00				70-80	Res Waste/dirt	Moderate	dry	99
3:00				80-90	Res Waste/dirt	Moderate	dry	105
4:00				90-100	Res Waste/dirt	Moderate	dry	110
5:00				100-110	Res Waste/dirt	Moderate	dry	109
6:00				110-120	TD 104'			
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/23/10
 CLIENT REPRESENTATIVE DATE
NATHAN GUKINS ENGINEER T
 NAME & TITLE

Dokk 9/23/2010
 AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/24/2010

Drilling		Well Asbuild	
EW 154 WELL NUMBER OR NAME			
113 LINEAR FEET OF DRILLING			
113 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Raidiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____		Top of ground elv. <u>891</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>10</u> Backfill Material <u>2</u> 2' Bent Seal <u>2</u> 1' Soil <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>102</u> Lgth of Perf. Pipe <u>99</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>113</u>	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	88
8:00				10-20	Res Waste/dirt	Moderate	dry	89
9:00				20-30	Res Waste/dirt	Moderate	dry	89
10:00				30-40	Res Waste/dirt	Moderate	dry	94
11:00				40-50	Res Waste/dirt	Moderate	dry	93
12:00				50-60	Res Waste/dirt	Moderate	dry	95
1:00				60-70	Res Waste/dirt	Moderate	dry	97
2:00				70-80	Res Waste/dirt	Moderate	dry	99
3:00				80-90	Res Waste/dirt	high	wet	101
4:00				90-100	Res Waste/dirt	high	wet	104
5:00				100-110	Res Waste/dirt	Moderate	dry	106
6:00				110-120	Res Waste/dirt	Moderate		107
Notes				120-130	TD 113'			
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/21/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVOUS ENGINEER II
NAME & TITLE

Dokk 9/24/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain County
PROJECT# 101-10-121

DATE: 9/29/2010

Drilling		Well Asbuild	
EW 153 WELL NUMBER OR NAME			
103 LINEAR FEET OF DRILLING			
103 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: 2hrs		Top of ground elv. <u>4'</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>20</u> Backfill Material <u>12</u> 2' Bent Seal <u>2</u> 1' Soil <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>85</u> Lgth of Perf .Pipe <u>82</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>103</u>	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	91
8:00				10-20	Res Waste/dirt	Moderate	dry	93
9:00				20-30	Res Waste/dirt	Moderate	dry	90
10:00				30-40	Res Waste/dirt	Moderate	dry	91
11:00				40-50	Res Waste/dirt	Moderate	dry	94
12:00				50-60	Res Waste/dirt	Moderate	dry	94
1:00				60-70	Res Waste/dirt	Moderate	dry	97
2:00				70-80	Res Waste/dirt	Moderate	dry	97
3:00				80-90	Res Waste/dirt	Moderate	damp	98
4:00				90-100	Res Waste/dirt	Moderate	damp	101
5:00				100-110	Res Waste/dirt	high	damp	104
6:00				110-120	TD 103			
Notes				120-130				
-northing				130-140				
easting				140-150				

BROWN AND CALDWELL 9/29/10
CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 9/29/2010
AEGI SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain 3.2

DATE: 11/11/2010

PROJECT# 101-10-123

Drilling		Well Asbuild	
EW 112 S WELL NUMBER OR NAME			
41	LINEAR FEET OF DRILLING		
41	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service: Radiator Grease			
NOTES:			
Total Benching Time:			

Top of ground elev.	878		
Backfill Material	1		1
2' Bentonite Seal	2		3
Length of Solid	20		
Backfill Material	12		15
2' Bent Seal	2		17
1' Dirt	1		18
Gravel Extend 2 Ft Above Perf.			
Iso. Ring on top of rock			
Lgth of Gravel Pk	23		
Lgth of Perf. Pipe	20		
Bore diameter	36-inch		40
Bottom of bore	41		41

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	79
8:00				10-20	Res Waste/dirt	Moderate	damp	82
9:00				20-30	Res Waste/dirt	Moderate	damp	84
10:00				30-40	Res Waste/dirt	Moderate	damp	87
11:00				40-50	TD 41'			
12:00				50-60				
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 11/11/10
CLIENT REPRESENTATIVE DATE

Dokk 11/11/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2

DATE: 11/11/2010

PROJECT# 101-10-123

Drilling		Well Asbuilt	
EW 113 S WELL NUMBER OR NAME			
41	LINEAR FEET OF DRILLING		
41	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____		Top of ground elev. <u>879</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>20</u> Backfill Material <u>12</u> 2' Bent Seal <u>2</u> 1' Dirt <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>23</u> Lgth of Perf .Pipe <u>20</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>41</u>	TOP 1 3 15 17 18 40 41

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	81
8:00				10-20	Res Waste/dirt	Moderate	damp	80
9:00				20-30	Res Waste/dirt	Moderate	damp	83
10:00				30-40	Res Waste/dirt	Moderate	damp	89
11:00				40-50	TD 41'			
12:00				50-60				
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 11/11/10
CLIENT REPRESENTATIVE DATE

Dokk 11/11/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2

DATE: 11/11/2010

PROJECT# 101-10-123

Drilling		Well Asbuilt	
EW 114 S WELL NUMBER OR NAME			
41	LINEAR FEET OF DRILLING		
41	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	77
8:00				10-20	Res Waste/dirt	Moderate	damp	81
9:00				20-30	Res Waste/dirt	Moderate	damp	81
10:00				30-40	Res Waste/dirt	Moderate	damp	83
11:00				40-50	TD 41'			
12:00				50-60				
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND COLDWELL 11/11/10
CLIENT REPRESENTATIVE DATE

Dokk 11/11/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2

DATE: 11/11/2010

PROJECT# 101-10-123

Drilling		Well Asbuilt	
EW 118 S WELL NUMBER OR NAME			
41	LINEAR FEET OF DRILLING		
41	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____ Radiator _____ Grease _____			
NOTES: _____			
Total Benching Time: _____		Top of ground elv. 875 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 20 Backfill Material 12 2' Bent Seal 2 1' Dirt 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 23 Lgth of Perf .Pipe 20 Bore diameter 36-Inch Bottom of bore 41	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	82
8:00				10-20	Res Waste/dirt	Moderate	damp	87
9:00				20-30	Res Waste/dirt	Moderate	damp	89
10:00				30-40	Res Waste/dirt	Moderate	damp	93
11:00				40-50	TD 41'			
12:00				50-60				
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND COLDWELL 11/11/10
CLIENT REPRESENTATIVE DATE

Dokk 11/11/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-123

DATE: 11/12/2010

Drilling		Well Asbuilt	
EW 117 S WELL NUMBER OR NAME			
41	LINEAR FEET OF DRILLING		
41	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____ Radiator _____ Grease _____			
NOTES: _____			
Total Benching Time: _____			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	79
8:00				10-20	Res Waste/dirt	Moderate	damp	80
9:00				20-30	Res Waste/dirt	Moderate	damp	76
10:00				30-40	Res Waste/dirt	Moderate	damp	85
11:00				40-50	TD 41'			
12:00				50-60				
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CHANDLER 11/12/10
CLIENT REPRESENTATIVE DATE

Dokk 11/12/2010
AEGL SITE SUPERVISOR DATE

ALATHAN GUEWS ENGINEER 2
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2

DATE: 11/12/2010

PROJECT# 101-10-123

Drilling		Well Asbuilt	
EW 118 S WELL NUMBER OR NAME			
41	LINEAR FEET OF DRILLING		
41	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service: <u>Raidiator</u> <u>Grease</u>			
NOTES:			
Total Benching Time:			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	85
8:00				10-20	Res Waste/dirt	Moderate	damp	88
9:00				20-30	Res Waste/dirt	Moderate	damp	89
10:00				30-40	Res Waste/dirt	Moderate	damp	91
11:00				40-50	TD 41'			
12:00				50-60				
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

DAVID AND COLDWELL 11/12/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 11/12/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-123

DATE: 11/12/2010

Drilling		Well Asbuild	
EW 119 S WELL NUMBER OR NAME			
41	LINEAR FEET OF DRILLING		
41	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____		Top of ground elev. <u>878</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>20</u> Backfill Material <u>12</u> 2' Bent Seal <u>2</u> 1' Dirt <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>23</u> Lgth of Perf. Pipe <u>20</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>41</u>	TOP 1 3 15 17 18 40 41

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	Moderate	dry	76
8:00				10-20	Res Waste/dirt	Moderate	damp	79
9:00				20-30	Res Waste/dirt	Moderate	damp	81
10:00				30-40	Res Waste/dirt	Moderate	damp	87
11:00				40-50	TD 41'			
12:00				50-60				
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CARROLL 11/12/10
CLIENT REPRESENTATIVE DATE

Dokk 11/12/2010
AEGL SITE SUPERVISOR DATE

NATHAN GWENS SUPERVISOR
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2

DATE: 11/15/2010

PROJECT# 101-10-124

Drilling		Well Asbuild	
EW 148R WELL NUMBER OR NAME			
104 LINEAR FEET OF DRILLING			
104 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____		Backfill Material <u>1</u> 1 2' Bentonite Seal <u>2</u> 3 Length of Solid <u>20</u> Backfill Material <u>12</u> 15 2' Bentonite Seal <u>2</u> 17 1' Dirt <u>1</u> 18 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>86</u> Lgth of Perf. Pipe <u>83</u> Bore diameter <u>36-inch</u> 103 Bottom of bore <u>104</u> 104	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay 5'	Moderate	dry	75
8:00				10-20	Res Waste/dirt	Moderate	damp	79
9:00				20-30	Res Waste/dirt	Moderate	damp	82
10:00				30-40	Res Waste/dirt	Moderate	damp	82
11:00				40-50	Res Waste/dirt	high	damp	84
12:00				50-60	Res Waste/dirt	high	damp	88
1:00				60-70	Res Waste/dirt	high	damp	87
2:00				70-80	Res Waste/dirt	high	damp	93
3:00				80-90	Res Waste/dirt	high	damp	96
4:00				90-100	Res Waste/dirt	high	damp	99
5:00				100-110	Res Waste/dirt	high	damp	102
6:00				110-120	TD 104'			
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 11/15/10
CLIENT REPRESENTATIVE DATE

Dokk 11/15/2010
AEGL SITE SUPERVISOR DATE

NATHAN GUNNS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-129

DATE: 11/16/2010

Drilling		Well Asbuild	
EW 180 WELL NUMBER OR NAME			
114 LINEAR FEET OF DRILLING			
114 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES:			
Total Batching Time:		Top of ground elv. <u>781</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>45</u> Backfill Material <u>37</u> 2' Bent Seal <u>2</u> 1' Dirt <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>71</u> Lgth of Perf. Pipe <u>68</u> Bore diameter <u>36-inch</u> Bottom of bore <u>114</u>	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Clay		dry	
8:00				10-20	Clay		dry	
9:00				20-30	Clay 30'		dry	
10:00				30-40	Res Waste/dirt	high	damp	88
11:00				40-50	Res Waste/dirt	high	damp	89
12:00				50-60	Res Waste/dirt	high	damp	88
1:00				60-70	Res Waste/dirt	high	damp	93
2:00				70-80	Res Waste/dirt	high	damp	93
3:00				80-90	Res Waste/dirt	high	wet	94
4:00				90-100	Res Waste/dirt	high	wet	95
5:00				100-110	Res Waste/dirt	high	wet	99
6:00				110-120	Res Waste/dirt	high	wet	98
Notes				120-130	TD 114'			
northing				130-140				
easting				140-150				

BROWN AND COLDWELL 11/16/10
CLIENT REPRESENTATIVE DATE

Dokk 11/16/2010
AEGL SITE SUPERVISOR DATE

NATHAN GWENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2

DATE: 11/18/2010

PROJECT# 101-10-124

Drilling		Well Asbuilt	
EW 149	WELL NUMBER OR NAME		
132	LINEAR FEET OF DRILLING		
132	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____ Raidiator _____ Grease _____			
NOTES: _____			
Total Benching Time: _____		Top of ground elev. 912 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 34 Backfill Material 26 2' Bent Seal 2 1' Dirt 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 100 Lgth of Perf. Pipe 97 Bore diameter 36-inch Bottom of bore 132	1 3 29 31 32 131 132

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Clay		dry	
8:00				10-20	Clay 19'		dry	
9:00				20-30	Res Waste/dirt	moderate	dry	88
10:00				30-40	Res Waste/dirt	moderate	damp	89
11:00				40-50	Res Waste/dirt	moderate	damp	89
12:00				50-60	Res Waste/dirt	moderate	damp	89
1:00				60-70	Res Waste/dirt	high	damp	97
2:00				70-80	Res Waste/dirt	high	damp	98
3:00				80-90	Res Waste/dirt	high	damp	102
4:00				90-100	Res Waste/dirt	high	damp	103
5:00				100-110	Res Waste/dirt	high	wet	102
6:00				110-120	Res Waste/dirt	high	wet	105
Notes				120-130	Res Waste/dirt	high	wet	107
northing				130-140	Res Waste/dirt	high	wet	106
easting				140-150	TD 132'			

BROWN AND CALDWELL 11/18/10
CLIENT REPRESENTATIVE DATE

Dokk 11/18/2010
AEGLE SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DATE: 11/19/2010

Drilling		Well Asbuild	
EW 308 WELL NUMBER OR NAME			
63	LINEAR FEET OF DRILLING		
63	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____	Raidiator Grease		
NOTES: _____			
Total Benching Time: _____		Top of ground elev. 806 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 10 Backfill Material 2 2' Bent Seal 2 1' Dirt 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 54 Lgth of Perf. Pipe 52 Bore diameter 36-Inch Bottom of bore 63	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	89
8:00				10-20	Res Waste/dirt	moderate	dry	93
9:00				20-30	Res Waste/dirt	moderate	dry	93
10:00				30-40	Res Waste/dirt	moderate	dry	95
11:00				40-50	Res Waste/dirt	moderate	dry	94
12:00				50-60	Res Waste/dirt	moderate	dry	93
1:00				60-70	Res Waste/dirt	moderate	dry	93
2:00				70-80	TD 63'			
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BRUN AND CALDWELL 11/19/10
CLIENT REPRESENTATIVE DATE

Dokk 11/19/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DATE: 11/19/2010

Drilling		Well Asbuild	
EW 307 WELL NUMBER OR NAME			
64 LINEAR FEET OF DRILLING			
64 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	88
8:00				10-20	Res Waste/dirt	moderate	dry	86
9:00				20-30	Res Waste/dirt	moderate	dry	88
10:00				30-40	Res Waste/dirt	moderate	dry	90
11:00				40-50	Res Waste/dirt	moderate	dry	90
12:00				50-60	Res Waste/dirt	moderate	dry	92
1:00				60-70	Res Waste/dirt	moderate	dry	91
2:00				70-80	TD 64'			
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND COLDWELL 11/19/10
CLIENT REPRESENTATIVE DATE
NATHAN GUGUS ENGINEER T
NAME & TITLE

Dokk 11/19/2010
AEGLE SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain 3.2

DATE: 11/19/2010

PROJECT# 101-10-124

Drilling		Well Asbuild	
EW 311 WELL NUMBER OR NAME			
31 LINEAR FEET OF DRILLING			
LINEAR FEET OF COMPLETION			
31 LINEAR FEET OF ABANDONMENT			
Time In: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	88
8:00				10-20	Res Waste/dirt	moderate	dry	87
9:00				20-30	Res Waste/dirt	moderate	dry	88
10:00				30-40	Res Waste/dirt	moderate	dry	88
11:00				40-50	Abandoned 31'			
12:00				50-60				
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
				130-140				
				140-150				
northing				598160.4				
easting				2059625.01				

BRADIN AND CALDWELL 11/19/10
CLIENT REPRESENTATIVE DATE

DOKK 11/19/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2

DATE: 11/29/2010

PROJECT# 101-10-124

Drilling		Well Asbuilt	
EW 52R2 WELL NUMBER OR NAME			
110	LINEAR FEET OF DRILLING		
110	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service:	Radiator Grease		
NOTES:			
Total Benching Time:			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	84
8:00				10-20	Res Waste/dirt	moderate	dry	87
9:00				20-30	Res Waste/dirt	moderate	dry	88
10:00				30-40	Res Waste/dirt	moderate	dry	88
11:00				40-50	Res Waste/dirt	moderate	dry	86
12:00				50-60	Res Waste/dirt	moderate	dry	89
1:00				60-70	Res Waste/dirt	moderate	dry	91
2:00				70-80	Res Waste/dirt	high	wet	94
3:00				80-90	Res Waste/dirt	high	wet	94
4:00				90-100	Res Waste/dirt	high	wet	99
5:00				100-110	Res Waste/dirt	high	wet	102
6:00				110-120	TD 110'			
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 11/29/10
CLIENT REPRESENTATIVE DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Dokk 11/29/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DATE: 12/1/2010

Drilling		Well Asbuild	
EW 304 WELL NUMBER OR NAME			
48 LINEAR FEET OF DRILLING			
48 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Raidiator</u> <u>Grease</u>			
NOTES:			
Total Benching Time:		Top of ground elv. <u>811</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>10</u> Backfill Material <u>2</u> 2' Bent Seal <u>2</u> 1' Dirt <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>40</u> Lgth of Perf. Pipe <u>37</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>48</u>	1 3 5 7 8 47 48

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	80
8:00				10-20	Res Waste/dirt	moderate	dry	81
9:00				20-30	Res Waste/dirt	moderate	dry	89
10:00				30-40	Res Waste/dirt	moderate	dry	86
11:00				40-50	Res Waste/dirt	moderate	dry	90
12:00				50-60	TD 48'			
1:00				60-70				
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 12/1/10
CLIENT REPRESENTATIVE DATE
NATHAN GUYENS ENGINEER I
NAME & TITLE

Dokk 12/1/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DATE: 12/1/2010

Drilling		Well Asbuild	
EW 312 WELL NUMBER OR NAME			
63 LINEAR FEET OF DRILLING			
63 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions:			
Site conditions:			
Rig hrs:			
Service: <u>Raidiator</u> <u>Grease</u>			
NOTES:			
Total Benching Time:			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	82
8:00				10-20	Res Waste/dirt	moderate	dry	81
9:00				20-30	Res Waste/dirt	moderate	dry	87
10:00				30-40	Res Waste/dirt	moderate	dry	89
11:00				40-50	Res Waste/dirt	moderate	dry	93
12:00				50-60	Res Waste/dirt	moderate	dry	97
1:00				60-70	Res Waste/dirt	moderate	dry	97
2:00				70-80	TD 63'			
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 12/1/10
CLIENT REPRESENTATIVE DATE
NATHAN GUYENS ENGINEER J.
NAME & TITLE

Dokk 12/1/2010
AEGLE SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain 3.2

DATE: 12/3/2010

PROJECT# 101-10-124

Drilling		Well Asbuilt	
EW 305 WELL NUMBER OR NAME			
79 LINEAR FEET OF DRILLING			
79 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Raidiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: _____		1 3 5 7 8 78 79	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	90
8:00				10-20	Res Waste/dirt	moderate	dry	89
9:00				20-30	Res Waste/dirt	moderate	dry	89
10:00				30-40	Res Waste/dirt	moderate	dry	92
11:00				40-50	Res Waste/dirt	moderate	dry	96
12:00				50-60	Res Waste/dirt	moderate	dry	97
1:00				60-70	Res Waste/dirt	moderate	dry	99
2:00				70-80	Res Waste/dirt	moderate	dry	99
3:00				80-80	TD 79'			
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BELOIN AND CADWELL 12/3/10
CLIENT REPRESENTATIVE DATE

Dokk 12/3/2010
AEGL SITE SUPERVISOR DATE

NATHAN GARNES ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DATE: 12/6/2010

Drilling		Well Asbuild	
EW 302 WELL NUMBER OR NAME			
84	LINEAR FEET OF DRILLING		
84	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in: _____	Time out: _____		
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: <u>Radiator</u> <u>Grease</u>			
NOTES: _____			
Total Benching Time: 2 hrs		Top of ground elv. <u>819</u> Backfill Material <u>1</u> 2' Bentonite Seal <u>2</u> Length of Solid <u>10</u> Backfill Material <u>2</u> 2' Bent Seal <u>2</u> 1' Dirt <u>1</u> Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk <u>76</u> Lgth of Perf. Pipe <u>73</u> Bore diameter <u>36-Inch</u> Bottom of bore <u>84</u>	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	88
8:00				10-20	Res Waste/dirt	moderate	dry	89
9:00				20-30	Res Waste/dirt	moderate	dry	91
10:00				30-40	Res Waste/dirt	moderate	dry	92
11:00				40-50	Res Waste/dirt	moderate	dry	94
12:00				50-60	Res Waste/dirt	moderate	dry	95
1:00				60-70	Res Waste/dirt	moderate	dry	99
2:00				70-80	Res Waste/dirt	moderate	dry	98
3:00				80-90	Res Waste/dirt	moderate	dry	95
4:00				90-100	TD 84'			
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CROWELL 12/6/10
CLIENT REPRESENTATIVE DATE

Dokk 12/6/2010
AEGLE SITE SUPERVISOR DATE

NATHAN GWENS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2

DATE: 12/6/2010

PROJECT# 101-10-124

Drilling		Well Asbuild	
EW 303	WELL NUMBER OR NAME		
57	LINEAR FEET OF DRILLING		
57	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service:	Raidiator Grease		
NOTES:			
Total Benching Time:			

The diagram illustrates the vertical profile of a well. It shows various materials and their thicknesses being added during construction. Key levels include the top of ground at elevation 812, the bottom of the bore at 57, and the length of the perforated pipe at 46 feet. A gravel pack of 49 feet is shown above the perforations. The well casing has a 36-inch bore diameter.

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	88
8:00				10-20	Res Waste/dirt	moderate	dry	89
9:00				20-30	Res Waste/dirt	moderate	dry	91
10:00				30-40	Res Waste/dirt	moderate	dry	92
11:00				40-50	Res Waste/dirt	moderate	dry	94
12:00				50-60	Res Waste/dirt	moderate	dry	95
1:00				60-70	TD 57'			
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 12/6/10
CLIENT REPRESENTATIVE DATE

Dokk 12/6/2010
AEGL SITE SUPERVISOR DATE

NATHAN GUNNS ENGINEER I
NAME & TITLE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DATE: 12/7/2010

Drilling		Well Asbuild	
EW 306 WELL NUMBER OR NAME			
88 LINEAR FEET OF DRILLING			
88 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____ Raidiator _____ Grease _____			
NOTES: _____			
Total Batching Time: _____			

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	90
8:00				10-20	Res Waste/dirt	moderate	dry	91
9:00				20-30	Res Waste/dirt	moderate	dry	89
10:00				30-40	Res Waste/dirt	moderate	dry	93
11:00				40-50	Res Waste/dirt	moderate	dry	93
12:00				50-60	Res Waste/dirt	moderate	dry	97
1:00				60-70	Res Waste/dirt	moderate	dry	97
2:00				70-80	Res Waste/dirt	moderate	dry	97
3:00				80-90	Res Waste/dirt	moderate	dry	99
4:00				90-100	TD 88'			
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND O'DWELL 12/7/10
CLIENT REPRESENTATIVE DATE
NATHAN GAVIN ENGINEER I
NAME & TITLE

Dokk 12/7/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DATE: 12/8/2010

Drilling		Well Asbuilt	
EW 311	WELL NUMBER OR NAME		
64	LINEAR FEET OF DRILLING		
64	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service:	Radiator Grease		
NOTES:			
Total Benching Time: 2hrs		Top of ground elev. 804 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 10 Backfill Material 2 2' Bent Seal 2 1' Dirt 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 56 Lgth of Perf. Pipe 53 Bore diameter 36-Inch Bottom of bore 64	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	90
8:00				10-20	Res Waste/dirt	moderate	dry	91
9:00				20-30	Res Waste/dirt	moderate	dry	89
10:00				30-40	Res Waste/dirt	moderate	dry	93
11:00				40-50	Res Waste/dirt	moderate	dry	93
12:00				50-60	Res Waste/dirt	moderate	dry	97
1:00				60-70	Res Waste/dirt	moderate	dry	97
2:00				70-80	TD 64'			
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 12/8/10
CLIENT REPRESENTATIVE DATE
NATHAN BROWN ENGINEER II
NAME & TITLE

Dokk 12/8/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain 3.2

DATE: 12/9/2010

PROJECT# 101-10-124

Drilling		Well Asbuild	
EW 301	WELL NUMBER OR NAME		
69	LINEAR FEET OF DRILLING		
69	LINEAR FEET OF COMPLETION		
	LINEAR FEET OF ABANDONMENT		
Time in:	Time out:		
Weather conditions:			
Site conditions:			
Rig hrs:			
Service:	Raidiator Grease		
NOTES:			
Total Benching Time: 2hrs		Top of ground elv. 827 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 10 Backfill Material 2 2' Bent Seal 2 1' Dirt 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 61 Lgth of Perf. Pipe 58 Bore diameter 36-Inch Bottom of bore 69	

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	88
8:00				10-20	Res Waste/dirt	moderate	dry	89
9:00				20-30	Res Waste/dirt	moderate	dry	91
10:00				30-40	Res Waste/dirt	moderate	dry	94
11:00				40-50	Res Waste/dirt	moderate	dry	96
12:00				50-60	Res Waste/dirt	moderate	dry	99
1:00				60-70	Res Waste/dirt	moderate	dry	103
2:00				70-80	TD 70'			
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND COWELL 12/9/10
 CLIENT REPRESENTATIVE DATE
NATHAN GIVENS ENGINEER J
 NAME & TITLE

Dokk 12/9/2010
 AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DATE: 12/10/2010

Drilling		Well Asbuild	
EW 310 WELL NUMBER OR NAME			
67 LINEAR FEET OF DRILLING			
67 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____			
NOTES: _____			
Total Batching Time: 7.5hrs		Top of ground elev. 804 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 10 Backfill Material 2 2' Bent Seal 2 1' Dirt 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 59 Lgth of Perf. Pipe 56 Bore diameter 36-Inch Bottom of bore 67	1 3 5 7 8 66 67

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	84
8:00				10-20	Res Waste/dirt	moderate	dry	84
9:00				20-30	Res Waste/dirt	moderate	dry	86
10:00				30-40	Res Waste/dirt	moderate	dry	88
11:00				40-50	Res Waste/dirt	moderate	dry	87
12:00				50-60	Res Waste/dirt	moderate	dry	90
1:00				60-70	Res Waste/dirt	moderate	dry	92
2:00				70-80	TD 67'			
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CALDWELL 12/10/10
CLIENT REPRESENTATIVE DATE
NATHAN GREENS ENGINEER I
NAME & TITLE

Dokk 12/10/2010
AEGL SITE SUPERVISOR DATE



Well Log

PROJECT NAME Lorain 3.2
PROJECT# 101-10-124

DATE: 12/11/2010

Drilling		Well Asbuild	
EW 309 WELL NUMBER OR NAME			
55 LINEAR FEET OF DRILLING			
55 LINEAR FEET OF COMPLETION			
LINEAR FEET OF ABANDONMENT			
Time in: _____ Time out: _____			
Weather conditions: _____			
Site conditions: _____			
Rig hrs: _____			
Service: _____ Radiator _____ Grease _____			
NOTES: _____			
Total Benching Time: 7.5hrs		Top of ground elev. 806 Backfill Material 1 2' Bentonite Seal 2 Length of Solid 10 Backfill Material 2 2' Bent Seal 2 1' Dirt 1 Gravel Extend 2 Ft Above Perf. Iso. Ring on top of rock Lgth of Gravel Pk 47 Lgth of Perf. Pipe 44 Bore diameter 36-Inch Bottom of bore 55	1 3 5 7 8 54 55

Monitoring Log				Well Boring Log				
Time	OXYGEN	H2S	LEL / CO	Depth	Composition	Degree of Decomp.	Degree of Moisture	Temp
7:00				0-10	Res Waste/Clay	moderate	dry	82
8:00				10-20	Res Waste/dirt	moderate	dry	82
9:00				20-30	Res Waste/dirt	moderate	dry	84
10:00				30-40	Res Waste/dirt	moderate	dry	85
11:00				40-50	Res Waste/dirt	moderate	dry	88
12:00				50-60	Res Waste/dirt	moderate	dry	86
1:00				60-70	TD 55'			
2:00				70-80				
3:00				80-90				
4:00				90-100				
5:00				100-110				
6:00				110-120				
Notes				120-130				
northing				130-140				
easting				140-150				

BROWN AND CHAPWELL 12/11/10
CLIENT REPRESENTATIVE DATE

Dokk 12/11/2010
AEGL SITE SUPERVISOR DATE

NATHAN GIVENS ENGINEER I
NAME & TITLE

Appendix F: No. 4 Stone Laboratory Results

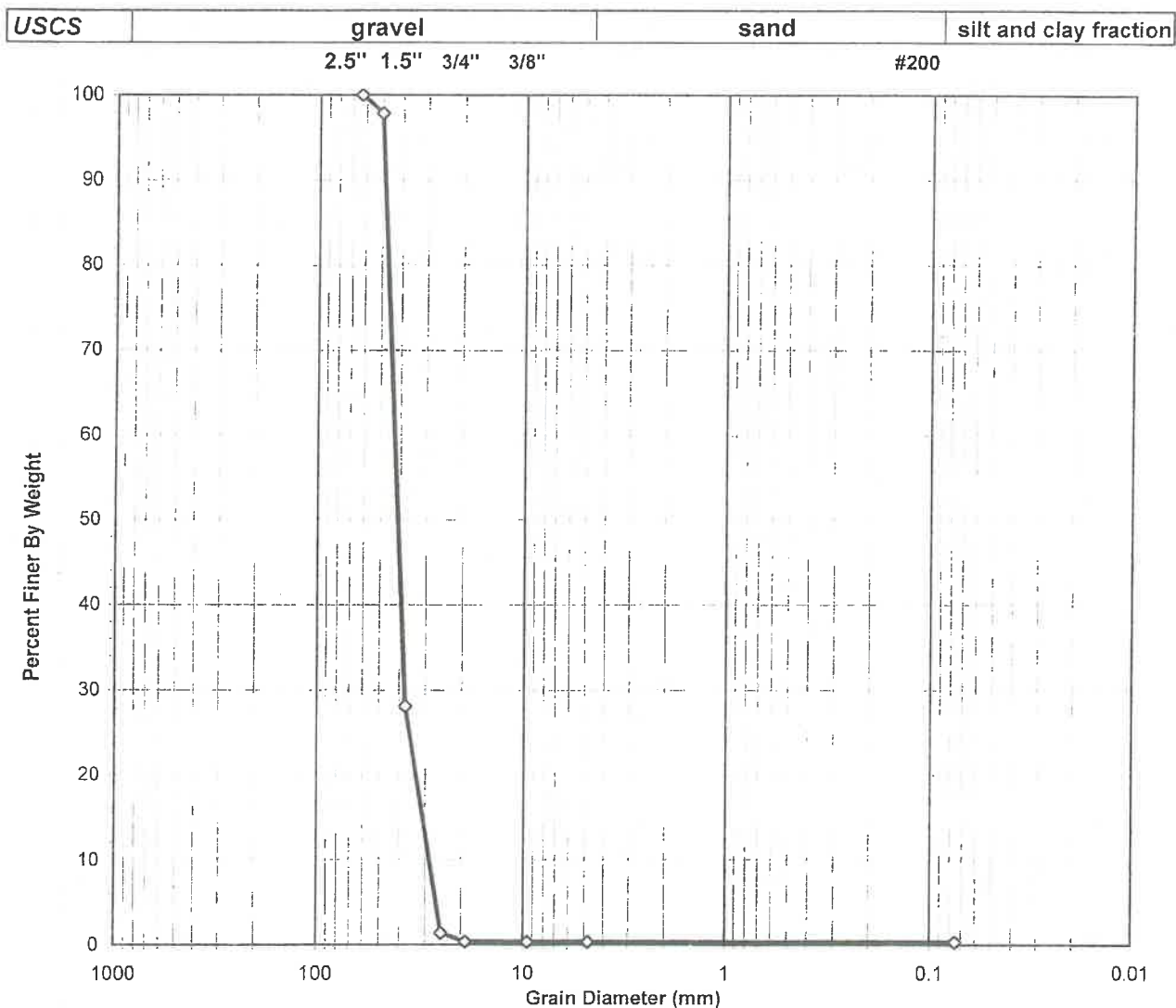
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WASH SIEVE ANALYSIS
AASHTO # 4 (ASTM C136-06)

Client BROWN AND CALDWELL
Client Reference LORAIN II 2010 PHASE 3 BCCS
Project No. 2010-411-01
Lab ID 2010-441-01-01

Boring No. 8-19-10
Depth(ft.) NA
Sample No. # 4 STONE

Color BROWN, GRAY AND TAN STON



USCS Symbol **GP**

USCS Classification **POORLY GRADED GRAVEL**

D60 = 42.77541

D30 = 37.80038 CC = 1.172206

D10 = 28.49669 CU = 1.501066

Tested By **JP** Date **8/21/2010** Checked By *Jm* Date **8-21-10**

WASH SIEVE ANALYSIS
 AASHTO # 4 (ASTM C136-06)

Client	BROWN AND CALDWELL	Boring No.	8-19-10
Client Reference	LORAIN II 2010 PHASE 3 BCCS	Depth(ft.)	NA
Project No.	2010-411-01	Sample No.	# 4 STONE
Lab ID	2010-441-01-01		

Color **BROWN, GRAY AND TAN STONE**

Tare No.	#5	Wt. of Dry Specimen (gm)	17719.00
Wt. Tare + DS.(Pre-Wash)	19749.00	Wt. of + #200 Specimen(gm)	17665.00
Wt. Tare + Dry, Washed specimen	19695.00	Wt. of - #200 Specimen(gm)	54.00
Wt Tare	2030.00		
Wt. Dry, Washed specimen	17665.00		

Total Wt. Retained After Sieving 17663.92

% Difference Wt. Dry, Washed specimen vs Total Wt. Retained After Sieving 0.0

Note: % Difference must not be more than 0.3

Sieve	Sieve Opening (mm)	Wt. of Material Retained (gm.)	Percent Retained	Accumulated Percent Retained	Percent Finer
2 1/2"	63.0	0	0.0	0.0	100.0
2"	50.0	378.3	2.1	2.1	97.9
1 1/2"	37.5	12368	69.8	71.9	28.1
1"	25.0	4727	26.7	98.6	1.4
3/4"	19.0	182.53	1.0	99.6	0.4
3/8"	9.5	0	0.0	99.6	0.4
#4	4.75	0.43	0.0	99.6	0.4
# 200	0.075	7.23	0.0	99.7	0.3
Pan	-	0.43	0.0	99.7	-

Tested By **JP** Date **8/21/2010** Checked By *Jem* Date **8-21-10**

CARBONATE CONTENT
ASTM D 3042-03 (SOP S-55)

Client	BROWN AND CALDWELL	Boring No.	8/19/2010
Client Reference	LORAIN II 2010 PHASE 3 BCCS	Depth(ft.)	NA
Project No.	2010-411-01	Sample No.	#4 STONE
Lab ID	2010-411-01-01		
Visual Description	BROWN CLAY AND TAN STONE		

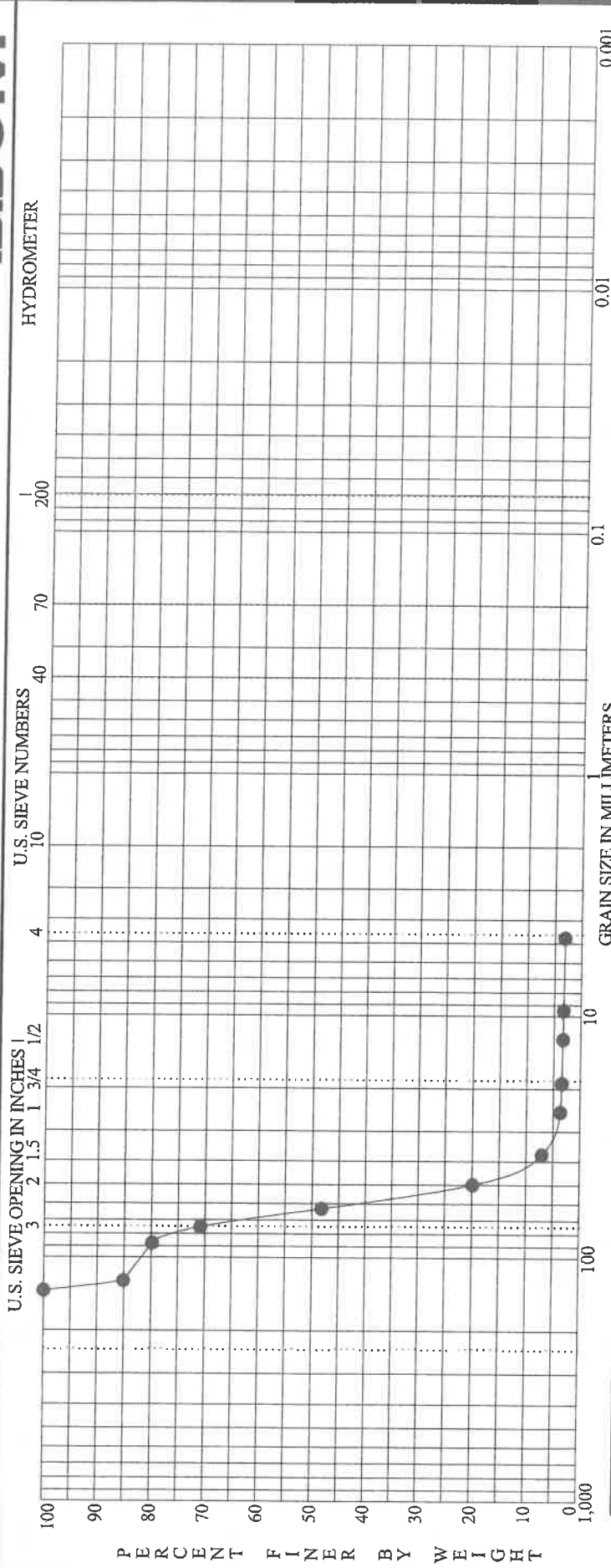
Washed and Dried Specimen (+ #200 Material)

Tare No.	673
Wgt. Tare (gm)	99.74
Weight of Washed, Dry Specimen and Tare Before Acid Wash (gm)	1125.50
Weight of Washed, Dry Specimen and Tare After Acid Wash (gm)	1124.50
Weight of dry Specimen before acid wash (gm)	1025.76
Weight of dry Specimen after acid wash (gm)	1024.76

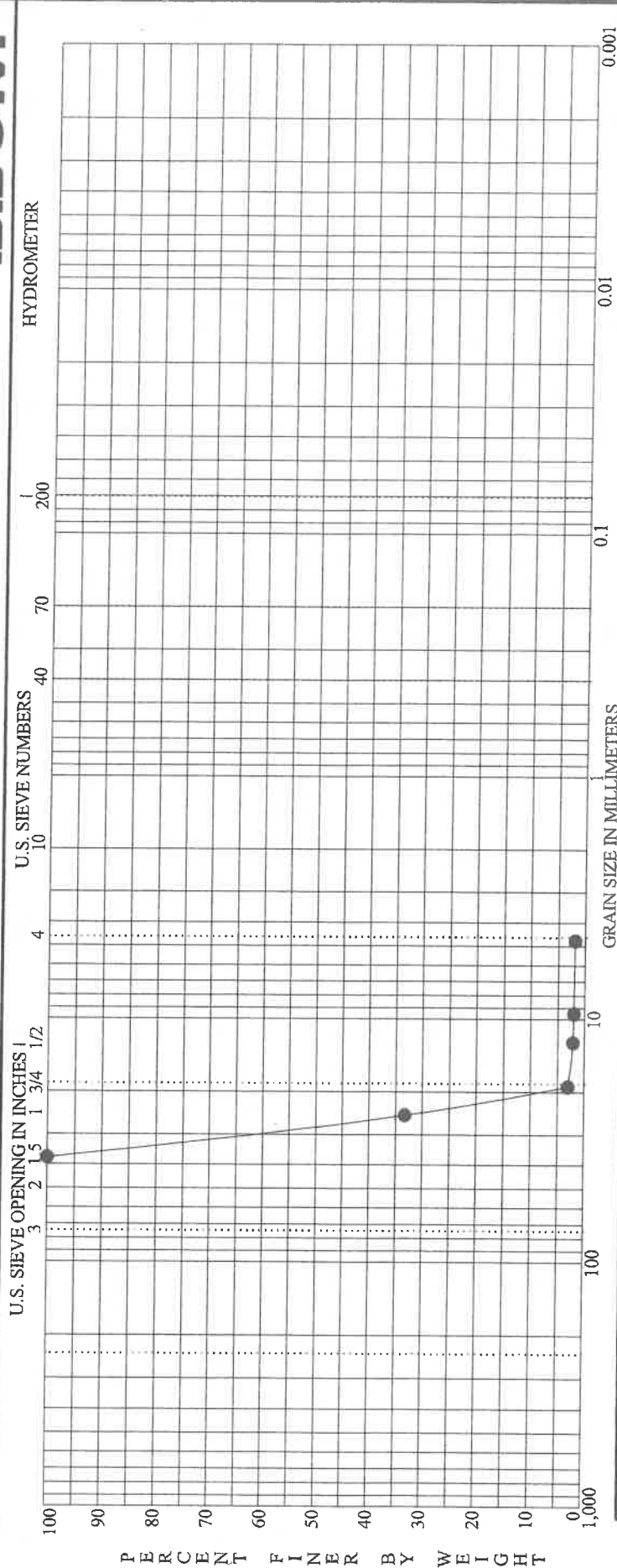
Carbonate Content**0.1%**

Note: Sampling for this test is done in accordance with Sampling Section of Test Method
ASTM C 136 and D 3042 Sections 6.1.1 and 6.1.2

Tested By KBL Date 8/19/2010 Checked By *Jm* Date 8-21-10
page 1 of 1 DCN: CT-S47 DATE :6/6/01 REVISION: 1 C:\MSOFFICE\EXCEL\PrintQ\G699.xls\Sheet1

[illegible]

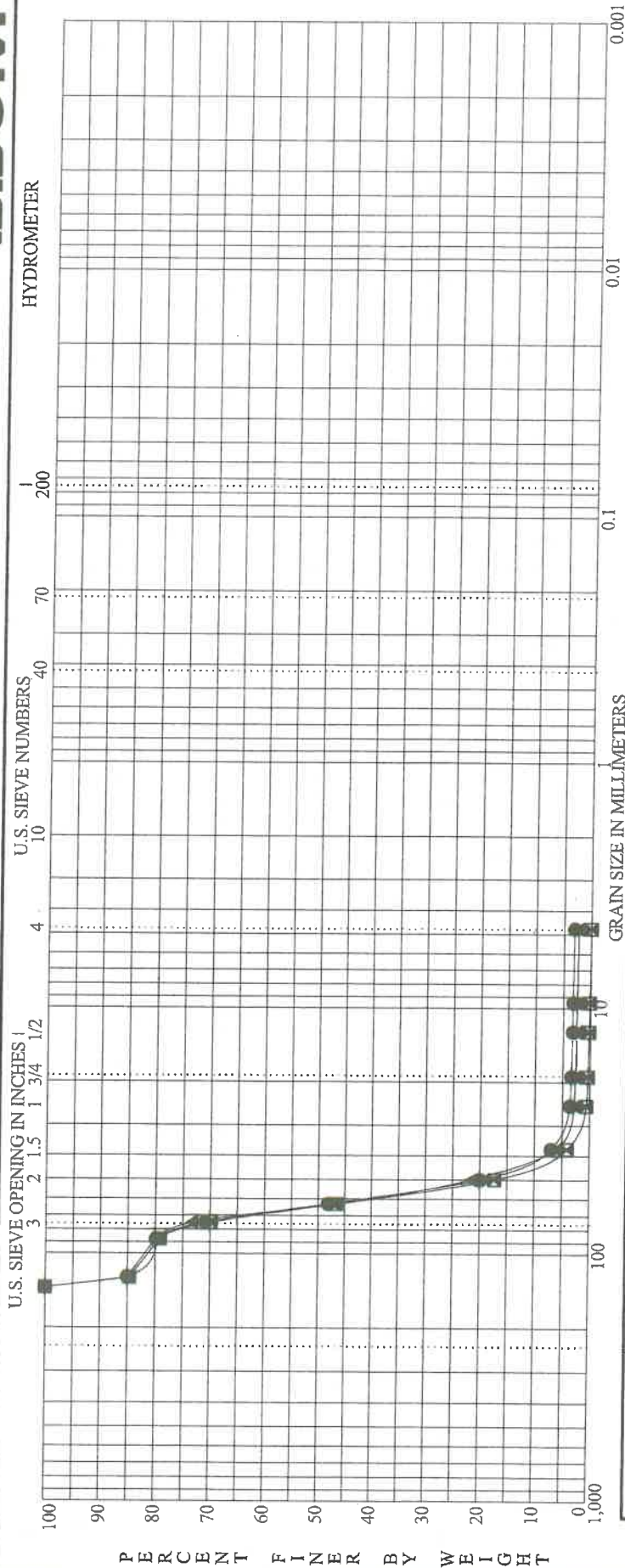
ASTM D422	GRADATION CURVE	PROJECT	Lorain County II Landfill Gas CQA
		LOCATION	OBERLIN, OHIO
		JOB NO.	012.01457.200
		DATE	1/7/11

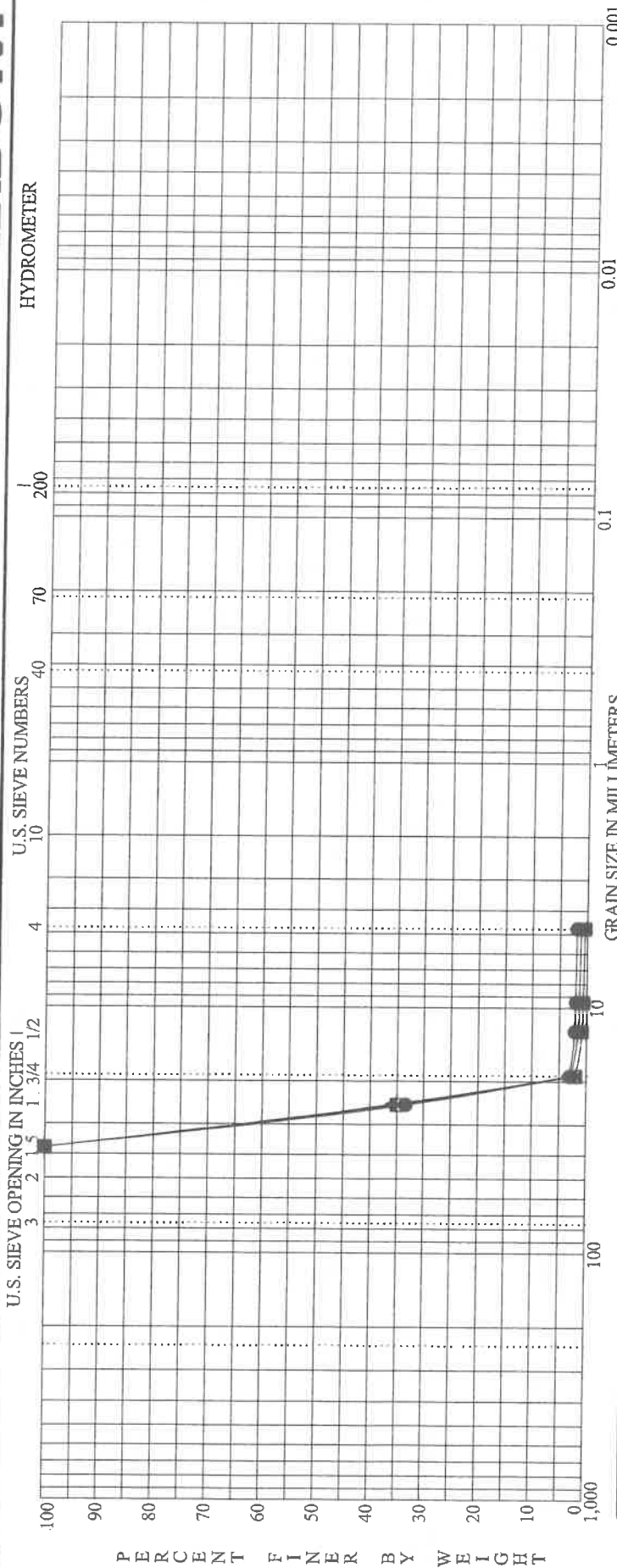
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GRADATION CURVE

PROJECT
LOCATION
JOB NO.

Lorain County II Landfill Gas CQA	
OBERLIN, OHIO	
012.01457.200	DATE 1/7/11





BOULDERS	COBBLES	GRAVEL			SAND			SILT OR CLAY						
		coarse	fine	fine	coarse	medium	fine	MC%	LL	PL	PI	Cc	Cu	
Classification														
Specimen Identification - Depth														
●	STONE BEDDING As Received	STONE BEDDING												
■	STONE BEDDING Before pH 4													
▲	STONE BEDDING After pH 4	% - CARBONATE RESIDUE CONTENT = 0.75												

Appendix G: Peel and Shear Test Results – Flexible Membrane Liner Trial Seam

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5m3

[illegible]

Geomembrane Repair Summary

CQA Monitor: N. GIVENS

2705 N

[illegible]

Appendix H: Air Monitoring Results

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Air Monitoring Form

Page 1 of 53

Instructions: Complete this form immediately prior to project start.

[illegible]

[illegible]

Air Monitoring Form

Page 3 of 53

Instructions: Complete this form immediately prior to project start.

[illegible]

[illegible]

Name of Project/Site: LORAIN II 2010 GCLC PHASE 2		Project No: 138764	
Project/Site Location: OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GIVENS <i>Nathan Givens</i>		Date: 09/03/10	
Instrument(s)			
Manufacturer: RAE SYSTEMS	Model: VRAE	Manufacturer:	Model:
Was Instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

[illegible]

Name of Project/Site:		Project No:	
LORAIN II 2010 GGCS PHASE 3		138764	
Project/Site Location:			
OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign):		Date:	
NATHAN GWENS <i>[Signature]</i>		09/07/10	
Instrument(s)			
Manufacturer:	Model:	Manufacturer:	Model:
RAE SYSTEMS	VR1E		
Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			
Monitoring Data			

HS-18 REV. 06/2006

[illegible]

HS-18 REV. 06/2006

Name of Project/Site: LORAIN II 2010 GOLF PHASE 3		Project No: 138764	
Project/Site Location: OVERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GWENS <i>Nathan Gwens</i>		Date: 09/10/10	
Instrument(s)			
Manufacturer: RAE SYSTEMS	Model: V RAE	Manufacturer:	Model:
Was Instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

[illegible]

[illegible]

Name of Project/Site: LORAIN II 2010 GOLS PHASE3		Project No: 130764	
Project/Site Location: OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GUNDS		Date: 09/14/10	
Instrument(s)			
Manufacturer: PAC SYSTEMS	Model: V PACE	Manufacturer:	Model:
Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

[illegible]



Air Monitoring Form

Page 12 of 53

Instructions: Complete this form immediately prior to project start.

[illegible]

Name of Project/Site: LORAIN II 2010 GCCS PHASE 3		Project No: 138764	
Project/Site Location: OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GIVENS		Date: 09/17/10	
Instrument(s)			
Manufacturer: RAE SYSTEMS	Model: VRAE	Manufacturer:	Model:
Was Instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

HS-18 REV. 06/2006

[illegible]

[illegible]

Name of Project/Site: LORAIN II 2010 GCS PHASE 3		Project No: 138764	
Project/Site Location: OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GIVENS <i>Nathan Givens</i>		Date: 09/22/10	
Instrument(s)			
Manufacturer: RAE SYSTEMS	Model: VRAE	Manufacturer:	Model:
Was Instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

[illegible]

Monitoring Data

HS-18 REV. 06/2006

Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No

HS-18 REV. 06/2006

HS-18 REV. 06/2006

Instructions: Complete this form immediately prior to project start.

HS-18 REV. 06/2006

Instructions: Complete this form immediately prior to project start.

Monitoring Data	
-----------------	--

HS-18 REV. 06/2006

Instructions: Complete this form immediately prior to project start.

Name of Project/Site: LORAIN II 2010 GCCS PHASE 3		Project No: 138764	
Project/Site Location: OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GIVENS <i>[Signature]</i>		Date: 10/02/10	
Instrument(s)			
Manufacturer: RAE SYSTEMS	Model: VRAE	Manufacturer:	Model:
Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			

Remarks:

Monitoring Data

[illegible]

Instructions: Complete this form immediately prior to project start.

[illegible]

Name of Project/Site: LORAIN II 2010 GCCS PHASE 3		Project No: 138764	
Project/Site Location: OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GIVENS [Signature]		Date: 10/9/10	
Instrument(s)			
Manufacturer: RAE SYSTEMS	Model: VRAE	Manufacturer:	Model:
Was Instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

[illegible]

Instructions: Complete this form immediately prior to project start.

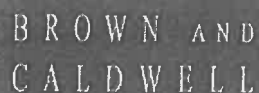
Name of Project/Site: LORAIN II 2010 GCLLS PHASE 3		Project No: 138764	
Project/Site Location: OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GIVENS		Date: 10/11/10	
Instrument(s)			
Manufacturer: RAE SYSTEMS	Model: VRAE	Manufacturer:	Model:
Was Instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			

Remarks:

Monitoring Data

[illegible]

[illegible]



Air Monitoring Form

Page 30 of 53

Instructions: Complete this form immediately prior to project start.

Name of Project/Site: LORAIN II 2010 GCLC PHASE 3		Project No: 138764	
Project/Site Location: OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GIVENS <i>[Signature]</i>		Date: 10/13/10	
Instrument(s)			
Manufacturer: RAE SYSTEMS	Model: VRAE	Manufacturer:	Model:
Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			

Remarks:

Monitoring Data

[illegible]

[illegible]

Instructions: Complete this form immediately prior to project start.

[illegible]

[illegible]

Time	Location and Activity	P/FID (ppm)	Mini- RAM (mg/m³)	Multi-Gas Detection			
				O2	%LEL	H2S	Other
0735	EW-1175 ; DRILLING			20.7	0	0	0
0745	↓			↓			
0755				20.8			
0815	↓			↓			
0830	EW-1185 ; DRILLING						
0845	↓						
0855							
0900							
1030	↓						
1040							
1055	EW-1195 ; DRILLING						
1110	↓			↓			
1130				20.7			
1145	↓			↓			
1310							
1340	↓			↓			
1400				↓	↓	↓	↓

Instructions: Complete this form immediately prior to project start.

Name of Project/Site: <u>LORAIN II 2010 GCES PHASE 3</u>		Project No: <u>138764</u>	
Project/Site Location: <u>OBERVIN, OH</u>			
Employee Performing Air Monitoring: (Print and Sign): <u>NATHAN GIVEN</u> <i>Nathan Given</i>		Date: <u>11/15/10</u>	
Instrument(s)			
Manufacturer: <u>RAC SYSTEMS</u>	Model: <u>VRAC</u>	Manufacturer:	Model:
Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

Monitoring Data

Time	Location and Activity	P/FID (ppm)	Mini- RAM (mg/m ³)	Multi-Gas Detection			
				O2	%LEL	H2S	Other
0730	EL-146R ; DRILLING			20.8	0	0	0
0735	↓			↓	↓	↓	↓
0745	24" HEADER, W-END, N-SLOPE ; TRENCHING			↓	↓	↓	↓
0800	EL-146R ; DRILLING			↓	↓	↓	↓
0815	↓			↓	↓	↓	↓
0830	↓			↓	↓	↓	↓
0855	24" HEADER, W-END, N-SLOPE ; TRENCHING			20.7	↓	↓	↓
0925	EL-146R ; DRILLING			↓	↓	↓	↓
1000	↓			↓	↓	↓	↓
1025	↓			↓	↓	↓	↓
1040	↓			↓	↓	↓	↓
1130	↓			↓	↓	↓	↓
1210	↓			↓	↓	↓	↓
1350	24" HEADER, W-END, N-SLOPE ; TRENCHING			20.9	↓	↓	↓
1430	EL-146R ; DRILLING			20.8	↓	↓	↓
1550	24" HEADER ; W-END, N-SLOPE ; TRENCHING			20.9	↓	↓	↓
1635	↓			↓	↓	↓	↓



Air Monitoring Form

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Instructions: Complete this form immediately prior to project start.

[illegible]

Monitoring Data

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Instructions: Complete this form immediately prior to project start.

Name of Project/Site: <u>LORAIN II 2010 GCLC PHASE 3</u>		Project No: <u>138764</u>	
Project/Site Location: <u>OBERVIN, OH</u>			
Employee Performing Air Monitoring: (Print and Sign): <u>NATHAN GIVENS</u> <i>[Signature]</i>		Date: <u>11/19/10</u>	
Instrument(s)			
Manufacturer: <u>RAE SYSTEMS</u>	Model: <u>VRAE</u>	Manufacturer:	Model:
Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

Monitoring Data

Time	Location and Activity	P/FID (ppm)	Mini- RAM (mg/m³)	Multi-Gas Detection			
				O2	%LEL	H2S	Other
0735	EW-304; DRILLING			20.8	0	0	0
0745	↓						
0805							
0820							
0840							
0900							
0925	EW-307; DRILLING						
0935	↓						
0945							
0955							
1010							
1020							
1045	↓						
1110							
1120	↓						
1135							
1150							
1405	EW-1185; TIE-IN			20.9			
1520	EW-1175; TIE-IN			↓	↓	↓	↓

Instructions: Complete this form immediately prior to project start.

Name of Project/Site: LORAIN II 2010 GCS PHASE 3		Project No: 138764	
Project/Site Location: OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GIVENS <i>[Signature]</i>		Date: 11/24/10	
Instrument(s)			
Manufacturer: RAE SYSTEMS	Model: VRAE	Manufacturer:	Model:
Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			

Remarks:

Monitoring Data

[illegible]

Remarks:

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Instructions: Complete this form immediately prior to project start.

Name of Project/Site: <u>LORAIN II 2010 GCS PHASE 3</u>		Project No: <u>138764</u>	
Project/Site Location: <u>OVERLIN, OH</u>			
Employee Performing Air Monitoring: (Print and Sign): <u>NATHAN GIVENS</u> <i>[Signature]</i>		Date: <u>12/3/10</u>	
Instrument(s)			
Manufacturer: <u>RAC SYSTEMS</u>	Model: <u>VRAC</u>	Manufacturer:	Model:
Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

Monitoring Data

Time	Location and Activity	P/FID (ppm)	Mini- RAM (mg/m ³)	Multi-Gas Detection			
				O2	%LEL	H2S	Other
0740	EW-305; DRILLING			20.8	0	0	0
0745							
0800							
0820							
0835							
0850							
0915							
0935							
0955							
1020							
1035							
1110							
1125							
1145							
1325	24" HEADER, TOP OF 6" DEEP TRENCHING						
1350							
1430	HORIZONTAL COLLECTOR, 1% SLOPE; TRENCHING						
1455							

Instructions: Complete this form immediately prior to project start.

Name of Project/Site: LORAIN II 2010 GCLCS PHASE 3		Project No: 138764	
Project/Site Location: OBERLIN, OH			
Employee Performing Air Monitoring: (Print and Sign): NATHAN GIVENS		Date: 12/14/10	
Instrument(s)			
Manufacturer: RAE SYSTEMS	Model: VRAE	Manufacturer:	Model:
Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			

Remarks:

Monitoring Data

[illegible]

Instructions: Complete this form immediately prior to project start.

Name of Project/Site: <u>LORAIN II 2010 GCCS PHASE 3</u>		Project No: <u>138764</u>	
Project/Site Location: <u>OBERVIN, OH</u>			
Employee Performing Air Monitoring: (Print and Sign): <u>NATHAN GIVEN</u> <i>[Signature]</i>		Date: <u>12/16/10</u>	
Instrument(s)			
Manufacturer: <u>RAE SYSTEMS</u>	Model: <u>VRAE</u>	Manufacturer:	Model:
Was Instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

Monitoring Data

Time	Location and Activity	P/FID (ppm)	Mini- RAM (mg/m ³)	Multi-Gas Detection			
				O ₂	%LEL	H ₂ S	Other
0745	EW-302; DRILLING			20.6	0	0	0
0755	↓						
0805							
0815							
0830							
0900							
0920							
0930							
1030	EW-303; DRILLING						
1040	↓						
1055							
1120							
1150							
1320							
1345							
1500	HORIZONTAL COLLECTOR, E-SLOPE; TRENCHING						
1540	↓						
1630							

Instructions: Complete this form immediately prior to project start.

Name of Project/Site: <u>LORAIN II 2010 GCLCS PHASE 3</u>		Project No: <u>138764</u>	
Project/Site Location: <u>OBERVIN, OH</u>			
Employee Performing Air Monitoring: (Print and Sign): <u>NATHAN GIVENS</u> <i>[Signature]</i>		Date: <u>12/7/10</u>	
Instrument(s)			
Manufacturer: <u>RAE SYSTEMS</u>	Model: <u>VRAE</u>	Manufacturer:	Model:
Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No			
Remarks:			

Monitoring Data

Time	Location and Activity	P/FID (ppm)	Mini- RAM (mg/m ³)	Multi-Gas Detection			
				O2	%LEL	H2S	Other
0800	GW-306; DRILLING			20.7	0	0	0
0810	↓						
0825							
0845				20.8			
0905							
0920							
0930							
0955							
1005							
1030							
1040							
1130	24" HEADER, UPPER PLATFORM; TRENCHING						
1350	↓						
1435							
1510	HORIZONTAL COLLECTOR, E. SLOPE; TRENCHING						
1530	↓						

Air Monitoring Form

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Instructions: Complete this form immediately prior to project start.

[illegible]

Instructions: Complete this form immediately prior to project start.

[illegible]

Instructions: Complete this form immediately prior to project start.

Name of Project/Site:

LORAIN II 2010 GCLC PHASE 3

Project No:

138764

Project/Site Location:

OBERLIN, OH

Employee Performing Air Monitoring:

(Print and Sign):

NATHAN GIVENS

Date:

12/10/10

Instrument(s)

Manufacturer:

RAE SYSTEMS

Model:

VRAE

Manufacturer:

Model:

Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No

Remarks:

Monitoring Data

Time	Location and Activity	P/FID (ppm)	Mini- RAM (mg/m³)	Multi-Gas Detection			
				O2	%LEL	H2S	Other
0800	EW-310 ; DRILLING			20.8	0	0	0
0805	↓						
0810							
0820							
0835				20.1			
0850							
0910							
0940							
0955							
1005							
1100	EW-146 R ; TIE-IN						
1340	HORIZONTAL COLLECTOR ; EAST SLOPE ; BRANCHING						
1425	↓						
1530							

[illegible]

Was instrument(s) calibrated per manufacturer's instructions? ☒ Yes ☐ No

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Appendix I: Pipeline Pressure Test Results

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2010 GCCS - Phase 3 Construction Certification Report - Pipe Pressure Test Result

Date	HDPE Pipe Description	Length (feet)	Pressure (psi)	Time (hours)	Result (Pass/Fail)	Retest (Yes/No)
9/24/2010	EW-2BR 6-inch lateral	39	25	4	Pass	No
10/15/2010	EW-35R 6-inch lateral	274	25	4	Pass	No
10/8/2010	EW-38R 6-inch lateral	170	25	4	Pass	No
9/15/2010	EW-45R 4-inch lateral	25	25	4	Pass	No
10/13/2010	EW-47R 6-inch lateral	21	25	4	Pass	No
9/24/2010	EW-58R2 6-inch lateral	46	25	4	Pass	No
9/11/2010	EW-73R 6-inch lateral	21	25	4	Pass	No
9/24/2010	EW-100R 6-inch lateral	48	25	4	Pass	No
11/11/2010	EW-112S 6-inch lateral	21	25	4	Pass	No
11/11/2010	EW-113S 6-inch lateral	22	25	4	Pass	No
11/11/2010	EW-114S 6-inch lateral	21	25	4	Pass	No
11/11/2010	EW-116S 6-inch lateral	16	25	4	Pass	No
11/11/2010	EW-117S 6-inch lateral	24	25	4	Pass	No
11/11/2010	EW-118S 6-inch lateral	22	25	4	Pass	No
11/11/2010	EW-119S 6-inch lateral	22	25	4	Pass	No
9/14/2010	EW-124R 6-inch lateral	18	25	4	Pass	No
9/14/2010	EW-125R 6-inch lateral	16	25	4	Pass	No
9/21/2010	EW-142R 6-inch lateral	18	25	4	Pass	No
9/21/2010	EW-144R 6-inch lateral	61	25	4	Pass	No
11/11/2010	EW-146R 6-inch lateral	43	25	4	Pass	No
9/21/2010	EW-148 6-inch lateral	157	25	4	Pass	No
12/21/2010	EW-150 to EW-149 6-inch lateral	520	25	4	Pass	No
10/11/2010	EW-151 to EW-152 6-inch lateral	530	25	4	Pass	No
10/12/2010	EW-153 6-inch lateral	179	25	4	Pass	No
10/13/2010	EW-154 6-inch lateral	150	25	4	Pass	No
9/18/2010	EW-155 6-inch lateral	126	25	4	Pass	No
9/11/2010	EW-163R 6-inch lateral	18	25	4	Pass	No
9/11/2010	EW-165R 6-inch lateral	28	25	4	Pass	No
9/11/2010	EW-166R 6-inch lateral	21	25	4	Pass	No
1/12/2011	EW-301 6-inch lateral	89	10	4	Pass	No
1/12/2011	EW-305 6-inch lateral	90	10	4	Pass	No
1/12/2011	EW-309 6-inch lateral	135	10	4	Pass	No
1/12/2011	EW-310 to EW-302 6-inch lateral	318	10	4	Pass	No
1/12/2011	EW-311 to EW-303 6-inch lateral	294	10	4	Pass	No
1/12/2011	EW-312 to EW-304 6-inch lateral	270	10	4	Pass	No
12/16/2010	24-inch East-West header	3448	10	4	Pass	No
1/12/2011	24-inch Cell A header	539	10	4	Pass	No
1/12/2011	18-inch Cell A header	618	10	4	Pass	No

2010 GCCS - Phase 3 Construction Certification Report - Pipe Pressure Test Result

Date	HDPE Pipe Description	Length (feet)	Pressure (psf)	Time (hours)	Result (Pass/Fail)	Retest (Yes/No)
9/10/2010	EW-116 2-inch airline	199	100	4	Pass	No
9/14/2010	EW-124R 2-inch airline	75	100	4	Pass	No
9/13/2010	EW-125R to EW-133 2-inch airline	414	100	4	Pass	No
9/17/2010	EW-35R to EW-155 2-inch airline	168	100	4	Pass	No
9/13/2010	TEW-10R2 2-inch airline	242	100	4	Pass	No
9/17/2010	EW-138 2-inch airline	400	100	4	Pass	No
9/20/2010	EW-36R 2-inch airline	13	100	4	Pass	No
9/21/2010	EW-82R 2-inch airline	74	100	4	Pass	No
9/21/2010	EW-144R 2-inch airline	61	100	4	Pass	No
9/24/2010	EW-53R 2-inch airline	214	100	4	Pass	No
9/24/2010	EW-58R2 2-inch airline	239	100	4	Pass	No
10/1/2010	EW-87R 2-inch airline	458	100	4	Pass	No
10/21/2010	EW-152 2-inch airline	147	100	4	Pass	No
10/21/2010	EW-50 2-inch airline	445	100	4	Pass	No
10/21/2010	CS-13 2-inch airline	308	100	4	Pass	No
10/21/2010	2-inch airline - trunk line	2178	100	4	Pass	No
1/12/2011	Cell A 2-inch airline	675	100	4	Pass	No
9/10/2010	EW-116 2-inch force main	199	50	4	Pass	No
9/13/2010	EW-125R to EW-133 2-inch force main	414	50	4	Pass	No
9/14/2010	EW-124R 2-inch force main	75	50	4	Pass	No
9/17/2010	EW-35R to EW-155 2-inch force main	168	50	4	Pass	No
9/13/2010	TEW-10R2 2-inch force main	242	50	4	Pass	No
9/17/2010	EW-138 2-inch force main	400	50	4	Pass	No
9/20/2010	EW-36R 2-inch force main	13	50	4	Pass	No
9/21/2010	EW-82R 2-inch force main inner containment	74	50	4	Pass	No
9/21/2010	EW-82R 4-inch force main outer containment	74	50	4	Pass	No
9/21/2010	EW-144R 2-inch force main inner containment	61	50	4	Pass	No
9/21/2010	EW-144R 4-inch force main outer containment	61	50	4	Pass	No
9/24/2010	EW-53R 2-inch force main	214	50	4	Pass	No
9/24/2010	EW-58R2 2-inch force main	239	50	4	Pass	No
10/1/2010	EW-87R 2-inch force main inner containment	458	50	4	Pass	No
10/1/2010	EW-87R 4-inch force main outer containment	458	50	4	Pass	No
10/21/2010	EW-152 2-inch force main	146	50	4	Pass	No
10/21/2010	EW-50 2-inch force main	445	50	4	Pass	No
10/21/2010	CS-13 2-inch force main	308	50	4	Pass	No
10/21/2010	4-inch force main - trunk line	2178	50	4	Pass	No
1/12/2011	Cell A 4-inch force main	650	50	4	Pass	No