



Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

July 2, 2021

Transmitted Electronically

Mr. Daniel Millsap
Service Director
City of Louisville
215 South Mill Street
Louisville, OH 44641

**Re: Louisville WWTP
Inspection
Inspection
NPDES
Stark County
3PD00033**

Subject: Comprehensive Compliance Evaluation Inspection

Dear Mr. Millsap:

On June 29, 2021, Ohio EPA conducted an inspection of the City of Louisville Wastewater Treatment Plant (WWTP), located at 2301 Ravenna Avenue NE (formerly 3101 Ravenna Road NE), City of Louisville, Stark County, Ohio. I represented Ohio EPA during the inspection. Louisville City was represented by Mr. Daniel Millsap, Service Director, Mr. Richard Goebeler, Chief Utility Operator/Superintendent, Mr. Charles Caldwell, Utility Supervisor, Mr. James Rothermel, Lab Technician/Operator, and Mr. Bruce Goebeler, Operator.

The purpose of the comprehensive compliance review was to evaluate the operation and maintenance of the Louisville WWTP, gather supplemental information for renewal of your National Pollutant Discharge Elimination System (NPDES) permit, and to evaluate compliance with the terms and conditions of your NPDES permit.

Compliance Review Report

Observations and notations made during the comprehensive compliance evaluation inspection are found on the attached comprehensive compliance review report.

Facility Description

The City of Louisville WWTP has a design treatment capacity of 1.8 million gallons per day (MGD) and a design peak treatment capacity of 4.2 MGD. Once currently pending improvements are completed the design treatment capacity will increase to 2.3 MGD and design peak treatment capacity will increase to 6.0 MGD. The facility currently treats an average of 1.48 MGD. The plant receives wastewater from the City of Louisville, as well as a few homes in Nimishillen Township, Stark County that are connected to the municipal system. The last major upgrade to the plant occurred in 1988, and current upgrades are being implemented in phases. Phase 1 improvements to the plant were made under Permit-to-Install (PTI) Nos. 1146082 (May 8, 2017) and 1215523 (May 8, 2018). Current treatment consists of influent pumping, primary screening, flow equalization with aeration, primary settling (no longer used – currently being retrofitted to grit removal), conventional activated sludge aeration in six tanks, alum addition for phosphorus removal, clarification via two new 70-foot diameter clarifiers, chlorine contact tank with gas

chlorine feed, flow metering, dechlorination, post-disinfection aeration, and discharge to the East Branch of Nimishillen Creek northwest of the plant. Sludge treatment consists of aerobic digestion in two aerobic digesters, dewatering via a belt filter presses, and storage in the former sludge drying beds. Dewatered sludge is hauled to Countywide Landfill in southern Stark County for disposal.

Louisville completed Phase 1 improvements, including adding two larger final clarifiers to replace the three smaller, aging clarifiers (now out of service), new WAS/RAS sludge pumps and controls, and a chemical feed system for phosphorus removal. Construction is ongoing at the facility for Phase 2 improvements through PTI 1351341 (August 17, 2020), including a new generator, expansion on the flow equalization basin, retrofitting the primary settling tanks to serve as grit removal, two new buildings for grit removal equipment, new grit pumps and blowers, new aeration diffusers and blowers, upgrades to the SCADA system, dissolved oxygen (DO) monitors, level sensors, tanks sensors, level switches for flood alarms, site lighting, and control gates for the aeration tanks.

Findings

1. The facility is in significant non-compliance (SNC) due to violations within the time period reviewed for total filterable residue (TFR), also known as total dissolved solids. SNC is a programmatic definition used to prioritize enforcement. In this case, the facility is in SNC due to TFR exceeding effluent limits by greater than 20% in at least two months out of a six-month period. This has been discussed with the City of Louisville dating back to 2016, and Louisville was issued a Notice of Violation (NOV) on May 5, 2021. Louisville responded to the NOV on May 28, 2021. TFR and copper violations have been attributed to Allegheny Technologies, Inc. (ATI), part of Jewel Acquisitions, Inc.
2. The City of Louisville has one significant industrial user within its collection system – ATI. ATI discharges approximately 120,000 gallons per day (gpd) of softener backwash to the municipal sanitary sewer system. Due to issues with flow metering, ATI has historically underreported the volume of flow to Louisville. In 2020, ATI notified Louisville that it will be closing the ATI Louisville facility in three phases starting in 2021 and completing its shutdown by early 2023. In Phase 1, ATI anticipates idling the Hot Anneal and Pickle Line by the end of 2021, in Phase 2 ATI anticipates idling the Cold Anneal and Pickle Line early 2022, and finally in Phase 3 ATI anticipates idling the Bright Anneal Line early 2023 or as soon as the new Bright Anneal Line that is being installed at its Vandergrift Facility is fully operational. ATI anticipates that water consumption will decrease when we idle the Hot Line and substantially decrease when we idle the Cold Line in early 2022. Louisville believes that the ongoing TFR violations will be abated once ATI ceases the discharge of the softener backwash to its collection system.
3. The NPDES permit renewal application was received on April 29, 2021, and was submitted by Mr. Daniel Millsap. Revisions to the application were received on June 9, 2021, and were received from Mr. Goebeler on behalf of Mr. Millsap. Additional electronic revisions were received on June 30, 2021 and July 1, 2021. As your current permit expires on August 31, 2021, the application was due to be received by Ohio EPA no later than March 4, 2021. The application was not timely received.
4. A review of the electronic Discharge Monitoring Report (eDMR) data from February 1, 2019 through May 31, 2021 indicates the following violations:

- a. Effluent Violations: Effluent violations are noted for total Filterable Residue (TFR, aka total dissolved solids) in September 2019, October 2019, November 2020, December 2020, February 2021, and March 2021. An effluent violation of oil and grease was noted in October 2019, and an effluent violation of copper was noted in April 2020. Louisville provided noncompliance notifications to these violations, attributing copper and TFR/TDS violations to ATI's discharge. For future reference, any maximum daily violations (pH, chlorine residual) should be reported by email or letter within 24 hours of discovery, and remaining violations should be noted in the monthly eDMRs with explanations.
 - b. Frequency Violations: No frequency violations are noted during the review period.
 - c. Use of Data Substitution Codes: Ohio EPA notes that the data substitution codes AH was used for specific Municipal Holidays. Note that the proper code to use for weekends and holidays, including municipal holidays, is AN. Please note that the AN code is only acceptable for parameters that are sampled daily. For samples sampled at a lesser frequency, the sampling data should be moved to a date when the plant/laboratory is staffed.
5. Operators of Record: The Louisville WWTP is a Class III wastewater treatment plant and has a Class II collection system tributary to the plant. There are no satellite communities. Ohio EPA files reflect that Mr. Richard Goebeler is listed at the current Operator of Record for the wastewater treatment plant. Louisville indicated that they submitted a revised Operator of Record Notification for Mr. Goebeler to be the Operator of Record for the municipal collection system. Ohio EPA's Operator list revised through June 1, 2021 does not reflect this information. Mr. Goebeler inquired about procedures to request a reduction in minimum staffing for the plant.
6. Plant Operations: An inspection of the plant indicated that the plant is properly maintained producing an acceptable visual quality effluent. The existing emergency generator and the proposed emergency generator do not appear to have an air permit.
7. Outfall Signage: Outfall signage is maintained for Outfall 001, which needs updated to reflect the latest permit; but no outfall signage is provided for Outfalls 002, 003, and 005. All outfalls and bypasses must have outfall signs per Part II of your NPDES permit.
8. Stormwater Plan and Monitoring: Louisville has a stormwater pollution prevention plan (SWPPP) undated, revised through December 23, 2020. Facility inspections and plan training are conducted annually, and facility stormwater outfall visual inspections are conducted quarterly.
9. Laboratory Operations: A review of laboratory equipment and quality assurance/quality control (QA/QC) documentation indicated that several pieces of laboratory equipment had missing or misplaced operating manuals. Manual unable to be located include balances, the bacteria incubator, and steam sterilizer. Balances should be relocated to areas away from air vents, and proper documentation must be maintained for the incubators and steam sterilizers. Chain-of-custody forms must be maintained for in-house samples to document that holding times are not exceeded prior to analysis. Bench sheets must include spots for analyst initials as multiple staff have the ability to perform analyses throughout the day.

Recommendations

The recommendation(s) set out below are not orders. The recommendations are offered by Ohio EPA in an effort to provide compliance assistance to your facility.

1. **NPDES Renewal Applications**: A condition of your NPDES permit for continued coverage is that a renewal application is due to be received by Ohio EPA no later than 180 days prior to the expiration of the current permit. The application was not received by Ohio EPA in a timely matter. For future reference, any technical issues with submission of permit renewals, monthly eDMRs, and other reports through the Ohio EPA eBiz system should be directed to the eBiz help desk at dsw.ebizhelp@epa.ohio.gov, which is monitored by Donna Dessoir and Katherine Harris at Ohio EPA central office and not through district staff. If you prefer to speak to them by phone, we recommend that you include that in your email request and a best time to reach you. Ohio EPA recommends that future applications be submitted well in advance of the 180-day deadline. Please ensure that future NPDES permit applications (including application fees) are submitted well in advance of the 180-day deadline prior to the expiration of your current permit.
2. **Non-Compliance Notification**: Part III, Item 12 of your Permit requires the Operator of Record to notify Ohio EPA of noncompliance with your permit. Daily maximums (pH, chlorine residuals) must be reported within 24 hours of discovery and remaining effluent violations must be reported with explanations through the eDMRs. For reference, Ohio EPA has noncompliance notification forms online that may be used at <https://www.epa.ohio.gov/dsw/permits/individuals/LiveTabId/153931#153934582-monitoring-and-reporting>. Ohio EPA recommends that daily exceedance, bypass, and compliance schedule violation notifications be made within 24 hours of discovery to the noncompliance general email address at nedo24hournpdes@epa.ohio.gov, and to electronically copy your interim compliance inspector Christopher Moody at Chris.Moody@epa.ohio.gov. Other violations should be noted with an explanation, including methods to avoid future violations, through the comments in the monthly eDMRs.
3. **Operators of Record**: Please verify with the Ohio EPA's Operator Certification unit that Mr. Goebeler is listed as the Operator of Record for the Louisville WWTP collection system.
4. **Stormwater Monitoring Program**: The following are noted:
 - a. **SWPPP Document**: Mr. Goebeler provided Louisville's Stormwater Pollution Prevention Plan (SWPPP) dated December 2018 as revised December 23, 2020. Annual reviews and revisions are documented in the plan. The plan appears to follow the format of an MS4 SWPPP and not an industrial facility SWPPP. We discussed the format of the SWPPP will require revision, and that a SWPPP template that will meet the current format is available provided during the inspection is available on Ohio EPA's website at https://www.epa.ohio.gov/dsw/permits/GP_IndustrialStormWater#153894568-permit-guidance-compliance-and-support. Additional items noted in the plan include the following:
 - i. **Overall Plan**: The plan appears to be written so generically that specific areas within the Louisville WWTP to inspect (grit and screening areas, solid handling and storage areas, sludge drying beds, access roads, chemical loading/unloading and storage areas, vehicle and equipment storage areas, etc.) are not provided. The SWPPP team is not identified in the plan by specific name and contact. Facility inspections must be conducted quarterly, not annually. Quarterly visual analysis forms do not identify the specific stormwater outfalls examined.

- ii. Site Map: The site map must identify the storm sewer system within the plant and clearly identify the specific stormwater outfalls (002, 003, and 005), BMP areas, pollutant source areas (grit and screening areas, solid handling and storage areas, sludge drying beds, access roads, chemical loading/unloading and storage areas, vehicle and equipment storage areas, etc.), material handling and storage areas, and non-stormwater discharge (001) areas.
 - iii. Non-Stormwater Documentation: The plan will need to reference a date that the non-stormwater evaluation was conducted to ensure that all wastewaters other than stormwater is routed through the WWTP. The current permit already reflects that non-stormwater (treated sanitary wastewater) flows through Outfall 001, with Outfalls 002, 003, and 005 is strictly stormwater.
 - iv. Spill Prevention and Response: The plan does not include areas that have traffic barriers, secondary containment, and emergency shutoffs, and areas where spill response supplies, and the Emergency Hotline Number is readily accessible and available.
 - v. Employee Training Documentation: Ohio EPA notes that there is no documentation of employee training for those responsible for implementing the stormwater plan, including following all best management practices. Please provide training on the plan and provide documentation that training has been conducted.
- b. Quarterly Visual Assessments: Quarterly visual assessments of the visual quality of the final discharge timely completed by Louisville staff for 2019, 2020, and 2021 as noted in appendices of the plan, including weather information.
 - c. Quarterly Facility Inspections: Quarterly facility inspections of the Louisville WWTP have not been conducted, only annual inspections by Louisville staff for 2019, 2020, and 2021. Quarterly inspections of the facility must commence.
 - d. Training: Ohio EPA could not locate the sign-in sheet for the 2021 training event. Please ensure that you maintain the sign-in sheet and topics outline for future training events.
 - e. Housekeeping: Some scrap metal (former screen unit) and scrap equipment is noted in a pile along the north side of the building should be removed or relocated under roof.
5. SWPPP Revision References: Once your permit renews, the contents of your stormwater plan will require additional revisions. Ohio EPA understands that Louisville will be revising or contracting to revise the SWPPP. I recommend that Louisville review its SWPPP document to ensure that the revisions reflect Ohio EPA's recommended template located online at Ohio EPA's industrial stormwater webpage. Louisville will also need to update its stormwater map to ensure that the map reflects any recontouring that may have occurred on the site, and show all sumps, yard drains, catch basins, and piping for ongoing improvements. Some helpful resources in revising your SWPPP include the following:
- a. [U.S. EPA Industrial Storm Water Fact Sheet – Sector T: Treatment Works](#) – U.S. EPA fact sheet describing best management practices for your industry group.
 - b. [Developing Your SWPPP: A Guide for Industrial Operators, June 2015](#) – U.S. EPA Guide for developing your SWPPP.

- c. [Ohio EPA 2017 SWPPP Plan Template](#) – Microsoft Word template for writing your revised SWPPP.
- d. [Ohio EPA 2017 SWPPP Recordkeeping Templates](#) – Microsoft Word template for reporting forms and recordkeeping templates typically included as SWPPP Appendices.
- e. Northeast Ohio Stormwater Training Council's [Quarterly Visual Assessment Guide](#) – A handy visual guide for conducting the visual assessments of your stormwater.
- f. [OHR000006 Annual Reporting Form](#) – Microsoft Word template for completing your annual report.
- g. [Industrial Stormwater Monitoring and Sampling Guide](#) – U.S. EPA Guidance on sampling. In addition to monthly monitoring, your sector has quarterly sampling for visual qualities (odor, color, sheen, turbidity, etc.) of stormwater discharges from qualifying storm events, and that there are recordkeeping forms provided to you as a template in the plan.

Renewal of NPDES Permit

Once Ohio EPA receives your complete NPDES renewal application, this office will begin the process of writing your renewal. The City will be offered a courtesy preview of the draft permit and fact sheet to provide you an early opportunity to check for errors or bring concerns to our attention. Your comments will be considered prior to the public-noticing of the permit. The City will then have another opportunity to provide formal input during the public comment period.

This letter is an official response from Ohio EPA that will be maintained as a public record.

Ohio EPA sincerely appreciates both the Applicant's and Operator's cooperation, and assistance, particularly Mr. Richard Goebeler's assistance in conducting this compliance evaluation inspection.

If you have any questions or comments concerning the enclosed inspection report, please contact me at (330) 963-1175 or by email at John.Schmidt@epa.ohio.gov.

Sincerely,



John Schmidt, P.E.
Environmental Engineer
Division of Surface Water

JMS/sc

Attachment

ec: Daniel Millsap, City of Louisville
Richard Goebeler, City of Louisville
Chris Moody, Ohio EPA, DSW, NEDO

NPDES Compliance Inspection Report

SECTION A: NATIONAL DATA SYSTEM CODING						
Permit #	NPDES #	Inspection Type	Sig. Non-Compliance	Inspection Date	Entry Time	Exit Time
OH0026182	3PD00033	CEI	Yes	6/29/2021	8:00 AM	2:45 PM

SECTION B: FACILITY DATA	
Name and Location of Facility Inspected	Permit Effective Date
Louisville WWTP	11/1/2019
	Permit Expiration Date
	8/31/2021
Name(s) and Title(s) of On-Site Representatives	Phone Numbers
Daniel Milsap, Service Director	(330) 875-3321
Richard Goebeler, Chief Utilities Operator/Superintendent	(330) 417-1065
Name and Title of Responsible Official	Phone Number
Daniel Milsap, Service Director	(330) 875-3321

SECTION C: AREAS EVALUATED DURING INSPECTION		
Evaluated? Y-Yes; N-No	Area Evaluated	Recommendations noted in report? Y – Yes; N – No; N/A – Not Applicable
Y	E. NPDES Compliance	Yes, See cover letter and attached report.
Y	F. Operations & Maintenance	Yes, See cover letter and attached report.
Y	G. Operator Certification	Yes, See cover letter and attached report.
Y	H. Collection System	No
Y	I. Sludge Management	No
Y	J. Storm Water	Yes, See cover letter and attached report.
Y	K. Self-Monitoring Program	No
Y	L. Laboratory	Yes, See cover letter and attached report.
Y	M. Effluent / Receiving Water Observations	No

Comments: The City of Louisville WWTP has a design treatment capacity of 1.8 MGD and a design peak treatment capacity of 4.2 MGD. Once currently pending improvements are completed the design treatment capacity will increase to 2.3 MGD and design peak treatment capacity will increase to 6.0 MGD. The facility currently treats an average of 1.48 MGD. The plant receives wastewater from the City of Louisville, as well as a few homes in Nimishillen Township, Stark County that are connected to the municipal system. The last major upgrade to the plant occurred in 1988, and current upgrades are being implemented in phases. Phase 1 improvements to the plant were made under Permit-to-Install (PTI) Nos. 1146082 (May 8, 2017) and 1215523 (May 8, 2018). Current treatment consists of influent pumping, primary screening, flow equalization with aeration, primary settling (no longer used – currently being retrofitted to grit removal), conventional activated sludge aeration in six tanks, alum addition for phosphorus removal, clarification via two new 70-foot diameter clarifiers, chlorine contact tank with gas chlorine feed, flow metering, dechlorination, post-disinfection aeration, and discharge to the East Branch of Nimishillen Creek northwest of the plant. Sludge treatment consists of aerobic digestion in two aerobic digesters, dewatering via a belt filter presses, and storage in the former sludge drying beds. Dewatered sludge is hauled to Countywide Landfill in southern Stark County for disposal. Louisville completed Phase 1 improvements, including adding two larger final clarifiers to replace the three smaller, aging clarifiers (now out of service), new WAS/RAS sludge pumps and controls, and a chemical feed system for phosphorus removal. Construction is ongoing at the facility for Phase 2 improvements through PTI 1351341 (August 17, 2020), including a

new generator, expansion on the flow equalization basin, retrofitting the primary settling tanks to serve as grit removal, two new buildings for grit removal equipment, new grit pumps and blowers, new aeration diffusers and blowers, upgrades to the SCADA system, DO monitors, level sensors, tanks sensors, level switches for flood alarms, site lighting, and control gates for the aeration tanks.

Compliance Data for Louisville WWTP between 2/1/2019 and 6/1/2021

Summary

Permit Effluent Limit Violations: 11

Permit Effluent Code Events: 0

Permit Effluent Frequency Violations: 0

Compliance Schedule Milestones Not Entered: 1 (Meet final limits for TFR)

Limit Violations						
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
September 2019	001	Residue, Total Filterable	30D Conc	1736	1986.5	9/1/2019
October 2019	001	Residue, Total Filterable	30D Conc	1736	2488.66	10/1/2019
October 2019	001	Oil and Grease, Hexane	1D Conc	10	11.6	10/30/2019
April 2020	001	Copper, Total Recoverable	30D Qty	0.243	.27282	4/1/2020
April 2020	001	Copper, Total Recoverable	30D Conc	32	34.	4/1/2020
November 2020	001	Residue, Total Filterable	30D Conc	1736	2401.5	11/1/2020
December 2020	001	Residue, Total Filterable	30D Conc	1736	2230.33	12/1/2020
February 2021	001	Residue, Total Filterable	30D Conc	1736	2984.	2/1/2021
February 2021	001	Residue, Total Filterable	30D Qty	13100	13104.3	2/1/2021
March 2021	001	Residue, Total Filterable	30D Conc	1736	1997.33	3/1/2021
May 2021	001	Residue, Total Filterable	30D Conc	1736	2149.5	5/1/2021

Comments:

- *AH used for municipal holidays. Cannot include parameters not required to be sampled daily.*

High Flow Data for Louisville WWTP between 2/1/2019 and 6/1/2021

Top 10 Flows			
Date	Flows (MGD)	Date	Flows (MGD)
2/12/2019	5.820	2/14/2019	3.870
5/9/2021	4.980	6/18/2019	3.700
6/20/2019	4.880	6/19/2019	3.700
3/20/2020	4.750	7/14/2019	3.630
3/19/2020	3.910	2/13/2019	3.550
Average	1.487 MGD		

Comments:

- *Highest flows more than twice ADDF. Should be addressed by pending improvements.*

SECTION D: PERMIT VERIFICATION

	Yes	No	N/A
a. Correct name and mailing address of permittee	☒	☐	
b. Correct name and location of receiving waters	☒	☐	
c. Flows and loadings conform with NPDES permit	☒	☐	
d. Treatment processes are as described in permit application	☒	☐	
e. New treatment process added since last inspection	☒	☐	
f. Notification given to State of new, different, or increased discharges	☒	☐	☐
g. All discharges are permitted	☐	☒	
h. Number and location of discharge points are as described in permit	☐	☒	☐
i. Are all storm water discharges properly permitted?	☐	☒	
For Industrial Facilities Only			
j. Products and production rates conform with permit application?	☐	☐	☒
k. Do categorical standards apply? If yes, which ones?	POTW > 1.0 MGD		

Comments:

- Last compliance evaluation inspection (CEI) that included sludge was March 6, 2019.
- PTI Nos. 1146082 (May 8, 2017) and 1215523 (May 8, 2018) Phase 1 improvements executed since last inspection that includes new primary screens and phosphorus removal.
- PTI No. 1351341 (August 17, 2020) currently under construction that will expand EQ capacity, add grit removal, larger generator, upgrade aeration for grit and activated sludge, and SCADA system.
- Parts IV-V-VI added to current permit but Outfalls 002, 003, and 005 were not added to the permit.

SECTION E: COMPLIANCE

See previous page for more compliance information.

	Yes	No	N/A
a. NPDES renewal app submitted 180 days prior to expiration	☐	☒	☐
b. Permittee has a compliance schedule	☒	☐	☐
c. Document containing compliance schedule	NPDES		
d. Permittee is meeting compliance schedule	☐	☒	☐
e. Any bypasses since last inspection	☐	☒	
f. Regulatory agency notified of all bypasses	☐	☐	☒
g. Permittee or representative reporting all noncompliance per Part III of NPDES	☒	☐	☐

Comments:

- Compliance milestones being met except for final limits for TFR. Current permit expires August 31, 2021.
- Facility currently in SNC for TFR, attributed to an IU (ATI). ATI is closing in 2021-2022.
- Louisville submitted a permit modification to extend compliance schedule that is pending with Ohio EPA and placed on hold when ATI announced its closure.

SECTION F: OPERATION AND MAINTENANCE

a. Standby power available	Generator	
b. Standby power provides power to which treatment components?	All units	
c. Which treatment components have alarm system available for power or equipment failures?	Influent screen, raw sewage pumps/VFDs, RAS pumps/VFDs, air pressure for aeration blowers and EQ blowers, wet floor alarms in raw pump areas, and RAS pump area. SCADA system being installed under current improvements.	
	Yes	No
d. All treatment units in service other than backup units	☒	☐
e. Routine and preventative maintenance scheduled and performed	☒	☐
f. Any major equipment breakdown since last inspection	☒	☐
g. Operation and maintenance manual provided and maintained	☒	☐
h. Any operational problems due to influent quality or quantity since last inspection	☐	☒
i. Are WWTP operations changed during high-flow events?	☒	☐
j. Does your facility accept trucked in wastewater, and if so, from what sources?	No, except 500-1,000 gallons annually from Nimishillen School	

Comments:

- Current improvements include increased headworks treatment and flow EQ capacity.
- In high flow events, EQ basin is utilized.

SECTION G: OPERATOR CERTIFICATION

a. Wastewater Treatment Works Classification	III		
	Yes	No	N/A
b. Operator of Record holds unexpired license of class required by Permit?	☒	☐	
c. Current Operator of Record form submitted?	☒	☐	
d. Copy certificate(s) and renewal card(s) of all professional operators displayed on-site?	☒	☐	
e. Minimum operator staffing requirements fulfilled (OAC 3745-7)	☒	☐	
f. If required (Class A or 1), are daily visits conducted by an owner's representative?	☐	☐	☒
g. If a Staffing Reduction plan has been approved, are the stipulations of the plan being met?	☐	☐	☒
h. Has the Operator of Record submitted written notifications to the permittee, Ohio EPA and, if applicable, any local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred?	☒	☐	☐
i. Professional Operator of Record logbook provided?	☒	☐	
j. Logbook location	WWTP Operations Room		
k. Logbook Format	Hardbound		
l. Has the professional Operator of Record(s) completed their electronic	Yes		

time submission (DMR or other option)?			
m. Do the electronic time submissions match the logbook?	Yes		
Logbook contains the following:			
n. Identification of treatment works	☒	☐	
o. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7	☒	☐	
p. Daily record of operator and maintenance activities (including preventative maintenance, repairs and request for repairs, process control test results, etc.)	☒	☐	
q. Laboratory results (unless documented on bench sheets)	Bench Sheets		
r. Identification of person making entries	☒	☐	

Comments:

- Logbook entries (plant and shift supervisor logs) obtained and reviewed by Ohio EPA.
- Each operator maintains their own logbook.
- Richard Goebeler is the current Superintendent/Chief Operator, as well as the collection system operator.

SECTION H: COLLECTION SYSTEM

Collection System Overview

a. Which department oversees collection system operation and maintenance	Louisville Utilities Department
b. Who is the certified operator serving as the professional Operator of Record for the collection system?	<i>Louisville Primary: Richard Goebeler Louisville Backups: Bruce Goebeler, James Rothermel</i>
c. Professional Operator(s) of Record holds unexpired license of class required by Permit?	Yes
d. Current Operator of Record form submitted?	<i>Yes – But not reflected on Ohio EPA ORC List (6/1/21)</i>
e. Copy of certificate(s) and renewal card(s) of all professional operators displayed on-site?	Yes
f. Minimum operator staffing requirements fulfilled (OAC 3745-7)	<i>Yes – Separate Logbook Maintained.</i>
g. Is there a plan for collection system maintenance? If yes, to what extent is this plan being implemented?	<i>Yes – Clean/CCTV sewers as necessary. Lift stations checked daily. Hot spots checked rotation – each monthly. Regular jetting and MH sealing program. Public info program.</i>
h. Were there any major repairs or improvements to collection system since last inspection?	None
i. Name the satellite communities that discharge into your collection system	<i>None – Collection serves a few homes in Nimishillen Twp., Stark County but discharge to Louisville sewers.</i>

SECTION H: COLLECTION SYSTEM – CONTINUED

Pumps and Force Mains

a. How many lift stations are within the collection system?	5
b. How many lift stations have alarms?	5
c. How many lift stations are equipped with permanent standby power or equivalent?	2, remaining have portable power available and can also hold 24 to 48 hours of flow within their wet wells.

Capacity / SSOs / I&I / WIB

	Yes	No
a. Are portable pumps used to relieve the system?	☒	☐
b. Any complaints received since last inspection of basement flooding?	☐	☒
c. Have there been any SSOs since the last inspection?	☐	☒
d. What progress has been made in SSO elimination if applicable?	N/A – SSOs have been eliminated. Current improvement underway to increase headworks and EQ capacity.	
e. Are any portions of the sewer system at or near dry weather capacity? If yes, describe plans.	None	
f. Is there an inflow and infiltration reduction plan being followed? If yes, describe plans.	Main line routinely televised.	

Combined Sewer System

	Yes	No
a. Does the collection system include combined sewers?	☐	☒
Skip following questions if there are no combined sewers		
b. Are all CSOs included in your NPDES permit? If not, explain.	All Louisville sanitary sewers tributary to Louisville WWTP are 100% separate (no CSOs)	
c. What is the status of the LTCP implementation?	N/A	
d. If there is no LTCP, what is the status of preparation of the LTCP?	N/A	

Comments:

- Based upon information provided by Richard Goebeler on July 29, 2021.
- No sanitary sewers are outside of the City of Louisville – only lateral lines serving individual homes and businesses.
- Current plant improvements underway will increase headworks treatment capacity (6 MGD) and flow EQ basin capacity will be increased by one-third.

SECTION I: SLUDGE MANAGEMENT

a. Date of last sludge inspection	March 6, 2019	
b. Sludge disposal method	Other	
c. Name of sludge disposal contractor	Werab Enterprises (Atwater) hauls sludge to Countywide LF in Stark County	
d. How many days of sludge storage are provided at plant?	6 Months+, Sludge typically hauled 3x per year.	
	Yes	No
e. Has amount of sludge generated changed significantly since last inspection?	☐	☒
f. Sludge records maintained for a minimum of 5 years?	☒	☐
g. Any complaints received last year regarding sludge	☐	☒
h. Is sludge adequately processed (digestion, pathogen control)	☒	☐
i. Is inadequate sludge handling causing operational problems?	☐	☒

Comments:

- Sludge digestion not necessarily required as sludge hauled to a landfill for disposal.
- Sludge is pressed and stored in the former sludge drying beds. Drainage from beds routed to headworks of the plant.

SECTION J: STORM WATER PROGRAM - POTW

POTW Part IV, V, VI	Yes	No	N/A
a. Is design flow > 1 MGD or is facility required to have a pretreatment program?	☒	☐	
b. Are industrial materials and activities exposed to storm water?	☒	☐	
If yes			
i. Does permit contain Parts IV, V and VI, or	☒	☐	☐
ii. Does facility have coverage under general NPDES permit for storm water associated with industrial activity?	☐	☐	☒
If no			
i. NOE submitted within last 5 years?	☐	☐	☒
ii. Does facility meet NOE requirements? (See guidance)	☐	☐	☒

Storm Water Pollution Prevention Plan (SWP3)	Yes	No	N/A
a. Certification statement signed & dated since most recent modification	☒	☐	
b. List current Pollution Prevention team, w/ names & SWP3 responsibilities	☐	☒	
c. Description of pollutant sources (including as applicable):	☒	☐	
i. Grit, screenings, and other solids handling, storage, or disposal areas	☐	☒	
ii. Sludge drying beds	☐	☒	☐
iii. Dried sludge piles	☐	☒	☐
iv. Compost piles	☐	☐	☒

v. Septage or hauled waste receiving station	☐	☐	☒
vi. Access roads and rail lines	☒	☐	
d. Site map current with size of property, location and extent of significant structures and impervious surfaces, drainage patterns, storm sewers/catch basins/outfalls, receiving waters, BMPs, pollutant sources, locations of significant spills/leaks, material handling & storage areas, storm water monitoring locations and location of non-storm water discharges marked?	☒	☐	
i. Storm water outfalls should be numbered (001, 002, etc.).	☒	☐	
ii. Must show location of grit, screenings and other solids handling, storage or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides and pesticides	☐	☒	
e. Inventory of all exposed materials	☐	☒	
f. List of spills and leaks	☒	☐	
g. Description of control measures, schedules, and procedures			
i. Minimize Exposure	☒	☐	
ii. Salt piles covered or enclosed	☐	☐	☒
iii. BMPs for material transfer areas minimize exposure	☐	☒	☐
iv. Dumpsters/roll-offs covered and/or leak proof	☐	☒	☐
v. Good Housekeeping	☒	☐	
vi. Materials orderly and labeled	☒	☐	
vii. Exposed areas clean	☒	☐	
viii. Minimize dust & offsite tracking	☒	☐	
ix. Controls for Waste, Garbage & Floatable Debris	☒	☐	
x. Permanent (Post-Construction) Storm Water Management Practices	☐	☒	
xi. Sediment & Erosion Controls			
i. Any areas of bare soil or sparse vegetation	☒	☐	
ii. Flow dissipation devices at outfalls and along channels	☒	☐	
xii. Spill Prevention and Response			
i. Traffic barriers/Secondary containment/Emergency shutoff switch	☐	☒	
ii. Spill response supplies & ER Hotline Number (1-800-282-9378) readily accessible and available?	☐	☒	
h. All equipment and controls maintained and repaired (including catch basins & storm sewer)	☒	☐	
i. Runoff Management: Has BMPs to divert, infiltrate, reuse, or otherwise reduce runoff	☒	☐	
j. Annual Employee Training records includes			
i. petroleum product management,	☐	☐	☒
ii. process chemical management	☒	☐	☐
iii. spill prevention and controls,	☒	☐	☐

iv. fueling procedures	☐	☐	☒
v. general good housekeeping practices	☒	☐	☐
vi. proper procedures for using fertilizer, herbicides, and pesticides	☐	☐	☒
vii. Names	☐	☒	
k. Non-storm water discharge evaluation (Must include a description of how equipment and vehicle wash water is managed. Discharges of sanitary and industrial wastewater and equipment vehicle wash water from the storm water conveyance system are prohibited.	☐	☒	

POTW Storm Water Inspections	Yes	No	N/A
a. Routine facility inspections conducted quarterly?	☐	☒	
b. Quarterly visual assessment of storm water discharge conducted?	☒	☐	☐
i. Samples taken within first 30 minutes of discharge from storm event with 72-hour or greater antecedent dry period?	☒	☐	☐
ii. If claiming substantially identical outfalls, is that accurate?	☒	☐	☐
c. Comprehensive site inspection conducted annually?	☒	☐	☐
i. Annual report completed?	☒	☐	☐

Comments:

- Copy of SWPPP revised December 23, 2020 provided June 29, 2021 by Richard Goebeler and data 2019-2021.
- Plan appears to follow MS4 SWPPP format rather than specific facility format for a POTW. Discussed available template on Ohio EPA's website and bookmarked resources page with links to U.S. EPA fact sheet.
- No names or contact information of SWPPP team or their roles in implementing plan.
- Facility map does not include pervious/impervious areas, Outfalls need clearly labeled and consistent (Outfall 001 is sanitary discharge), BMPs, pollutant sources, material handling/storage areas, and non-stormwater discharge locations. Map also does not reflect current improvements.
- No date of non-stormwater evaluation for Outfalls 002, 003, and 005.
- Annual Certifications: December 9, 2019 and December 23, 2020.
- Routine Facility Insp: Annual only, no quarterly: March 19, 2019; February 07, 2020; and January 25, 2021.
- Quarterly Visuals: January 23, 2019, March 19, 2019, April 30, 2019, July 23, 2019, March 10, 2020, June 27, 2020, September 8, 2020, November 23, 2020, January 8, 2021, and April 27, 2021. 3Q2021 scheduled for July 2021.
- Annual Reports: December 9, 2019 and December 23, 2020. 2021 Annual report scheduled for December 2021.
- Annual Training: January 14, 2019, March 10, 2020, and January 18, 2021. 2020 and 2021 training lacks sign-in sheets.

SECTION K: SELF-MONITORING PROGRAM

Flow Measurement	Yes	No
a. Actual flow discharged is measured?	☒	☐
b. Flow measurement equipment adequate to handle full range of flows	☒	☐
c. Is the primary flow measuring device calibrated at least annually or in accordance with manufacturers specifications	☒	☐
d. Date of last calibration	06/08/2021	
e. Who calibrates the flow measuring device?	SCI (contractor)	
f. Frequency of calibration	Annually	
g. How often is the flow measuring device checked for functionality?	Daily	

Sampling, Monitoring, and Records	Yes	No	N/A
a. Secondary instruments operated and maintained	☐	☒	
b. Sampling location(s) are as specified by permit	☒	☐	
c. Sampling frequencies agree with permit (look at compliance table for frequency violations or missing DMRs)	☒	☐	
d. Are proper sampling methods used (i.e., Oil & Grease collected in a glass container)	☒	☐	
e. Are the proper sampling types used (i.e., Grab, Composite, Flow proportionate, etc.)	☒	☐	
f. Are the field parameters (pH, DO, total residual chlorine, temperature) measured within 15 minutes of collection?	☒	☐	☐
g. Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e., continuous monitoring instrumentation, calibration, and maintenance records)	☒	☐	

Comments:

- *Influent and Effluent Flow Meters: to be upgraded and replaced as part of Phase 2 improvements.*
- *Composite samples are 24-hour flow proportional (influent/effluent) maintained at proper temperature.*
- *Secondary Instrumentation: Aeration DO meters to be installed as a part of Phase 2 improvements.*
- *Laboratory instruments are calibrated prior to use.*

SECTION L: LABORATORY

In-House Sampling:

Parameter	Analytical testing methods used
Ammonia	Standard Method 4500-NH3-D and Hach Method 10205 TNT Plus Method 830/831/832
COD/CBOD	Standard Method 5210-B
E. Coli	EPA Method 1603 US EPA Method 10029
pH	Standard Method H+-B and an Orion Dual Star pH meter
Total Phosphorus	Standard Method 4500-P-B
Orthophosphate	Standard Method 4500-P-E
Total Dissolved Solids (Residue, Filterable)	Standard Method 2540-C
Total Suspended Solids	Standard Method 2540-D
Total Solids	Standard Method 2540-B
Dissolved Oxygen	Standard Method 4500-O-G and YSI 5100-115 DO Meter
Chlorine, Total Residual	Standard Method 4500-Cl-G and Hach Colorimeter II Meter
Temperature	Standard Method 2550-B and a NICET Calibrated thermometer.

	Yes	No	N/A
a. Quality assurance manual provided and maintained?	☐	☒	
b. Does quality assurance manual contain SOPs for all sampling and analyses conducted on site?	☐	☒	
c. If alternate procedures are used, are they U.S. EPA approved?	☐	☐	☒
d. Are permit required parameters analyzed more frequently than required by the permit?	☐	☒	
i. If yes, are results recorded in permittee's e-DMR report?	☐	☐	☒

Comments:

- Copies of written standard operating procedures for analysis were unable to be located during the inspection, although lists are maintained in folders. A quality assurance manual should be developed that contains standard operating procedures for all sampling and analysis conducted on site.*

SECTION L: LABORATORY - CONTNUED

Commercial Laboratory Sampling:

Laboratory Names: EnviroScience Laboratories, Stow, OH (WET Testing)
Ream and Haagar Environmental Laboratories, Dover, OH (All Others)

Parameter	Analytical testing methods used
Metals (Cd, Cr, Cu, Pb, Ni, Zn)	EPA Method 200.7 and 200.8
Hexavalent Chromium (VI)	Standard Methods 3500-Cr-B Colorimetric
Cyanide, Total	La Chat 10-204-00-1-X (2000)
Nitrate-Nitrite (NOx)	EPA Method 300.0
Oil and Grease	EPA Method 1664A
Mercury, Low Level	EPA Method 1631-E
TKN	EPA Method 351.2 Rev 2.0
Whole Effluent Toxicity (WET) BioAssay Acute Ceriodaphnia dubia (water flea) Chronic Ceriodaphnia dubia Acute Pimphales promelas (fthd minnow) Chronic Pimphales promelas	EPA Method 2002.0 EPA Method 1002.0 EPA Method 2000.0 EPA Method 1000.0
Priority Pollutants – Wastewater Cyanide Mercury Phenolics VOCs Hardness Metals (<i>Sb, As, Be, Cd, Cr, Cu, Pb, Mo, Ni, Se, Ag, Ti, Zn</i>) Pesticides/PCBs sVOCs (Base/Neutrals)	EPA Method 245.1 EPA Method 10-204-00-1-X EPA Method 420.4 EPA Method 624.1 Standard Method 2340-B EPA Method 200.7 EPA Method 608.1 EPA Method 625.1
Sludge Waste Profile Cyanide Total Solids, % Solids Flash Point Sulfide TCLP Metals (<i>As, Ba, Cd, Cr, Pb, Se, Ag</i>) TCLP Mercury TCLP Extraction	EPA Method 335.4 Standard Method 2540-B ASTM D93 SW-846: EPA Method 9056 (Chapter 7) SW-846: EPA Method 6010-B SW-846: EPA Method 245.1 SW-846: EPA Method 1311

Quality Assurance and Quality Control	Yes	No	N/A
a. Does the lab participate in DMRQA or other QC programs?	☒	☐	
b. Has corrective action been taken for any parameters found unsatisfactory in the last DMRQA or water Pollution Studies?	☒	☐	☐
i. Date of last study: 1/15/2020	☒	☐	☐
ii. Parameters found unsatisfactory: Orthophosphate	☒	☐	☐
c. Has a Performance Audit Inspection (PAI) been conducted by Ohio EPA, Division of Environmental Services since the last inspection?	☒	☐	
i. If yes; have the recommendations from that PAI been implemented?	☒	☐	☐

SECTION M: EFFLUENT/RECEIVING WATER OBSERVATIONS

Outfall Number	Outfall sign in place	Oil Sheen	Grease	Turbidity	Foam	Solids	Color	Other
001	Yes	None	None	Clear	None	None	Clear	
002	No	---	---	---	---	---	---	Dry
003	No	---	---	---	---	---	---	Dry
005	No	---	---	---	---	---	---	Dry

Comments:

- *Final effluent appears to be of acceptable visual quality.*
- *Stormwater outfalls were dry as inspection not occurring during a storm event.*
- *Stormwater outfalls need an outfall sign.*

SECTION N: LABORATORY EVALUATION

Criteria	Standard Methods Requirement		Rating
Balance		Acceptable?	
• Standard Weights	• Either NIST Class S or ASTM/ANSI Class 1 weights ^{1,2}	☒ Yes ☐ No	A
• Calibration Frequency / Documentation	• Calibration verification required at least once each day the balance is used. ³	☒ Yes ☐ No	
• Cleanliness, air movement, vibration	• Cleanliness of balance is a must and air movement, and vibration needs to be kept to a minimum ¹	☒ Yes ☐ No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable) ¹	☒ Yes ☒ No	
	• Must be able to measure to 0.1 milligrams ⁴	☒ Yes ☐ No	
	• Instrument manual available	☐ Yes ☒ No	
	• Logbook maintained ²	☒ Yes ☐ No	
Comments: Entris 124-IS Sartorius 33507294. Unable to locate manufacturer manual. Balance should be relocated away from air vent blowing above it. Balance was calibrated on February 4, 2021.			
Criteria	Standard Methods Requirement		Rating
Drying Oven (Suspended Solids)		Acceptable?	
• Temperature Recordkeeping	• Temperature recorded with each use ⁴	☒ Yes ☐ No	A
	• Logbook maintained ²	☒ Yes ☐ No	
• Calibration Frequency / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2} . Correction factor posted on thermometer / equipment ¹	☒ Yes ☐ No	
• Other	• Thermometer temperature in 0.5° C increments ⁵	☒ Yes ☐ No	
	• Acceptable temperature range is 103° – 105° C ⁴	☒ Yes ☐ No	
	• Instrument manual available	☒ Yes ☐ No	
Comments: Thermo Scientific Heratherm OMH60 Oven. Oven was calibrated on January 13, 2021. All instruments calibrated annually against an NIST-certified thermometer in-house.			

SECTION N: LABORATORY EVALUATION – CONTINUED

Criteria	Standard Methods Requirement	Acceptable?		Rating
pH Meter				
• Calibration Frequency / Documentation	• Calibration verification required for testing over long period of time (e.g., 12 hrs.), or after a large number of samples (every 10 samples) ³	☒ Yes	☐ No	A
	• Logbook maintained ²	☒ Yes	☐ No	
• Minimum of 2-point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result ⁷	☒ Yes	☐ No	
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet ²	☒ Yes	☐ No	
• Buffer Expiration Date	• Buffers must not be expired	☒ Yes	☐ No	
• Other	• Instrument manual available	☒ Yes	☐ No	
	• Teflon covered magnetic stirrer or equivalent for mixing ⁸	☒ Yes	☐ No	
Comments: Thermo Scientific Orion Dual Star pH /ISE Benchtop, Orion Star Series S/N E04881, Probe Thermo Scientific Orion G59106BNWP, pH X01-11110. 2-Point calibration (7.0, 10.0) per manufacturer's specs and verified with an 8.0 solution. Buffers expire in 2022.				
Criteria	Standard Methods Requirement	Acceptable?		Rating
Dissolved Oxygen Meter				
• Calibration Method	• Air or known DO calibration method ¹⁰	☒ Yes	☐ No	A
	• Calibration per manufacturer specification ¹⁰	☒ Yes	☐ No	
• Calibration Frequency / Documentation	• Logbook maintained ²	☒ Yes	☐ No	
	• Calibration verification required at least once each day the meter is used. ³	☒ Yes	☐ No	
• Other	• Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil) ¹¹	☒ Yes	☐ No	
	• Instrument manual available	☒ Yes	☐ No	
Comments: YSI 5100 meter, 5100-115, S/N 17K100438, calibrated daily and noted in logbook.				

SECTION N: LABORATORY EVALUATION – CONTINUED

Criteria	Standard Methods Requirement		Rating
Incubator (CBOD/ E-Coli)		Acceptable?	
• Temperature Recordkeeping	• Temperature checked / recorded twice daily for each shelf in use ¹ (E-Coli)	☐ Yes ☒ No	M
	• Temperature checked / recorded daily ² (CBOD)	☒ Yes ☐ No	
	• Acceptable temperature range (CBOD) is 20° C ±1.0 ° 12	☒ Yes ☐ No	
	• Acceptable temperature range (E-Coli) is 35° C ±0.5 ° 22	☒ Yes ☐ No	
	• Logbook maintained ²	☒ Yes ☐ No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1, 2}	☒ Yes ☐ No	
	• Temperature correction information posted on incubator ¹	☐ Yes ☐ No	
• E. Coli can use multiple tubes (five 20 ml or ten 10 ml), or mfg's multi-well tray	• E-coli Ultraviolet lamp (365 nm wavelength, 6 W bulb) ²³	☐ Yes ☐ No	
• Other	• Instrument manual available	☒ Yes ☐ No	
	• Temperature Log (thermometer reads to 0.5 Celsius). ¹	☒ Yes ☐ No	
Comments: Thetco E. Coli Incubator. Purchased used from Stark County with no manual. Temp of whole oven logged daily – not by shelf. Thermometer calibrated January 13, 2021. Thermo Scientific Precision PK 50575516 Incubator. Calibrated January 13, 2021.			
Criteria	Standard Methods Requirement		Rating
Refrigerator		Acceptable?	
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.5 Celsius). ⁵	☒ Yes ☐ No	A
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1, 2}	☒ Yes ☐ No	
• Other	• Thermometer held in water bath. ¹	☒ Yes ☐ No	
	• Refrigerator temperature ≤6° Celsius. ¹³	☒ Yes ☐ No	
	• Do not store volatile solvents, food, or beverages. ¹⁴	☒ Yes ☐ No	
Comments: Fischer Scientific ACCD 3704. Thermometer calibrated January 13, 2021. Reading 4° C.			

SECTION N: LABORATORY EVALUATION – CONTINUED

Criteria	Standard Methods Requirement		Rating
Chlorine Meter		Acceptable?	
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV ¹⁵	☒ Yes ☐ No	A
	• Calibration verification required for testing over long period of time (e.g., 12 hrs.), or after a large number of samples (every 10 samples) ³	☒ Yes ☐ No	
• Calibration Method	• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification ¹⁶	☒ Yes ☐ No	
	• Standards used for calibration not expired	☒ Yes ☐ No	
• Slope Documentation / Acceptability	• Calibration curve (acceptable slope)	☒ Yes ☐ No	
• Other	• Electrode free of deposits and foreign material	☒ Yes ☐ No	
	• Logbook being maintained. ²	☒ Yes ☐ No	
	• Instrument manual available	☒ Yes ☐ No	
Comments: Hach Pocket Colorimeter II, S/N 16020E292941. Calibrated daily. Not used for more than a few hours.			
Criteria	Standard Methods Requirement		Rating
Ammonia Meter		Acceptable?	
• Calibration Frequency / Documentation	• Calibration verification required for testing over long period of time (e.g., 12 hrs.), or after a large number of samples (every 10 samples) ³	☒ Yes ☐ No	A
	• Logbook being maintained ²	☒ Yes ☐ No	
• Slope acceptability	• Verify calibration slope is acceptable (per mfg. spec.).	☒ Yes ☐ No	
• Calibration Method	• Standards used for calibration (3 ammonia solutions of 10 mg/l, 1 mg/l, and 0.1 mg/l) or per mfg. spec. ¹⁷	☒ Yes ☐ No	
	• Standards used for calibration not expired	☒ Yes ☐ No	
• Other	• Electrode free of deposits and foreign material	☒ Yes ☐ No	
	• Teflon covered magnetic stirrer or equivalent for mixing ¹⁸	☒ Yes ☐ No	
	• Instrument manual available	☒ Yes ☐ No	
Comments: Hach DR 3900 Ammonia Meter, Model LPG440.99.0012 S/N 1538782. With TNT 8030. Manufacturer's spec has 1 standard. Standards expire in June 2022.			

SECTION N: LABORATORY EVALUATION – CONTINUED

Criteria	Standard Methods Requirement	Acceptable?		Rating
Sample Collection/Handling				
• Sample Labeling	• Sample containers labeled (description, date, time, preservative added, initialed). ¹⁹	☐ Yes	☐ No	M
• Chain of Custody	• Chain of custody (description, date, time, signature). ¹⁹	☐ Yes	☒ No	
• Other	• Composite samples refrigerated during sample collection ¹⁴	☒ Yes	☐ No	
	• Equipment blanks utilized ¹⁴	☐ Yes	☒ No	
	• SOP for cleaning of sampling equipment	☐ Yes	☒ No	
	• Logbook being maintained ²	☒ Yes	☐ No	
Comments: Chain of Custody used for shipping samples to outside labs, but not for in-house sampling. Samples collected prior to inspection already discarded. Logbooks for DO, Temperature, and CL2 Residual (collected 3x daily) – no analyst initials or signature. No written SOPs available.				
Criteria	Standard Methods Requirement	Acceptable?		Rating
Desiccator				
• General criteria	• Properly working seals.	☒ Yes	☐ No	A
	• Desiccant fresh (blue color)	☒ Yes	☐ No	
• Documentation	• Logbook being maintained ²	☒ Yes	☐ No	
Comments: Should consider using a logbook rather than a calendar to maintain records.				
Criteria	Standard Methods Requirement	Acceptable?		Rating
Bench sheets				
• General criteria	• Date(s) ²	☒ Yes	☐ No	M
	• Analyst initials ²	☐ Yes	☒ No	
	• Blue or black ink pen ²	☒ Yes	☐ No	
	• Calibration information ²	☒ Yes	☐ No	
	• Equations, calculations, units for all measurements, notations, and results present ²	☒ Yes	☐ No	
	• Corrections, single line through, initialed and dated ²	☒ Yes	☐ No	
Comments: Multiple analysts – Need analyst initials on the general bench sheet.				

SECTION N: LABORATORY EVALUATION – CONTINUED

Criteria	Standard Methods Requirement		Rating
Hot Water Bath (Fecal Coliform/E. Coli)		Acceptable?	
• Temperature Recordkeeping	• Temperature Log (thermometer reads 0.2° C) ²¹	☐ Yes ☐ No	Rating
	• Incubator temperature 44.5° C ± 0.2° 21/24	☐ Yes ☐ No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1, 2}	☐ Yes ☐ No	
	• Logbook being maintained ²	☐ Yes ☐ No	
• Water Level	• Thermometer total immersion or partial (line on thermometer to ID immersion depth) ^{1, 5}	☐ Yes ☐ No	
Comments: Not applicable. No water bath utilized. M Coli Blue Method used for E Coli analysis.			
Criteria	Standard Methods Requirement		Rating
Autoclaves/Steam Sterilizers		Acceptable?	
• All apparatus utilized is adequately sterilized before use	• Sterilizing temperature 121° C ²⁵	☒ Yes ☐ No	U
	• 10 to 30 minutes time based on material being sterilized ²⁶	☒ Yes ☐ No	
• Documentation	• Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached as measured in the exhaust. ¹	☐ Yes ☒ No	
	• Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used ¹	☐ Yes ☒ No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	☐ Yes ☒ No	
	• Logbook being maintained ²	☐ Yes ☒ No	
• Performance Checks	• Test monthly for efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules ¹	☐ Yes ☒ No	
Comments: No logbook or any SOP. Sterilize for 1-hour at a specific pressure. No documentation of temperature verification or calibration. No performance checks completed.			

SECTION N: LABORATORY EVALUATION – CONTINUED

Criteria	Standard Methods Requirement			Rating
Final Effluent Temperature Monitoring			Acceptable?	
• General Criteria	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	☒ Yes	☐ No	A
	• Thermometer scaled to 0.1° C and accurate to 0.5° C ⁵	☒ Yes	☐ No	
	• Logbook being maintained ²	☒ Yes	☐ No	
Comments: Temperatures recorded 3x daily in logbooks.				
Number of Criteria Rated:		Acceptable	9	
		Marginal	3	
		Unacceptable	1	
		Total Number of Areas Rated	13	
Acceptable Ratings – No action required (recommend SOPs written or updated, perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, written response not required).				
Marginal Ratings – Improvements required, written response required (recommend SOPs be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response).				
Unsatisfactory Rating - Improvements required, written response required, NOV issued (recommend SOPs be written or updated, recommend they perform DMRQA's for all onsite analysis, recommend voluntary lab analyst certification, require deficiencies to be addressed in written response to NOV).				
Consider recommending PAI Audit from DES when:		>60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable		

Notation of Referenced Method

1 Method 9020-B, Item 3	14 Method 1060A, Item 1
2 Method 1020-A, Item 1	15 Method 4500-CI I, Item 2
3 Method 1020-B, Item 10	16 Method 4500-CI I, Item 4
4 Method 2540-B, Item 2	17 Method 4500-NH3 D, Item 4
5 Method 2550-B, Item 1	18 Method 4500-NH3 D, Item 2
6 Method 1020-A, Item 1	19 Method 1060-B, Item 2
7 Method 4500-H B, Item 4	20 Method 1060-B, Item 1
8 Method 4500-H B, Item 2	21 Method 9222D, Item 1
9 Method 1020-B, Item 2	22 Method 9223 B, Item 2
10 Method 4500-O B, Item 3	23 Method 9223 B, Item 3
11 Method 4500-O G, Item 3	24 Method 1603, Item 2
12 Method 5210-B, Item 5	25 Method 9030-B, Item 3
13 CFR 136.3, Table II	26 Method 9020 B, Table IV

SECTION N: LABORATORY EVALUATION – CONTINUED

Equipment Logbook Content - all maintenance performed on a piece of equipment should be documented in the logbook. This should include parts replacement and routine maintenance activities. Entries should include date, maintenance performed and initials of person making entry.

Approved Standard Methods	
CBOD / BOD 5 Day	Std Methods 5210-B
Ammonia, Selective Electrode Method	Std Methods 4500-NH3 D
Total Residual Chlorine, DPD Colorimetric Method	Std Methods 4500-Cl G
Total Suspended Solids, Dried at 103-105 °C	Std Methods 2540-D
Dissolved Oxygen, Membrane Electrode Method	Std Method 4500-O G
pH, Electrometric Method	Std Methods 4500-H+ B
Orthophosphate	Std Methods 4500-P E or F and USEPA 365.1 Rev 2.0.
Fecal Coliform, Membrane Filter Procedure	Std Methods 9222D
Escherichia Coli, Enzyme Substrate Test	Std Method 9223B
Escherichia Coli Membrane Filtration Procedure	EPA Method 1603
Oil and Grease	USEPA 1664A or Std Methods 5520B
Metals, general	USEPA 200, Std Methods 3111B or C, or 3120B
Volatiles (Purgeables by purge and trap)	USEPA 6210, Std Methods 624
Semi-Volatiles (Base/Neutrals and acids)	USEPA 6410, Std Methods 625
Pesticides	USEPA 6410 and 6630, Std Methods 608

SECTION N: LABORATORY EVALUATION – CONTINUED

Preservation and Holding Times						
Parameter	Container	Min. Sample Size (mL)	Sample Type	Preservation	Maximum Storage Time	
					Recommended	Regulatory
BOD / CBOD	P, G	1000	G, C	Refrigerate $\leq 6^{\circ}$ C	6h	48h
TSS	P, G	200	G, C	Refrigerate $\leq 6^{\circ}$ C	7 d	7 d
pH	P, G	50	G	Analyze immediately	0.25h	0.25 h
NH ₃ -N	P, G	500	G, C	Analyze as soon as possible or add H ₂ SO ₄ to pH <2, Refrigerate $\leq 6^{\circ}$ C	7 d	28 d
Ortho-phosphate	P, G	50	G	Filter using 0.45-micron filter. Refrigerate $\leq 4^{\circ}$	48 h	48 h
TRC	P, G	500	G	Analyze immediately	0.25h	0.25 h
DO (electrode)	G, BOD Bottle	300	G	Analyze immediately	0.25h	0.25 h
Temperature	P, G	--	G	Analyze immediately	0.25h	0.25 h
Metals, general	P, G	1000	G, C	For dissolved filter immediately and add HNO ₃ to pH <2	6 months	6 months
Purgeables by purge and trap	G (PTFE lined lid)	40 (X2)	G	HCl to pH<2, Refrigerate $\leq 6^{\circ}$ C	7 d	14 d
Base/Neutrals and acids	G (solvent rinsed or baked)	1000	C, G	Refrigerate $\leq 6^{\circ}$ C	7 d	7 days until extraction 40 days after extraction
Pesticides	G (PTFE lined lid)	1000	C	Refrigerate $\leq 6^{\circ}$ C	7 d	7 days until extraction 40 days after extraction
Fecal Coliform / E-Coli	G, P (Sterilized)	100	G	Refrigerate $\leq 10^{\circ}$ C If chlorine present, add sodium thiosulfate tablet	6 hours transport. Start analysis within 2 hours of receipt in lab.	
Oil and Grease	G	1000	G	HCl or H ₂ SO ₄ to pH <2, Refrigerate $\leq 6^{\circ}$ C	28 d	28 d