pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0026425**
Facility Type	**Municipal**	APS ID	**1068480**
Major / Minor	**Minor**	Authorization ID	**1405025**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Municipality of Penn Hills**	Facility Name	**Lincoln Rd STP**
Applicant Address	105 Duff Road	Facility Address	1955 Lincoln Road
	Pittsburgh, PA 15235-3219		Pittsburgh, PA 15235
Applicant Contact	Jennifer Cohn	Facility Contact	Same as applicant
Applicant Phone	(412) 798-2171	Facility Phone	Same as applicant
Client ID	77993	Site ID	253359
Ch 94 Load Status	Not Overloaded	Municipality	Penn Hills Township
Connection Status		County	Allegheny
Date Application Received	August 1, 2022	EPA Waived?	Yes
Date Application Accepted	August 2, 2022	If No, Reason	

Purpose of Application: Renewal of existing NPDES permit for the discharge of treated sewage.

Summary of Review

The applicant has applied for the renewal of NPDES Permit PA0026425. The previous permit was issued on January 29, 2018 and will expire on January 31, 2023.

Sewage from this plant is treated with a comminutor/bar screen, aeration tanks, secondary clarifiers, and UV disinfection. The resulting effluent discharges to Shades Run, which is classified as a Warm Water Fishery (WWF) and is located in State Watershed 18-A.

The applicant is currently enrolled in and will continue to use eDMR.

The Act 14-PL 834 Municipal Notification was provided by the July 25, 2022 letters. No comments were received.

Below is a summary of changes made to this permit:

- All instances of 8-hr composite samples have been changed to 24-hr composite samples.
- *E.coli* monitoring was imposed.
- Ammonia-nitrogen and dissolved oxygen limits became more stringent.
- Mass loading limits for $CBOD_5$, TSS, and ammonia nitrogen have been rounded to comply with DEP guidance. They are slightly more stringent than the previous permit cycle.
- Monitoring frequency for Total Nitrogen and Total Phosphorus has increased because the receiving stream is impaired for nutrients. Mass loading limitations for Total Nitrogen and Total Phosphorus have been removed.
- Water Quality Based Effluent Limitations (WQBELs) for Total Copper, Total Lead, and Total Zinc have been imposed.

Approve	Deny	Signatures	Date
X		Grace Polakoski Grace Polakoski, E.I.T. / Environmental Engineering Specialist	January 3, 2023
X		Mahbuba Iasmin Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineer Manager	January 4, 2023

Summary of Review

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 **(l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.**

The facility is not seeking to revise the previously permitted effluent limits. However, in the process of review, DEP determined that the WQBELs for daily maximum mass loading limitations for Total Nitrogen and Total Phosphorus were improperly imposed, as discussed below. This is permitted under 40 CFR §122.44 (l)(2)(i)(B)(2).

Sludge use and disposal description and location(s): Plum Creek STP 91 Colorado Street Penn Hills, PA 15147

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.24
Latitude	40º 28' 29"	Longitude	-79º 52' 54"
Quad Name	Pittsburgh East	Quad Code	1506
Wastewater Description:	Sewage Effluent		
Receiving Waters	Shades Run (WWF)	Stream Code	42221
NHD Com ID	123972883	RMI	0.68
Drainage Area	0.23 sq. mi.	Yield (cfs/mi^2)	0.0057
Q_{7-10} Flow (cfs)	0.00131	Q_{7-10} Basis	USGS StreamStats (Attachment A)
Elevation (ft)	961	Slope (ft/ft)	
Watershed No.	18-A	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	NUTRIENTS		
Source(s) of Impairment	URBAN RUNOFF/STORM SEWERS		
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)	7.22 (MIN)/ 7.41 (MAX)	NPDES Renewal Application
Temperature (°F)	61.9	NPDES Renewal Application
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake		Pittsburgh Water and Sewer Authority	
PWS Waters	Allegheny River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	0.97

Changes Since Last Permit Issuance: N/A

Other Comments: Typically, a discharge within close proximity to a Public Water Supply Intake would be subject to a Nitrite-Nitrate evaluation. However, in the case of Lincoln Rd STP, the Department does not believe that such an evaluation is necessary. When the Q_{7-10} flows of the Allegheny River (2390 cfs) and Shades Run (0.00131 cfs) are compared, the dilution ratio is such that any pollutant contributions from Shades Run are effectively negligent. Additionally, according to 25 PA Code Chapter 93.7, the maximum allowable concentration of nitrite-nitrate as N is 10 mg/L for PWS waters. The effluent discharge concentration of NO_2-N + NO_3-N for Lincoln Rd STP is 6.9 mg/L, which is well below the water quality criterion. Therefore, the Department does not consider nitrite-nitrate contributions from Lincoln Rd STP to be a concern for the Pittsburgh Water and Sewer Authority Public Water Supply Intake.

Treatment Facility Summary

Treatment Facility Name: Lincoln Road STP

WQM Permit No.	Issuance Date	Purpose
0215410	8/14/15	Replacement of chlorine disinfection with ultra-violet disinfection
466S17	6/20/66	Construction of the original STP

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration Activated Sludge	Ultraviolet	0.24

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.24	408	Not Overloaded		Other WWTP

Changes Since Last Permit Issuance: N/A

Compliance History

Facility: Lincoln Road STP
NPDES Permit No.: PA026425
Compliance Review Period: 8/2017 – 8/2022
Inspection Summary:

INSP ID	INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC	CREATION DATE	UPDATE DATE
3344251	04/05/2022	Compliance Evaluation	County Health Dept	No Violations Noted	04/07/2022	04/07/2022
3187690	05/06/2021	Compliance Evaluation	County Health Dept	Violation(s) Noted	05/06/2021	10/29/2021
3030679	05/08/2020	Compliance Evaluation	County Health Dept	No Violations Noted	05/11/2020	05/11/2020
2884195	05/20/2019	Compliance Evaluation	County Health Dept	Violation(s) Noted	05/23/2019	10/28/2021
2726426	04/23/2018	Chapter 94 Inspection	PA Dept of Environmental Protection	No Violations Noted	05/04/2018	
2699446	02/28/2018	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	02/28/2018	

Violation Summary:

VIOL ID	VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE
916162	05/06/2021	92A.44	NPDES - Violation of effluent limits in Part A of permit	10/29/2021
850270	05/20/2019	92A.44	NPDES - Violation of effluent limits in Part A of permit	10/28/2021
850271	05/20/2019	92A.61(C)	NPDES - Failure to monitor pollutants as required by the NPDES permit	10/28/2021

Open Violations by Client ID:

There is one open violation for client ID 77993 associated with Plum Creek STP. I'm not sure why the NOV is to the client and not to the permit.

Enforcement Summary:

No enforcements

DMR Violation Summary:

BEGIN	END	PARAMETER	SAMPLE	PERMIT	UNIT	STAT_BASE_CODE
5/1/22	5/31/22	Fecal Coliform	> 2420	1000	No./100 ml	Instantaneous Maximum
2/1/21	2/28/21	Total Suspended Solids	46	45	mg/L	Weekly Average
12/1/18	12/31/18	pH	5.1	6	S.U.	Daily Minimum
7/1/18	7/31/18	Fecal Coliform	> 2420	1000	No./100 ml	Instantaneous Maximum
5/1/17	5/31/17	Fecal Coliform	> 2420	1000	CFU/100 ml	Instantaneous Maximum
5/1/17	5/31/17	Total Suspended Solids	140.1	90.1	lbs/day	Weekly Average
5/1/17	5/31/17	Total Suspended Solids	157	45	mg/L	Weekly Average
5/1/17	5/31/17	Total Suspended Solids	46	30	mg/L	Average Monthly

Compliance Status:

Permittee in compliance.

Completed by: John Murphy
Completed date: 8/22/2022

Compliance History

DMR Data for Outfall 001 (from July 1, 2021 to June 30, 2022)

Parameter	JUN-22	MAY-22	APR-22	MAR-22	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21
Flow (MGD) Average Monthly	0.06410	0.14620	0.11391	0.12495	0.21576	0.12672	0.11354	0.05725	0.05440	0.07461	0.05930	0.04979
Flow (MGD) Daily Maximum	0.12870	0.74900	0.25330	0.18780	0.66360	0.27980	0.38760	0.07550	0.17890	0.61800	0.21680	0.10510
pH (S.U.) Daily Minimum	7.2	7.3	7.4	7.3	7.3	7.1	7.2	7.3	7.0	7.1	7.1	7.3
pH (S.U.) Daily Maximum	7.9	7.9	7.8	8.0	8.6	7.6	7.7	8.0	7.6	8.0	7.6	8.1
DO (mg/L) Daily Minimum	9.6	11.1	11.0	11.0	11.2	10.0	10.1	9.3	7.4	8.6	10.0	10.0
CBOD5 (lbs/day) Average Monthly	1.6	2.3	2.8	2.9	4.0	3.3	2.2	1.6	1.6	2.1	2.1	2.8
CBOD5 (lbs/day) Weekly Average	2.1	3.5	3.6	3.2	5.3	5.3	2.5	1.9	2.4	3.3	3.6	6.1
CBOD5 (mg/L) Average Monthly	3.0	3.0	3.1	3.2	3.0	3.0	3.0	3.3	3.9	5.1	7.0	6.5
CBOD5 (mg/L) Weekly Average	3.0	3.2	3.5	3.7	3.0	3.0	3.0	4.7	4.8	8.1	11.8	15.8
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	26	17	23	35	32	32	38	17	45	27	12	63
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	39	36	50	50	61	45	59	26	103	37	40	225
BOD5 (mg/L) Raw Sewage Influent Average Monthly	52.2	23.0	23.3	38.2	23.3	35.0	57.0	37.9	127.1	67.5	37.1	94.7
TSS (lbs/day) Average Monthly	3.8	17.6	7.7	10.4	21.5	19.9	15.2	5.8	3.9	7.0	3.5	7.0
TSS (lbs/day) Raw Sewage Influent Average Monthly	39	29	41	47	37	26	61	23	43	80	8	125

TSS (lbs/day) Raw Sewage Influent Daily Maximum	74	60	84	98	109	41	72	40	78	208	30	470
TSS (lbs/day) Weekly Average	4.8	27.1	22.9	18.9	49.9	32.3	31.1	9.3	5.2	13.8	6.7	12.4
TSS (mg/L) Average Monthly	7.0	23.0	7.0	13.0	15.0	17.0	20.0	13.0	10.0	15.0	11.0	19.0
TSS (mg/L) Raw Sewage Influent Average Monthly	80	43	40	48	24	27	88	53	114	226	24	180
TSS (mg/L) Weekly Average	9.0	42.0	19.0	26.0	28.0	26.0	37.0	20.0	18.0	21.0	18.0	44.0
Fecal Coliform (No./100 ml) Geometric Mean	4	7	2	2	13	4	4	12	20	19	27	139
Fecal Coliform (No./100 ml) Instantaneous Maximum	7	> 2420	15	5	366	60	8	19	71	46	61	366
UV Transmittance (%) Daily Minimum	5.0	39.20	77.48	78.67	4.16	81.58	77.57	83.23	76.65	63.13	18.20	78.13
Total Nitrogen (lbs/day) Daily Maximum							3.34					
Total Nitrogen (mg/L) Daily Maximum							6.07					
Ammonia (lbs/day) Average Monthly	0.06	0.13	0.15	0.35	0.39	0.12	0.09	0.05	0.14	0.08	0.21	0.24
Ammonia (mg/L) Average Monthly	0.12	0.16	0.16	0.35	0.29	0.11	0.14	0.11	0.06	0.18	0.60	0.48
Total Phosphorus (lbs/day) Daily Maximum							0.36					
Total Phosphorus (mg/L) Daily Maximum							0.65					

Compliance History

Effluent Violations for Outfall 001, from: August 1, 2021 To: June 30, 2022

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Fecal Coliform	05/31/22	IMAX	> 2420	No./100 ml	1000	No./100 ml

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.24
Latitude 40º 28' 29.00" **Longitude** -79º 52' 54.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
Flow (MGD)	Report	Average Monthly	-	92a.27, 92a.61
	Report Max Daily	Average Weekly	-	92a.27, 92a.61
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids (TSS)	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
Total Residual Chlorine (TRC)	0.5	Average Monthly	-	92a.48(b)(2)
Ammonia-Nitrogen (NH_3-N)	25	Average Monthly	-	92a.61
	50	IMAX	-	92a.61
Dissolved Oxygen (DO)	4.0	Instantaneous Minimum	-	93.6, 92a.61
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Total N	Report	Average Monthly	-	92a.61
Total P	Report	Average Monthly	-	92a.61
Fecal Coliform (No./100mL) (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (No./100mL) (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (No./100mL) (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (No./100mL) (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
E. Coli (No./100mL)	Report	IMAX	-	92a.61

Water Quality-Based Limitations

WQM7.0

WQM7.0 is a water quality modeling program for Windows that determines Waste Load Allocations ("WLAs") and effluent limitations for carbonaceous biochemical oxygen demand ("$CBOD_5$"), ammonia-nitrogen, and dissolved oxygen for single and multiple point-source discharge scenarios. To accomplish this, the model simulates two basic processes. In the ammonia-nitrogen module, the model simulates the mixing and degradation of ammonia-nitrogen in the stream and compares calculated instream ammonia-nitrogen concentrations to ammonia-nitrogen water quality criteria. In the dissolved oxygen module, the model simulates the mixing and consumption of dissolved oxygen in the stream due to the degradation of $CBOD_5$ and ammonia-nitrogen and compares calculated instream dissolved oxygen concentrations to dissolved oxygen water quality criteria. WQM 7.0 then determines the highest pollutant loadings that the stream can assimilate while still meeting water quality criteria under design conditions.

DEP's modeling for sewage discharges is a two-step process. First, a discharge is modeled for the summer period (May through October) using warm temperatures for the discharge and the receiving stream. Modeling for the summer period is done first because allowable ammonia-nitrogen concentrations in a discharge are lower at higher temperatures (i.e., warm

temperatures are more likely to result in critical loading conditions). Reduced dissolved oxygen levels also appear to increase ammonia toxicity and the maximum concentration of dissolved oxygen in water is lower at higher temperatures. The second step is to evaluate WQBELs for the winter period, but only if modeling shows that WQBELs are needed for the summer period.

The model inputs used to model the discharge from Lincoln Rd STP are shown below:

Stream Parameters			
Reach 1		**Reach 2**	
Stream Code	42221	Stream Code	42221
RMI	0.68	RMI	0.58
Elevation (ft)	961	Elevation (ft)	960
Drainage Area (mi^2)	0.23	Drainage Area (mi^2)	0.30
Q_{7-10} Flow (cfs)	0.00131	Q_{7-10} Flow (cfs)	0.0018

Facility/Design Parameters	
Discharge Flow (MGD)	0.24
LFY (cfs/mi^2) [for use in summer modeling]	0.0057
2*LFY (cfs/mi^2) [for use in winter modeling]	0.0114

Summer Modeling Inputs			
Tributary		**Discharge**	
Temperature (°C)	25	Temperature (°C)	20
pH (S.U.)	7	pH (S.U.)	7
DO (mg/L)	8.24	DO (mg/L)	4
$CBOD_5$ (mg/L)	2	$CBOD_5$ (mg/L)	25
NH_3-N (mg/L)	0	NH_3-N (mg/L)	25
DO Goal (mg/L)	5	DO Goal (mg/L)	5
Winter Modeling Inputs			
Tributary		**Discharge**	
Temperature (°C)	5	Temperature (°C)	15
pH (S.U.)	7	pH (S.U.)	7
DO (mg/L)	12.51	DO (mg/L)	4
$CBOD_5$ (mg/L)	2	$CBOD_5$ (mg/L)	25
NH_3-N (mg/L)	0	NH_3-N (mg/L)	25
DO Goal (mg/L)	5	DO Goal (mg/L)	5

The modeling results (output files can be found in Attachments B and C) show that technology based effluent limitations for these parameters are appropriate.

Parameter	Limit (mg/l)	SBC	Model
Dissolved Oxygen	5	Minimum	WQM7.0
Ammonia Nitrogen (Nov 1 – Apr 30)	2.63	Average Monthly	WQM7.0
Ammonia Nitrogen (May 1 – Oct 31)	1.89	Average Monthly	WQM7.0

In the previous permit cycle, the average weekly $CBOD_5$ limits were 37.5 mg/L. Since 37.5 mg/L is more stringent than 40 mg/L, an average monthly limit of 25 mg/L and an average weekly limit of 37.5 mg/L for $CBOD_5$ will be imposed this permit cycle. The model results recommend more stringent ammonia-nitrogen and dissolved oxygen limits for the facility.

A review of past eDMR data to 1/1/2017 indicates that Lincoln Rd STP consistently reports dissolved oxygen values greater than 5.0 mg/L. A review of past eDMR data to 1/1/2017 indicates that Lincoln Rd STP consistently reports ammonia-nitrogen values less than the proposed effluent limitations for this permit cycle. Therefore, the Department does not plan to implement a compliance schedule to meet the new effluent limitations.

Toxics Management Spreadsheet (TMS)

WQBELs are developed pursuant to Section 301(b)(1)(C) of the Clean Water Act and, per 40 CFR § 122.44(d)(1)(i), are imposed to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) that are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality." The Department of Environmental Protection developed the Toxics Management Spreadsheet (TMS) to facilitate calculations necessary to complete a reasonable potential (RP) analysis and determine WQBELs for discharges of toxic and some nonconventional pollutants.

The TMS is a single discharge, mass-balance water quality modeling program for Microsoft Excel® that considers mixing, first-order decay, and other factors to determine WQBELs for toxic and nonconventional pollutants. Required input data including stream code, river mile index, elevation, drainage area, discharge flow rate, low-flow yield, and the hardness and pH of both the discharge and the receiving stream are entered into the TMS to establish site-specific discharge conditions. Other data such as reach dimensions, partial mix factors, and the background concentrations of pollutants in the stream also may be entered to further characterize the discharge and receiving stream. The pollutants to be analyzed by the model are identified by inputting the maximum concentration reported in the permit application or Discharge Monitoring Reports, or by inputting an Average Monthly Effluent Concentration (AMEC) calculated using DEP's TOXCONC.xls spreadsheet for datasets of 10 or more effluent samples. Pollutants with no entered concentration data and pollutants for which numeric water quality criteria in 25 Pa. Code Chapter 93 have not been promulgated are excluded from the modeling.

The TMS evaluates each pollutant by computing a Wasteload Allocation for each applicable criterion, determining the most stringent governing WQBEL, and comparing that governing WQBEL to the input discharge concentration to determine whether permit requirements apply in accordance with the following RP thresholds:

- Establish limits in the permit where the maximum reported effluent concentration or calculated AMEC equals or exceeds 50% of the WQBEL. Use the average monthly, maximum daily, and instantaneous maximum (IMAX) limits for the permit as recommended by the TMS (or, if appropriate, use a multiplier of 2 times the average monthly limit for the maximum daily limit and 2.5 times the average monthly limit for IMAX).
- For non-conservative pollutants, establish monitoring requirements where the maximum reported effluent concentration or calculated AMEC is between 25% - 50% of the WQBEL.
- For conservative pollutants, establish monitoring requirements where the maximum reported effluent concentration or calculated AMEC is between 10% - 50% of the WQBEL.

In most cases, pollutants with effluent concentrations that are not detectable at the level of DEP's Target Quantitation Limits are eliminated as candidates for WQBELs and water quality-based monitoring.

Per DEP SOP "Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers" (SOP No. BCW-PMT-037), the Toxics Management Spreadsheet (TMS) will be run for all pollutants for which sampling data is available. Per the NPDES Application instructions all sewage facilities with a design flow of greater than or equal to 0.1 MGD are required to provide effluent samples for: pH, TRC, fecal coliform, $CBOD_5$ or BOD_5, TSS, NH_3-N, Total N, Total P, dissolved oxygen (min), temperature, TKN, NO_2-N + NO_3-N, TDS, chloride, bromide, sulfate, oil and grease, and TMDL parameters. Even though Lincoln Rd STP does not have any industrial contributors, effluent concentrations for Total Copper, Total Lead, and Total Zinc were still reported.

The results reported originally in the NPDES Renewal application were entered into the TMS (Attachment D) and the following WQBELs were recommended:

Pollutant	Average Monthly (µg/L)	Maximum Daily (µg/L)	IMAX (µg/L)
Total Copper	9.36	14.0	14.0
Total Lead	3.19	4.98	7.98
Total Zinc	120	120	120

The permittee was informed of the anticipated WQBELs via Pre-Draft Letter on August 19, 2022 (Attachment E). Since the original effluent sampling results did not meet the DEP required quantitation limits (QLs), the permittee was given the option to perform resampling. The Pre-Draft Survey was returned to the DEP on September 15, 2022 (Attachment F) and the permittee did elect to resample.

The resampling results were returned to the DEP on December 12, 2022 (Attachment G). Both the resampling and original results showed presence of Total Copper, Total Lead, and Total Zinc in the sewage effluent from the facility. While the QLs were met during this round of resampling, the original effluent sampling results still had to be used in TMS modeling because the concentrations were higher than the reporting limits and they represent the maximum sample value for an overall sample size less than 10. Therefore, no additional TMS modeling was done and the above WQBELs for Total Copper, Total Lead, and Total Zinc will be imposed during this permit cycle. No previous monitoring data exists for Total Copper, Total Lead, and Total Zinc, therefore the permittee will be given the standard 2-year compliance schedule with the Toxics Reduction Evaluation requirement in the permit.

Best Professional Judgment (BPJ) Limitations

According to the standard in 25 PA Code Chapter 93 and best professional judgment, a dissolved oxygen minimum limitation of 4.0 mg/L should be implemented. However, WQM7.0 modeling results recommend a dissolved oxygen minimum limitation of 5.0 mg/L. The more stringent of the values shall be imposed during this permit cycle.

Mass Loading Limitations

Per Department SOP "Establishing Effluent Limitations for Individual Sewage Permits" (BCW-PMT-033), mass loading limits will be established for POTWs for $CBOD_5$, TSS, ammonia nitrogen. Average monthly mass loading limits will be established for $CBOD_5$, TSS, and ammonia nitrogen. Average weekly mass loading limits will be established for $CBOD_5$ and TSS. Mass loading limits will be calculated according to the formula below:

$$average\ annual\ design\ flow\ (MGD) \times concentration\ limit\ \left(\frac{mg}{L}\right) \times 8.34\ (converstion\ factor)$$
$$= mass\ loading\ limit\ \left(\frac{lbs}{day}\right)$$

The following mass loading limitations were calculated:

Parameter	Average Monthly (lbs/day)	Average Weekly (lbs/day)
$CBOD_5$	**50**	**75**
TSS	**60**	**90**
Ammonia Nitrogen (May 1 – Oct 31)	**3.5**	**-**
Ammonia Nitrogen (Nov 1 – Apr 30)	**5.0**	**-**

Due to current Department rounding guidance, the average monthly and average weekly mass loading limitations for $CBOD_5$ and TSS are slightly more stringent than the previous permit cycle.

Influent Monitoring

Per Department SOP "New and Reissuance Sewage Individual NPDES Permit Applications" (BCW-PMT-002), POTWs with design flows greater than 2,000 GPD, influent BOD_5 and TSS monitoring will be established in the permit. The influent monitoring will be established with the same frequency and sample type as the effluent sampling.

Additional Considerations

Sewage discharges will include monitoring, at a minimum, for E. coli, in new and reissued permits, with a monitoring frequency of 1/quarter for design flows >= 0.1 and < 1 MGD.

The receiving stream is impaired for nutrients, therefore sampling for total nitrogen and total phosphorus will be conducted at a frequency of 1/week.

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Department's Technical Guidance for the Development and Specification of Effluent Limitations.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through End of 2nd Year from Permit Effective Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Copper, Total (ug/L)	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Lead, Total (ug/L)	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Zinc, Total (ug/L)	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Beginning of 3rd Year from Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Copper, Total (ug/L)	XXX	XXX	XXX	9.36	14.0	14.0	1/week	24-Hr Composite
Lead, Total (ug/L)	XXX	XXX	XXX	3.19	4.98	7.98	1/week	24-Hr Composite
Zinc, Total (ug/L)	XXX	XXX	XXX	120.0	120.0	120.0	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	50.0	75.0 Weekly Avg.	XXX	25.0	37.5	50.0	1/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Suspended Solids	60.0	90.0 Weekly Avg.	XXX	30.0	45.0	60.0	1/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Ultraviolet light transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	Report	XXX	XXX	Report Daily Max	XXX	1/week	24-Hr Composite

Outfall 001 , Continued (from Permit Effective Date through Permit Expiration Date)

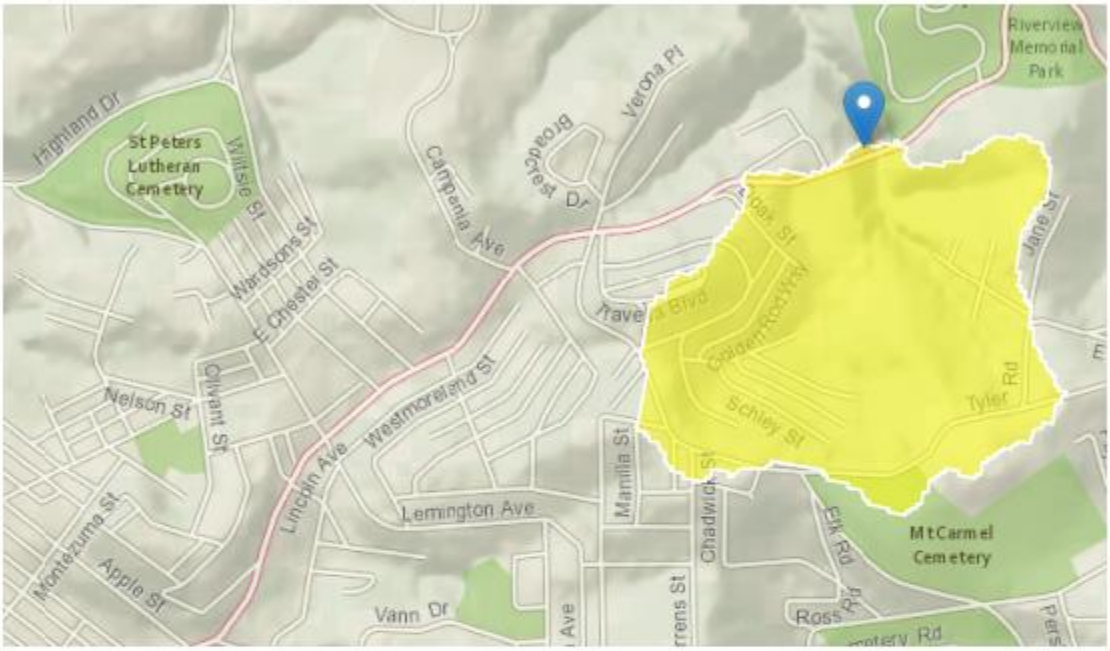
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2)	Required
	Average Monthly	Daily Maximum	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
Ammonia-Nitrogen Nov 1 - Apr 30	5.0	XXX	XXX	2.63	XXX	5.26	1/week	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	3.5	XXX	XXX	1.89	XXX	3.78	1/week	24-Hr Composite
Total Phosphorus	XXX	Report	XXX	XXX	Report Daily Max	XXX	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001

ATTACHMENT A:
USGS STREAMSTATS

StreamStats Report

Region ID: PA
Workspace ID: PA20220811193229601000
Clicked Point (Latitude, Longitude): 40.47475, -79.88161
Time: 2022-08-11 15:33:10 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.23	square miles
ELEV	Mean Basin Elevation	1155	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.23	square miles	2.26	1400
ELEV	Mean Basin Elevation	1155	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

Low-Flow Statistics Flow Report [Low Flow Region 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0051	ft^3/s
30 Day 2 Year Low Flow	0.0105	ft^3/s
7 Day 10 Year Low Flow	0.00131	ft^3/s
30 Day 10 Year Low Flow	0.00313	ft^3/s
90 Day 10 Year Low Flow	0.00681	ft^3/s

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

ATTACHMENT B:
WQM MODELING RESULTS (SUMMER)

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18A	42221	SHADES RUN	**0.680**	961.00	0.23	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.006	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Lincoln Rd STP	PA0026425	0.0000	0.0000	0.2400	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18A	42221	SHADES RUN	**0.580**	960.00	0.30	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.006	0.00	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18A	42221	SHADES RUN

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
0.680	0.00	0.00	0.00	.3713	0.00189	.485	4.99	10.29	0.15	0.040	20.02	7.00
Q1-10 Flow												
0.680	0.00	0.00	0.00	.3713	0.00189	NA	NA	NA	0.15	0.040	20.01	7.00
Q30-10 Flow												
0.680	0.00	0.00	0.00	.3713	0.00189	NA	NA	NA	0.15	0.040	20.02	7.00

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18A	42221	SHADES RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.680	0.240	20.018	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
4.987	0.485	10.286	0.154
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
24.92	1.500	1.89	0.701
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.011	23.660	Owens	5
Reach Travel Time (days)			
0.040			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.004	24.77	1.88	5.15
0.008	24.62	1.88	5.27
0.012	24.48	1.87	5.39
0.016	24.33	1.87	5.50
0.020	24.19	1.86	5.59
0.024	24.04	1.86	5.69
0.028	23.90	1.85	5.77
0.032	23.76	1.85	5.85
0.036	23.62	1.84	5.92
0.040	23.48	1.83	5.99

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18A	42221	SHADES RUN

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.680	Lincoln Rd STP	16.74	16.78	16.74	16.78	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.680	Lincoln Rd STP	1.88	1.89	1.88	1.89	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.68	Lincoln Rd STP	25	25	1.89	1.89	5	5	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18A	42221	SHADES RUN

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.680	Lincoln Rd STP	PA0026425	0.000	CBOD5	25		
				NH3-N	1.89	3.78	
				Dissolved Oxygen			5

ATTACHMENT C:
WQM MODELING RESULTS (WINTER)

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18A	42221	SHADES RUN	**0.680**	961.00	0.23	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.011	0.00	0.00	0.000	0.000	0.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Lincoln Rd STP	PA0026425	0.0000	0.0000	0.2400	0.000	15.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	12.51	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18A	42221	SHADES RUN	**0.580**	960.00	0.30	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.012	0.00	0.00	0.000	0.000	0.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18A	42221	SHADES RUN

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
0.680	0.00	0.00	0.00	.3713	0.00189	.485	4.99	10.29	0.15	0.040	14.96	7.00
Q1-10 Flow												
0.680	0.00	0.00	0.00	.3713	0.00189	NA	NA	NA	0.15	0.040	14.98	7.00
Q30-10 Flow												
0.680	0.00	0.00	0.00	.3713	0.00189	NA	NA	NA	0.15	0.040	14.95	7.00

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18A	42221	SHADES RUN

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.680	0.240	14.965	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
4.987	0.485	10.286	0.154
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
24.92	1.500	2.62	0.475
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.026	20.988	Owens	5
Reach Travel Time (days)			
0.040			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.004	24.80	2.61	5.24
0.008	24.69	2.61	5.44
0.012	24.57	2.60	5.63
0.016	24.45	2.60	5.80
0.020	24.34	2.59	5.95
0.024	24.22	2.59	6.10
0.028	24.11	2.58	6.23
0.032	24.00	2.58	6.36
0.036	23.88	2.57	6.47
0.040	23.77	2.57	6.58

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18A	42221	SHADES RUN

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.680	Lincoln Rd STP	24.1	24.16	24.1	24.16	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
0.680	Lincoln Rd STP	2.61	2.63	2.61	2.63	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.68	Lincoln Rd STP	25	25	2.63	2.63	5	5	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18A	42221	SHADES RUN

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
0.680	Lincoln Rd STP	PA0026425	0.000	CBOD5	25		
				NH3-N	2.63	5.26	
				Dissolved Oxygen			5

ATTACHMENT D:
Toxic Management Spreadsheet Results

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Lincoln Rd STP** NPDES Permit No.: **PA0026425** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **sewage**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
0.24	100	7.32						

					0 if left blank	0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		966									
	Chloride (PWS)	mg/L		329									
	Bromide	mg/L		0.1									
	Sulfate (PWS)	mg/L		236									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L											
	Total Antimony	µg/L											
	Total Arsenic	µg/L											
	Total Barium	µg/L											
	Total Beryllium	µg/L											
	Total Boron	µg/L											
	Total Cadmium	µg/L											
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	µg/L		29.8									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	µg/L											
	Total Lead	µg/L		5.47									
	Total Manganese	µg/L											
	Total Mercury	µg/L											
	Total Nickel	µg/L											
	Total Phenols (Phenolics) (PWS)	µg/L											
	Total Selenium	µg/L											
	Total Silver	µg/L											
	Total Thallium	µg/L											
	Total Zinc	µg/L		69.9									
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										
	Carbon Tetrachloride	µg/L	<										

Group 3	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										
	Chloroform	µg/L	<										
	Dichlorobromomethane	µg/L	<										
	1,1-Dichloroethane	µg/L	<										
	1,2-Dichloroethane	µg/L	<										
	1,1-Dichloroethylene	µg/L	<										
	1,2-Dichloropropane	µg/L	<										
	1,3-Dichloropropylene	µg/L	<										
	1,4-Dioxane	µg/L	<										
	Ethylbenzene	µg/L	<										
	Methyl Bromide	µg/L	<										
	Methyl Chloride	µg/L	<										
	Methylene Chloride	µg/L	<										
	1,1,2,2-Tetrachloroethane	µg/L	<										
	Tetrachloroethylene	µg/L	<										
	Toluene	µg/L	<										
	1,2-trans-Dichloroethylene	µg/L	<										
	1,1,1-Trichloroethane	µg/L	<										
	1,1,2-Trichloroethane	µg/L	<										
	Trichloroethylene	µg/L	<										
	Vinyl Chloride	µg/L	<										
Group 4	2-Chlorophenol	µg/L	<										
	2,4-Dichlorophenol	µg/L	<										
	2,4-Dimethylphenol	µg/L	<										
	4,6-Dinitro-o-Cresol	µg/L	<										
	2,4-Dinitrophenol	µg/L	<										
	2-Nitrophenol	µg/L	<										
	4-Nitrophenol	µg/L	<										
	p-Chloro-m-Cresol	µg/L	<										
	Pentachlorophenol	µg/L	<										
	Phenol	µg/L	<										
	2,4,6-Trichlorophenol	µg/L	<										
Group 5	Acenaphthene	µg/L	<										
	Acenaphthylene	µg/L	<										
	Anthracene	µg/L	<										
	Benzidine	µg/L	<										
	Benzo(a)Anthracene	µg/L	<										
	Benzo(a)Pyrene	µg/L	<										
	3,4-Benzofluoranthene	µg/L	<										
	Benzo(ghi)Perylene	µg/L	<										
	Benzo(k)Fluoranthene	µg/L	<										
	Bis(2-Chloroethoxy)Methane	µg/L	<										
	Bis(2-Chloroethyl)Ether	µg/L	<										
	Bis(2-Chloroisopropyl)Ether	µg/L	<										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<										
	4-Bromophenyl Phenyl Ether	µg/L	<										
	Butyl Benzyl Phthalate	µg/L	<										
	2-Chloronaphthalene	µg/L	<										
	4-Chlorophenyl Phenyl Ether	µg/L	<										
	Chrysene	µg/L	<										
	Dibenzo(a,h)Anthrancene	µg/L	<										
	1,2-Dichlorobenzene	µg/L	<										
	1,3-Dichlorobenzene	µg/L	<										
	1,4-Dichlorobenzene	µg/L	<										
	3,3-Dichlorobenzidine	µg/L	<										
	Diethyl Phthalate	µg/L	<										
	Dimethyl Phthalate	µg/L	<										
	Di-n-Butyl Phthalate	µg/L	<										
	2,4-Dinitrotoluene	µg/L	<										
	2,6-Dinitrotoluene	µg/L	<										
	Di-n-Octyl Phthalate	µg/L	<										

	1,2-Diphenylhydrazine	µg/L	<										
	Fluoranthene	µg/L	<										
	Fluorene	µg/L	<										
	Hexachlorobenzene	µg/L	<										
	Hexachlorobutadiene	µg/L	<										
	Hexachlorocyclopentadiene	µg/L	<										
	Hexachloroethane	µg/L	<										
	Indeno(1,2,3-cd)Pyrene	µg/L	<										
	Isophorone	µg/L	<										
	Naphthalene	µg/L	<										
	Nitrobenzene	µg/L	<										
	n-Nitrosodimethylamine	µg/L	<										
	n-Nitrosodi-n-Propylamine	µg/L	<										
	n-Nitrosodiphenylamine	µg/L	<										
	Phenanthrene	µg/L	<										
	Pyrene	µg/L	<										
	1,2,4-Trichlorobenzene	µg/L	<										
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Lincoln Rd STP, NPDES Permit No. PA0026425, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Shades Run**

No. Reaches to Model: **1**

- (●) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	042221	0.68	961	0.23			Yes
End of Reach 1	042221	0.58	960	0.3			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	0.68	0.0057			10.29							100	7		
End of Reach 1	0.58	0.006			10.29										

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	0.68														
End of Reach 1	0.58														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Lincoln Rd STP, NPDES Permit No. PA0026425, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | All | Inputs | Results | Limits

☑ ***Hydrodynamics***

$Q_{7\text{-}10}$

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
0.68	0.00		0.00	0.371	0.002	0.485	4.989	10.29	0.154	0.04	0.00003
0.58	0.00		0.002					10.290			

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
0.68	0.02		0.02	0.371	0.002	0.497	4.989	10.043	0.159	0.038	0.007
0.58	0.029		0.03								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.32

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	13.439	14.0	14.0	Chem Translator of 0.96 applied
Total Lead	0	0		0	64.581	81.6	81.9	Chem Translator of 0.791 applied
Total Zinc	0	0		0	117.180	120	120	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.32

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	

Total Copper	0	0		0	8.956	9.33	9.36	Chem Translator of 0.96 applied
Total Lead	0	0		0	2.517	3.18	3.19	Chem Translator of 0.791 applied
Total Zinc	0	0		0	118.139	120	120	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 0.007 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Copper	0.019	0.028	9.36	14.0	14.0	µg/L	9.36	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Lead	0.006	0.01	3.19	4.98	7.98	µg/L	3.19	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	0.24	0.24	120	120	120	µg/L	120	AFC	Discharge Conc ≥ 50% WQBEL (RP)

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS

Sulfate (PWS)	N/A	N/A	PWS Not Applicable

ATTACHMENT E:
Pre-Draft Letter (August 19, 2022)

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

August 19, 2022

VIA ELECTRONIC MAIL:

Jennifer Cohn
Municipality of Penn Hills
105 Duff Road
Pittsburgh, PA 15235-3219

Re: Draft NPDES Permit- Sewage
Lincoln Road STP
Application No. PA0025425
Authorization ID No. 1405025
Penn Hills Township, Allegheny County

Dear Permittee:

The Department of Environmental Protection (DEP) has reviewed your NPDES permit application and has reached a preliminary finding that new or more stringent water quality-based effluent limitations (WQBELs) for toxic pollutant(s) should be established in the permit. This finding is based on DEP's assessment that reasonable potential exists to exceed water quality criteria under Chapter 93 in the receiving waters during design flow conditions. The following WQBELs are anticipated based on the information available to DEP during its review:

Outfall No.	Pollutant	Average Monthly (µg/L)	Maximum Daily (µg /L)	IMAX (µg/L)	Target Quantitation Limits (µg/L)
001	Total Copper	9.36	14.0	14.0	4
001	Total Lead	3.19	4.98	7.98	1
001	Total Zinc	120	120	120	5

Attached is a survey that DEP requests that you complete and return to DEP in 30 days (by September 19, 2022). Completion of this survey will help DEP develop the draft NPDES permit and allow DEP to understand your current capabilities or plans to treat or control these pollutant(s). If you decide not to complete and return the survey, DEP will proceed with developing the draft NPDES permit based on all available information and certain assumptions. Your response to this notice does not constitute an official comment for DEP response but will be taken under consideration. When the draft NPDES permit is formally noticed in the

Pennsylvania Bulletin, you may make official comments for DEP's further consideration and response.

In addition to completion of the survey, you may elect to collect a minimum of four (4) additional effluent samples, as 24-hour composites, and have the samples analyzed for the pollutant(s) identified above, using a quantitation limit (QL) that is no greater than the Target QLs identified in the table above. The samples should be collected at least one week apart. If you elect this option, please check the appropriate box on the survey and return the survey to DEP. Review of your application will remain on hold until the additional sampling results are provided to DEP.

Please contact me if you have any questions about this information or the attached survey.

Sincerely,

Grace Polakoski

Grace Polakoski, E.I.T.
Environmental Engineering Specialist
Clean Water Program

Enclosures

cc: Kurt H. Todd, P.E. – The Gateway Engineers, Inc.
Southwest Regional Office

ATTACHMENT F:
Pre-Draft Survey (September 15, 2022)

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Clean Water

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Municipality of Penn Hills** Permit No.: **PA0026425**

Pollutant(s) identified by DEP that may require WQBELs: **Lead, Copper, Zinc**

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☒ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☒ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☐ Yes ☐ No ☒ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☒ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☒ Yes ☐ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

☐	Discharge pollutant concentration coefficient(s) of variability	Year(s) Studied:
☐	Discharge and background Total Hardness concentrations (metals)	Year(s) Studied:
☐	Background / ambient pollutant concentrations	Year(s) Studied:
☐	Chemical translator(s) (metals)	Year(s) Studied:
☐	Slope and width of receiving waters	Year(s) Studied:
☐	Velocity of receiving waters at design conditions	Year(s) Studied:
☐	Acute and/or chronic partial mix factors (mixing at design conditions)	Year(s) Studied:
☐	Volatilization rates (highly volatile organics)	Year(s) Studied:
☐	Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:

Please submit this survey to the DEP regional office that is reviewing the permit application within 30 days of receipt.

ATTACHMENT G:
Resampling Results

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

[TOC_1]Case Narrath
Work Order[TOC]

Work Order Case Narrative

WO# 22I2897 AMENDED. This report supersedes all prior report revisions.
Amendment Date: 10-11-22
Initials: JRD
Amendment Reason: Rerun selected metals at lower reporting limits.

Customer: Penn Hills
Project: Lincoln Road NPDES- Metals Testing
Sample: Lincoln Road Effluent
Collection Method: Composite

Sample Number: 22I2897-01
Collection: 09/30/2022 11:00
Received: 09/30/2022 13:45
Matrix: NPW

Cert	Analyte	Result	RL	Units	Prep Date	Analysis Date	Analyst	Method
Metals								
	Copper	0.010	0.002	mg/L	10/18/2022 07:30	10/18/2022 08:10	BMC	EPA 200.7
	Lead	1.16	1.00	µg/ L	10/14/2022 07:47	10/14/2022 13:43	MTW	EPA 200.8
	Zinc	14.6	5.00	µg/ L	10/14/2022 07:47	10/14/2022 13:43	MTW	EPA 200.8

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: Penn Hills
Project: Lincoln Road NPDES- Metals Testing
Sample: Lincoln Road Effluent
Collection Method: Composite

Sample Number: 22J1627-01
Collection: 10/10/2022 07:00
Received: 10/10/2022 15:35
Matrix: NPW

Cert	Analyte	Result		RL	Units	Prep Date	Analysis Date	Analyst	Method
Metals									
	Copper	0.021		0.002	mg/L	10/18/2022 07:30	10/18/2022 08:36	BMC	EPA 200.7
	Lead	3.28		1.00	µg/ L	10/13/2022 13:45	10/13/2022 16:07	MTW	EPA 200.8
	Zinc	25.3		5.00	µg/ L	10/13/2022 13:45	10/13/2022 16:07	MTW	EPA 200.8

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: Penn Hills
Project: Lincoln Road NPDES- Metals Testing
Sample: Lincoln Road Effluent
Collection Method: Composite

Sample Number: 22J2079-01
Collection: 10/17/2022 09:30
Received: 10/17/2022 12:45
Matrix: NPW

Cert	Analyte	Result		RL	Units	Prep Date	Analysis Date	Analyst	Method
Metals									
	Copper	0.010		0.002	mg/L	10/18/2022 07:30	10/18/2022 08:47	BMC	EPA 200.7
	Lead	1.37		1.00	µg/ L	10/27/2022 13:06	10/27/2022 15:04	MTW	EPA 200.8
	Zinc	14.3	R2	5.00	µg/ L	10/27/2022 13:06	10/27/2022 15:04	MTW	EPA 200.8

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: Penn Hills
Project: Lincoln Road NPDES- Metals Testing
Sample: Lincoln Road Effluent
Collection Method: Composite

Sample Number: 22J2365-01
Collection: 10/24/2022 07:15
Received: 10/24/2022 12:10
Matrix: NPW

Cert	Analyte	Result		RL	Units	Prep Date	Analysis Date	Analyst	Method
Metals									
	Copper	0.010		0.002	mg/L	10/27/2022 08:00	10/27/2022 15:30	BMC	EPA 200.7
	Lead	1.10	R1	1.00	µg/ L	11/03/2022 11:00	11/03/2022 13:08	MTW	EPA 200.8
	Zinc	12.3		5.00	µg/ L	11/03/2022 11:00	11/03/2022 13:08	MTW	EPA 200.8