pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0026476**
Facility Type	**Municipal**	APS ID	**610335**
Major / Minor	**Major**	Authorization ID	**1192748**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Coaldale-Lansford-Summit Hill Sewer Authority**	Facility Name	**Coaldale Lansford Summit Hill Sewer Authority**
Applicant Address	124 West Ridge Street	Facility Address	219 Greenwood Street
	Lansford, PA 18232-1310		Coaldale, PA 18218-1015
Applicant Contact	Marc Collevechio	Facility Contact	Roy Penberth
Applicant Phone	(570) 645-2445	Facility Phone	(570) 645-4717
Client ID	36724	Site ID	258225
Ch 94 Load Status	Existing Hydraulic Overload	Municipality	Coaldale Borough
Connection Status	Legally Modified Connection Ban	County	Schuylkill
Date Application Received	July 28, 2017	EPA Waived?	No
Date Application Accepted	July 28, 2017	If No, Reason	Major Facility, CSOs

Purpose of Application: RENEWAL OF EXISTING NPDES PERMIT.

Summary of Review

The applicant is requesting the renewal of their NPDES permit to discharge up to 1.65 MGD of treated sewage WWTP serving Coaldale Borough, Lansford Borough, and Summit Hill Borough (CLSHSA). All the municipalities are located in Schuylkill County, Pennsylvania. The receiving stream(s), Panther Creek (CWF), Nesquehoning Creek (CWF, MF), and Unnamed Tributary to Panther Creek (CWF, MF), are located in State Water Plan watershed 3-A and 2-B and are classified for Cold Water Fishes and Migratory Fishes, aquatic life, water supply and recreation. Per the Department's current existing use list, the receiving streams do not have an existing use classification that is more protective than their designated use. The streams are listed as non-attainment due to acid mine drainage (AMD). The discharge is not expected to affect public water supplies.

The applicant processes up to 3.0 MGD during Wet weather and the balance exceeds the capacity of the plant. CSO Point Sources 002--007 serve as combined sewer reliefs necessitated by stormwater entering the sewer system and exceeding the hydraulic capacity of the sewers and/or the treatment plant.

The water quality of Panther creek is greatly affected by the surface runoff from coal culm banks. It has been documented by EPA's "Decision Rationale Total Maximum Daily Loads Panther Creek Watershed for Acid Mine Drainage Affected Segments" dated June 2014 and Little Schuylkill River TMDL dated February 2014. PA0026476 Coaldale Lansford Summit Hill Sew Auth is one of the sewage NPDES permits not receiving individual waste load allocations for metals. The high levels of metals are the cause for these impairments. All impairments resulted from drainage from abandoned coalmines. The TMDLs address the three primary metals associated with acid mine drainage (iron, manganese, aluminum) and pH.

Acid Mine Drainage and Siltation Affected Segments

The following table shows the applicable water quality criteria for the selected parameters:

Approve	Deny	Signatures	Date
X		Bernard Feist (signed) Bernard Feist, P.E. / Environmental Engineer	June 8, 2021
X		Amy M. Bellanca (signed) Amy M. Bellanca, P.E. / Environmental Engineer Manager	6-11-21

Summary of Review

Table 3. Applicable Water Quality Criteria

Parameter	*Criterion Value (Mg/l)*	*Total Recoverable/Dissolved*	*Critical Use*
Aluminum (Al)	0.75	Total Recoverable	Aquatic Life
Iron (Fe)	1.50	Total Recoverable	Aquatic Life
Manganese (Mn)*	1.00	Total Recoverable	Potable Water Supply
pH **	6.0-9.0	N/A	Aquatic Life

The allowable loads for Al, Fe and Mn were calculated to meet water quality standards at all points instream, including the nearest potable water supply intake (Pottstown Borough Water Authority approximately 65 miles downstream).

Table 4. NPDES permits in the Panther Creek Watershed not receiving individual waste load allocations for metals

NPDES Permit	Facility Name	Sample Point in Little Schuylkill TMDL
PA0026476	Coaldale Lansford Summit Hill Sew Auth	LS11
PAG052223	Slusser Brothers, Inc. Panther Valley Middle School	LS11
PAR202240	Hart Metals	LS11

Table 9. NPDES permits in the Little Schuylkill River Watershed not receiving individual waste load allocations for metals

NPDES Permit	Facility Name	Sample Point
PA0012742	ICI Explosives USA, Inc. Copperhead Chem Tamaqua Pl	LSNR
PA0026476	Coaldale Lansford Summit Hill Sew Auth	LS11
PA0027006	Tamaqua Boro Schuylkill County WWTP	LS11, LSNR

The reasons the sewage discharges have not received individual wasteload allocations include one or more of the following:

- This class of discharge is not a significant contributor of pollutants of concern as addressed in the TMDL,
- The discharge concentration is at or below the level of the instream water quality criterion value for the parameters of concern,
- The discharge does not cause or contribute to a downstream impairment, or
- The discharge has been evaluated via the reasonable potential analysis to discharge the pollutants of concern at current levels.

In general, DEP establishes limits in the draft permit where the effluent concentration exceeds 50% of a modelled WQBEL. For non-conservative pollutants establish monitoring requirements where the effluent concentration determined is between 25% - 50% of the WQBEL. For conservative pollutants, establish monitoring requirements where the effluent concentration determined is between 10% - 50% of the WQBEL.

Two primary programs that provide reasonable assurance for maintenance and improvements of water quality in the watershed are in effect. The Pa. DEP's efforts to reclaim AMLs, coupled with its duties and responsibilities for issuing mining NPDES permits, will be the focal points in water quality improvement. Since the AMD TMDLs did not consider sewage dischargers, there are no WLAs to apply. Quarterly sewage AMD monitoring will continue to support the TMDL.

Point of First Use (POFU)

Coaldale POFU 2017.pdf

A 2017 Point of First Use (POFU) use was conducted by the regional biologist for this Permit's Renewal Cycle with major modelling consequences. Due to the improvement in water quality from the historic severe biological impairment, the POFU will now be established at Outfall 001. The stream now meets the minimum requirements for a perennial community therefor the data in the old pollution report (7/06/2007) is no longer applicable to the discharge.

Summary of Review

§ 95.5. Treatment requirements for discharges to waters affected by abandoned mine drainage.

(a) For wastes discharged to waters polluted by abandoned coal mine drainage, so that the applicable water quality criteria are not being met and designated water uses are not being achieved to the extent that aquatic communities are essentially excluded, and where the pollution cannot be remedied by controlling known, active discharges, the following degrees of treatment shall be provided:

(1) Sewage, as defined in The Clean Streams Law (35 P. S. § § 691.1—691.1001), shall receive secondary treatment, as defined by this chapter.

(2) Industrial waste as defined in The Clean Streams Law (35 P. S. § § 691.1—691.1001), shall achieve one of the following degrees of treatment, as appropriate, which are defined under 33 U.S.C.A. § § 1314(b) and 1316(b):
(i) Best Conventional Pollutant Control Technology (BCT).
(ii) Best Available Technology Economically Achievable (BAT).
(iii) Standards of performance for new sources.

(**b) A greater degree of treatment will be required to the waters where one of the following exists:**

(1) The water quality of the receiving water has or is expected to improve significantly.

(2) The minimum degree of treatment required would cause pollution in downstream waters, so that designated stream uses in these downstream waters would not be achievable.

New Effluent Limits

The new effluent limits for CBOD5, TSS, pH, and Fecal Coliform are technology-based requirements. Ammonia- N limits will be introduced this Permit Cycle due to the updated POFU. The Dissolved Oxygen and TRC are water quality-based limits. Additional new DRBC requirements for TDS Limits will be added. Further Toxic Modelling recommended the monitoring of Total Copper, Total Lead, Total Silver, and Total Zinc that will be introduced along with the continuing M&R of the previous AMD metals. The Permit will contain the latest 2021 E-coli and WETT reporting requirement updates.

Combined Sewer Overflow (CSO) Policy

The goals of the EPA's 1994 Combined Sewer Overflow (CSO) Control Policy (Volume 59 of the Federal Register (FR) 18688 and 18689, April 19, 1994) are :

1. To ensure that if CSOs occur, they are only as a result of wet weather,
2. To bring all wet weather CSO discharge points into compliance with the technology-based and water quality-based requirements of the Clean Water Act (CWA) and
3. To minimize water quality, aquatic biota and human health impacts from CSOs from all Publicly Owned Treatment Works (POTW) Treatment Plants (as defined in Title 40 of the Code of Federal Regulations (CFR) Part 403.3(p))."

NPDES Compliance - EPA Publication Number: 305-K-17-001 Interim Revised Version, January 2017
EPA's CSO Policy outlines the NMCs and the **minimum elements of an LTCP**. Table 12-1 lists the NMCs, while Table 12-2 lists the elements of the LTCP.

Summary of Review

Table 12-1. Nine Minimum CSO Controls

- Proper operation and regular maintenance programs for the sewer system and the CSOs.
- Maximum use of the collection system for storage.
- Review and modification of pretreatment requirements to ensure that CSO impacts are minimized.
- Maximization of flow to the POTW for treatment.
- Prohibition of CSOs during dry weather.
- Control of solid and floatable materials in CSOs.
- Establishment of pollution prevention programs.
- Public notification to ensure that the public receives adequate notification of CSO occurrences and CSO impacts.
- Monitoring to effectively characterize CSO impacts and the efficacy of CSO controls.

Table 12-2. Elements of the Long-Term CSO Control Plan

- Characterization, monitoring, and modeling of the Combined Sewer System
- Public Participation
- Consideration of Sensitive Areas
- Evaluation of Alternatives
- Cost/Performance Considerations
- Operational Plan
- Maximizing Treatment at the Existing POTW Treatment Plant
- Implementation Schedule
- Post-Construction Compliance Monitoring Program

https://www.epa.gov/sites/production/files/2017-03/documents/npdesinspect-chapter-12.pdf

The key elements to CSO control are to:
• Eliminate or relocate overflows that discharge to sensitive areas wherever physically possible and economically achievable, and where not possible, provide treatment necessary to meet WQS for full protection of existing and designated uses.
• Coordinate the review and appropriate revision of water quality standards and implementation procedures on CSO-impacted waters with development of long-term CSO control plans.
• Evaluate a reasonable range of alternatives for the CSO control plan that could achieve the necessary level of control/treatment and select the controls to be implemented based on cost/performance evaluations.
• Develop an implementation schedule based on the relative importance of adverse impacts on WQS and designated uses, priority projects identified in the long-term plan LTCP, and on the permittee's financial capability.
• Maximize treatment of wet weather flows at the existing POTW treatment plant.

All future PaDEP Inspections and Permits will obtain information to determine compliance in the following areas:

1. CSO prevention during dry weather.
2. Implementation of the nine minimum CSO controls.
3. Adherence to a schedule for development, submission, and implementation of a LTCP, including any interim deliverables.
4. Adherence to schedule for implementation of the CSO controls selected from the LTCP.
5. Elimination or relocation of overflows from identified sensitive areas, as defined in the approved LTCP.
6. Meeting narrative, performance-based, or numerical water quality-based effluent limitations.
7. Monitoring program, including baseline information on frequency, duration, and impacts of CSOs.
8. Once PADEP's proposed E. coli standard becomes effective, PADEP will incorporate E. coli limits in subsequently reissued NPDES permits and require that it is included in CSO post-construction compliance monitoring (PCCM) plans to verify compliance with water quality standard and designated uses.

Summary of Review

The Department wants the Applicant to be aware of a guidance document offered by the Environmental Protection Agency. It is a planning tool for the development of LTCPs in Small Communities (jurisdictions with populations under 75,000), which might be useful in development of any revised LTCP. The links to the instructions and LTCP-EZ Template can be found at: https://www.epa.gov/npdes/npdes-cso-guidance-documents.

Long Term Control Plan

The required Long-Term Control Plan (LTCP) is a document by which the permittee evaluates the existing CSS infrastructure and the hydraulic relationship between the CSS, wet weather, overflows and treatment capacity. Cost effective alternatives for reducing or eliminating overflows are evaluated and a plan forward to eventually meet water quality standards is selected. An implementation schedule is then developed to achieve that goal. The three LTCP options are demonstrative, presumptive and total separation. The demonstrative approach shows that the current plan is adequate to meet the water quality-based requirements of the CWA based on data, while the presumptive approach will implement a minimum level of treatment that is presumed to meet the water quality-based requirements of the CWA.

PaDEP's Annual CSO Status Report (Chapter 94 Report)

The Annual CSO Status Report is part of the permittee's annual Chapter 94 Municipal Wasteload Management Report. In this annual report, the permittee includes

1. The summary of the frequency, duration and volume of the CSO events from the past year,
2. The operational status of the CSO outfalls,
3. Identification of any known in-stream water quality impacts,
4. A summary of all actions taken to implement NMCs and the LTCP and effectiveness of those actions,
5. A progress report and evaluation of the NMC implementation,
6. Rain gauge data for each event and
7. Documentation of annual inspections and maintenance.

The permittee shall comply with a minimum of one of the following under design conditions:

1) A planned control program that has been demonstrated to be adequate to meet the water quality-based requirements of the CWA ("demonstration approach"), or

2) A minimum level of treatment that is presumed to meet the water quality-based requirements of the CWA, unless data indicate otherwise ("presumption approach"):

   a. Eliminate or capture for treatment, or storage and subsequent treatment, at least 85% of the system-wide combined sewage volume collected in the combined sewer system during precipitation events under design conditions; or
   b. Discharge no more than an average of [4, 5, or 6] overflow events per year; or
   c. Eliminate or remove no less than the mass of the pollutants identified as causing water quality impairment, for the volumes that would be eliminated or captured for treatment under the 85% capture by volume approach.

The Authority operates and maintains the trunk line within the collection system. Coaldale Borough 20%, Lansford Borough 57% and Summit Hill Borough 23% are each responsible for operation/maintenance of their collection system. The Authority will continue to pay for all water quality testing, flow monitoring and office and engineering costs associated with the LTCP.

- The existing LTCP was approved November 2, 2005 and is inadequate by updated 2021 Standards. A proposed 2016 update is included in the attachments. The new Permit will require more additional update requirements.

Summary of Review

2005 Existing:

In order to insure proper operation of these diversion chambers the Chief Plant Operator shall oversee to the following actions:

1. Inspect each of the diversion chambers on a weekly basis during periods of dry weather flows.
2. Inspect each of the diversion chambers after every period of rain.
3. Inspect each of the diversion chambers during and after every period of heavy rain. A period of heavy rain shall be defined as any period of rain during which stormwater is being by-passed at the treatment plant.
4. Keep a written record of all inspections of the diversion chambers, including findings from each inspection and corrective action taken.
5. In the event a malfunction that cannot be immediately corrected is noted during an inspection, the Chief Plant Operator shall notify the PA Dept. of Environmental Protection within twenty-four (24) hours of said discovery.
6. Any malfunction reported to the PA Department of Environmental Protection shall be reported to the Authority on the Chief Operator's monthly report.
7. Insure routine general maintenance of all diversion chambers, including removal of debris and silt build-up. Chambers shall be maintained in a manner to prevent any flow obstructions which will result in dry weather diversions or excessive wet weather diversions.
8. No changes shall be made to the diversion chambers without prior approval by the PA Department of Environmental Protection and the Authority.

Recent LTCP updates :

- There are 6 combined sewer overflows (CSO) throughout the collection system. Each CSO is marked with a sign for identification.
- Flow meters have been installed at each CSO and pump station since summer of 2019. Each CSO is metered to record flows and a flow study is currently underway.
- CSO outfalls 002, 003, 004, 005, 006, and 007 do not have primary treatment (barscreens) which is a minimum requirement.
- As part of the existing Long Term Control Plan sampling is conducted annually at each CSO. E-coli must be added.
- The WWTP has a bypass at the headworks that is controlled by a gate valve which must be eliminated along with a Permit requirement for a new Long Term Control Plan.

25 Pa. Code 92a.47(c): Discharges from an SSO are prohibited. Written SSO reports are due to be received by the Department within 5 days of becoming aware of the incident. Electronic versions of the SSO report should be submitted via email to help maintain compliance with the 5-day reporting requirement. Immediate telephone notification (within 15 minutes) to the Department is required to be made of any pollution incident and/or SSO. The after-hours emergency phone number is 570-826-2511.

Summary of Review

Sludge use and disposal description and location: Greater Hazelton Sewer Authority for further treatment

The WMS Report query “Water Management System Inspections” was run. On 10/07/2020 an Inspection was done with No Violations noted.

The WMS “Open Violations by Client Report" was run and there are No Open Violations.

The Administratively Extended Permit expired on January 31, 2018 and the renewal was submitted July 28, 2017

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

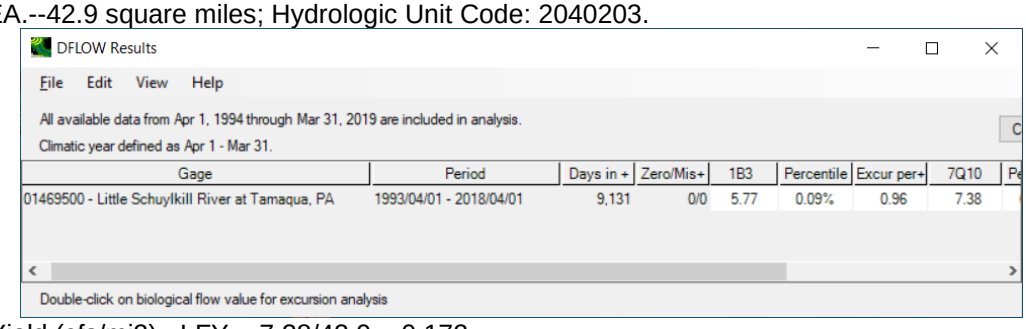
Outfall No.	001	Design Flow (MGD)	1.65
Latitude	40º 48' 52.67"	Longitude	-75º 55' 55.33"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Panther Creek (CWF)	Stream Code	02252
NHD Com ID	25998226	RMI	2.34
Drainage Area	7.0	Yield (cfs/mi^2)	0.172
Q_{7-10} Flow (cfs)	1.2	Q_{7-10} Basis	DFLOW USGS 1469500
Elevation (ft)	887	Slope (ft/ft)	.006
Watershed No.	3-A	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Flow Alterations, Metals, Siltation, Unknown Toxicity		
Source(s) of Impairment	Abandoned Mine Drainage, Industrial Point Source, Small Residential Runoff, Surface Mining		
TMDL Status	Final, Final	Name	Little Schuylkill River, Panther Creek Watershed TMDL

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		

Nearest Downstream Public Water Supply Intake		Pottstown Borough Authority	
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	66

Changes Since Last Permit Issuance: Drainage area at outfall 001 is used for WETT Series and Modelling

USGS STATION.--01469500 LITTLE SCHUYLKILL RIVER AT TAMAQUA, PA
LOCATION.--Lat 40`48'25", long 75`58'20", Schuylkill County, Hydrologic Unit 02040203, on left bank at pumping plant of Panther Valley Water Co., 0.6 mi upstream from Tamaqua, and 0.8 mi upstream from Panther Creek.
DRAINAGE AREA.--42.9 square miles; Hydrologic Unit Code: 2040203.

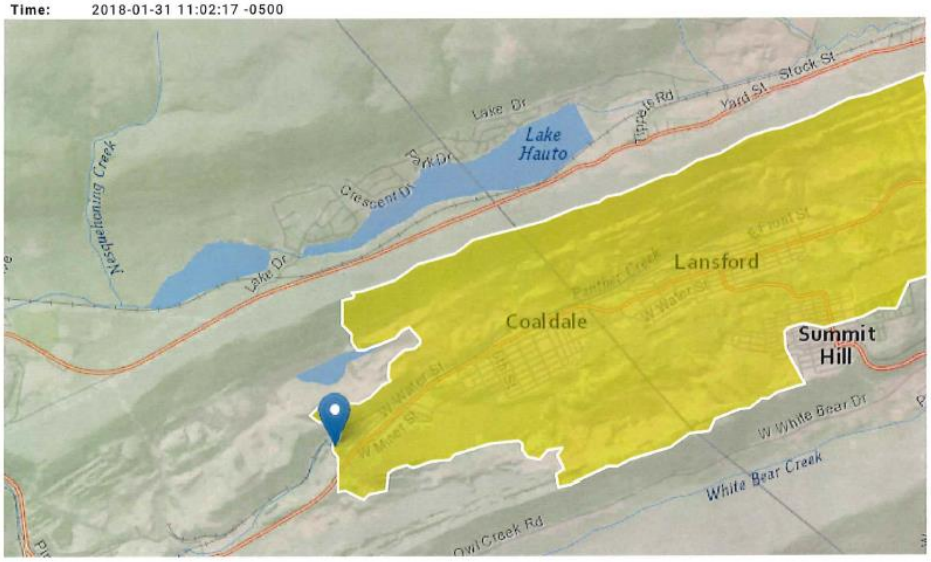


Q7-10 LowFlowYield (cfs/mi2) =LFY = 7.38/42.9 = 0.172
River Mile 92.47 – 99.0 – 22.0 – 2.34 (Delaware River – Schuylkill River – Little Schuylkill River – Panther Creek).
Outfall 001 at RMI 2.34

RMI 2.34 NAD 1983 Latitude: 40.8147 (40 48 53) NAD 1983 Longitude: -75.9323 (-75 55 57)
Drainage Area: 7 mi2 Alt Feet: 887
Stream flow = 0.172 * 7 = 1.2 cfs
1.650 MGD =2.5526 cfs dilution = 1.2/ 2.5526 = 0.47 :1

StreamStats Report

Region ID: PA
Workspace ID: PA20180131160201683000
Clicked Point (Latitude, Longitude): 40.81462, -75.93194
Time: 2018-01-31 11:02:17 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	6.92	square miles

RMI 0.0 Confluence of Little Schuylkill River
StreamStats Report 40.79559, -75.96608
DRNAREA Drainage Area =54.1 square miles; Alt =787 ft

Treatment Facility Summary				
Treatment Facility Name: Coaldale Lansford Summit Hill Sewer Authority				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Activated Sludge	Chlorine	1.650000
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
1.65	2800	Existing Hydraulic Overload	Aerobic Digestion	Greater Hazelton Sewer Authority

The existing facilities consist of grit removal, and comminutor, a bar screen, two (2) primary clarifiers, two (2) aeration tanks, two (2) secondary clarifiers, a chlorine contact disinfection tank, and two (2) aerobic digestion tanks.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 1.65
Latitude 40º 48' 52.37" **Longitude** -75º 55' 55.37"
Wastewater Description: Effluent

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.

Technology-Based Limitations

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

Parameter	Minimum	Average Monthly	Average Weekly	IMAX	Basis
Flow (MGD)	XXX	Report	Report Max Daily	XXX	§§ 92a.27, 92a.61
CBOD5 (mg/L)	XXX	25	40	50	§ 92a.47
TSS (mg/L)	XXX	30	45	60	§ 92a.47
TRC (mg/L)	XXX	0.5	XXX	1.6	§§ 92a.47-48
NH3-N (mg/L)	XXX	25	XXX	50	BPJ
D.O. (mg/L)	4	XXX	XXX	XXX	BPJ
pH (SU)	6	XXX	XXX	9	§ 92a.47, § 95.2
Total N (mg/L)	XXX	Report	XXX	XXX	§ 92a.61
Total P (mg/L)	XXX	Report	XXX	XXX	§ 92a.61
Fecal Coliform (No./100 ml) (May-Sept)	XXX	200 Geo Mean	XXX	1,000	§ 92a.47
Fecal Coliform (No./100 ml) (Oct-April)	XXX	2,000 Geo Mean	XXX	10,000	§ 92a.47
E. Coli (No./100 ml)*	XXX	XXX	XXX	Report	§ 92a.61

Plus:

DOCKET NO. D-1964-027 CP-3

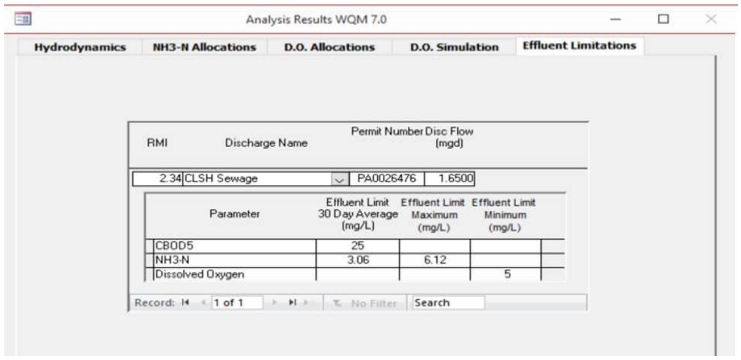
EFFLUENT TABLE A-2: DRBC Parameters Not Included in NPDES Permit

OUTFALL 001 (Discharging to Panther Creek)		
PARAMETER	**LIMIT**	**MONITORING**
Total Dissolved Solids	1,000 mg/l	Quarterly
Ammonia-Nitrogen	20 mg/l	Monthly

Water Quality-Based Limitations

A "Reasonable Potential Analysis" determined the following parameters were candidates for limitations:

The following limitations were determined through water quality modeling:



The DRBC Limit of 20mg/l will be introduced into the first 3 years of the Permit; whereas, the new WQM modelling stricter limits will be applied in the fourth year. This extension will afford the applicant time to adjust to the new modelling location going forward. At the present time, seasonal effluent limitations are generally being used for NH3-N by PaDEP with 3x's multipliers for the winter months. TRC limits will allow for the same adjustment time frame.

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9 — Coaldale

1.2	= Q stream (cfs)	0.5	= CV Daily
1.65	= Q discharge (MGD)	0.5	= CV Hourly
4	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.169	1.3.2.iii	WLA cfc = 0.157
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.063	5.1d	LTA_cfc = 0.091

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.720	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.108	AFC
		INST MAX LIMIT (mg/l) = 0.253	

The Toxics Management Spreadsheet (TMS) modeling recommended effluent monitoring requirements for several pollutants.

☑ ***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	Report	Report	Report	Report	Report	µg/L	13.5	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Lead	Report	Report	Report	Report	Report	µg/L	4.62	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Silver	Report	Report	Report	Report	Report	µg/L	3.78	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	120	AFC	Discharge Conc > 10% WQBEL (no RP)

TMS PA0026476 2021.pdf

Changes to the Permit : Per the Biologist report, water Quality Modelling will be introduced for the first time this Permit Cycle directly at Outfall 001.

Best Professional Judgment (BPJ) Limitations

Comments: Stricter Modelling Limits will be imposed during the 4th year of Permit

Anti-Backsliding

n/a

IDENTIFICATION OF ACTIVE OUTFALLS INCLUDED IN PERMITTEE CSO SYSTEM

The outfalls identified below serve as combined sewer overflows necessitated by storm water entering the sewer system and exceeding the hydraulic capacity of the sewers and/or the treatment plant and are permitted to discharge only for this reason. Dry weather discharges from these outfalls are prohibited. Each discharge shall be monitored for cause, frequency, duration, and quantity of flow. The data must be recorded on the Department-provided DMR for CSOs form and reported monthly as an attachment to the regular Discharge Monitoring Report (DMR) or as otherwise provided for in the permit. Monitoring and compliance with the requirements specified above shall be performed in accordance with NPDES Permit Condition Part C - on combined sewer overflows.

Outfall No.	Location Description	Receiving Stream Name	Location	
			Latitude	Longitude
002	Diversion Chamber No. 1	Unnamed Tributary to Panther Creek (CWF, MF)	40° 49' 49"	-75° 53' 41"
003	Diversion Chamber No. 2	Unnamed Tributary to Panther Creek (CWF, MF)	40° 49' 56"	-75° 53' 24"
004	Diversion Chamber No. 3	Nesquehoning Creek (CWF, MF)	40° 50' 05"	-75° 52' 55"
005	Diversion Chamber No. 4	Panther Creek (CWF)	40° 50' 07"	-75° 52' 43"
006	Diversion Chamber No. 5	Panther Creek (CWF)	40° 50' 09"	-75° 52' 37"
007	Diversion Chamber No. 6	Panther Creek (CWF)	40° 50' 14"	-75° 52' 00"

Whole Effluent Toxicity (WET)

For Outfall 001, ☐ **Acute** ☒ **Chronic** WET Testing was completed:

☐ For the permit renewal application (4 tests).
☐ Quarterly throughout the permit term.
☐ Quarterly throughout the permit term and a TIE/TRE was conducted.
☒ Other: **PaDEP Yearly Policy unless there is a failure (then quarterly)**

The dilution series used for the tests was: 100%, 64%, **27%**, 14%, and 7%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: **27%**.

Summary of Four Most Recent Test Results

2017 Application submission

Outfall tested: 001
Type of tests completed: ☒ Chronic ☐ Acute

	Ceriodaphnia Results				Pimephales Results			
Test Date	Survival NOEC	Reproduction NOEC	LC50	Pass/Fail	Survival NOEC	Growth NOEC	LC50	Pass/Fail
06/22/16	100%	>100%	>100%	Pass	64%	64%	80%	Pass
05/19/15	100%	>100%	>100%	Pass	100%	100%	>100%	Pass
05/06/14	27%	27%	41.6%	Pass	64%	64%	100%	Pass
07/23/13	100%	100%	>100%	Pass	100%	100%	>100%	Pass

2021 Updates

CLSH WETT TEST 2017.pdf
CLSH WETT TEST 2018.pdf
CLSH WETT TEST 2019.pdf
CLSH WETT TEST 2020.pdf

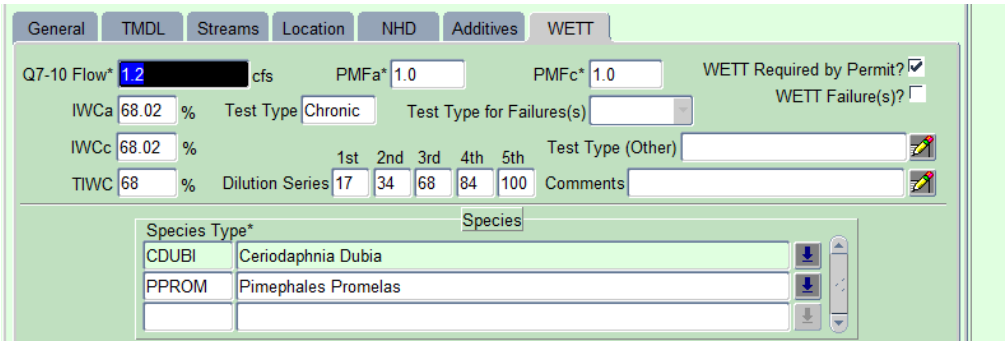
Is there reasonable potential for an excursion above water quality standards based on the results of these tests? (*NOTE – In general, reasonable potential is determined anytime there is at least one test failure in the previous four tests).*

☐ **YES** ☒ **NO**

Comments:

Evaluation of Test Type, IWC and Dilution Series for Renewed Permit

The WETT testing Dilution ratios are also re-modelled at Outfall 001 for this 2021 Permit Cycle. They are changing from the previous Dilution Series requirement of 100%, 64%, **27%**, 14%, 7% to the new Dilution Series of 100%, 84%, **68%**,34%, 17%.



Updates from the application: Per the Biologist report, WET Testing will be introduced for the first time this Permit Cycle modelled directly at Outfall 001.

Annual sampling will continue for Ceriodaphnia dubia and Pimephales promelas with this permit renewal. North East's results are reviewed by the regional biologist and the Program Water Quality Specialists will continue to upload the results into the eDMR system. Upon a failure quarterly testing is required per PaDEP Policy (see permit for details.)

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

Will WET limits be established in the permit? ☐ YES ☒ NO

Compliance History

DMR Data for Outfall 001 (from April 1, 2020 to March 31, 2021)

Parameter	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20
Flow (MGD) Average Monthly	1.66	1.00	1.26	1.27	1.05	0.74	0.81	1.09	1.06	1.45	1.35	1.38
Flow (MGD) Daily Maximum	1.91	1.56	1.83	1.91	1.61	1.63	1.42	1.74	1.74	1.92	1.91	2.05
pH (S.U.) Minimum	6.8	6.9	6.8	6.6	6.9	6.8	6.7	6.6	6.7	6.5	6.6	6.6
pH (S.U.) Maximum	7.1	7.4	7.2	7.2	7.2	7.2	7.2	7.1	7.0	7.1	7.1	7.0
DO (mg/L) Instantaneous Minimum	6.1	6.5	5.9	5.5	5.2	5.6	5.5	5.5	5.3	5.1	5.7	5.6
TRC (mg/L) Average Monthly	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.4	0.4
TRC (mg/L) Instantaneous Maximum	0.7	0.7	0.6	0.6	0.6	0.5	0.7	0.6	0.8	0.7	0.6	0.8
CBOD5 (lbs/day) Average Monthly	40	46	21	26	25	20	26	31	19	29	65	36
CBOD5 (lbs/day) Weekly Average	75	108	28	33	30	24	34	42	30	39	156	45
CBOD5 (mg/L) Average Monthly	3.0	5.0	2.0	3.0	3.0	4.0	4.0	4.0	2.0	3.0	5.0	3.0
CBOD5 (mg/L) Weekly Average	6.0	9.0	3.0	4.0	4.0	5.0	7.0	7.0	3.0	4.0	10.0	4.0
TSS (lbs/day) Average Monthly	51	92	58	48	65	20	31	27	13	46	22	27
TSS (lbs/day) Weekly Average	91	188	88	73	85	38	63	56	20	69	32	41
TSS (mg/L) Average Monthly	4.0	10.0	6.0	5.0	8.0	3.0	4.0	3.0	2.0	4.0	2.0	2.0
TSS (mg/L) Weekly Average	6.0	15.0	7.0	11.0	12.0	5.0	6.0	4.0	3.0	5.0	4.0	3.0
Fecal Coliform (CFU/100 ml) Geometric Mean	4	109	22	6	2	5	3	10	3	4	2	12
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	80	5400	500	1480	40	40	40	340	210	120	70	580
Total Aluminum (lbs/day) Average Monthly	1	0.8	1	0.6	0.6	0.1	0.2	0.2	0.2	0.4	0.2	0.3
Total Aluminum (lbs/day) Weekly Average	2	1.0	1	1.0	1.0	0.1	0.2	0.3	0.2	0.8	0.3	0.7
Total Aluminum (mg/L) Average Monthly	0.1	0.1	0.10	0.07	0.07	0.02	0.02	0.02	0.02	0.03	0.02	0.03
Total Aluminum (mg/L) Weekly Average	0.1	0.1	0.10	0.10	0.1	0.02	0.03	0.02	0.02	0.05	0.02	0.05
Total Iron (lbs/day) Average Monthly	2	2	1	2	2.0	1	2	1	0.5	3	0.8	2
Total Iron (lbs/day) Weekly Average	2	4	2	3	3.0	1	5	4	0.6	6	2.0	3

Total Iron (mg/L) Average Monthly	0.13	0.26	0.16	0.18	0.21	0.16	0.23	0.14	0.06	0.25	0.07	0.15
Total Iron (mg/L) Weekly Average	0.18	0.52	0.19	0.26	0.27	0.19	0.39	0.32	0.08	0.42	0.14	0.24
Total Manganese (lbs/day) Average Monthly	3	2	2	2	2.0	0.8	1	2	2.0	2	1	2
Total Manganese (lbs/day) Weekly Average	3	3	2	2	2.0	0.7	2	3	2.0	2	2	2
Total Manganese (mg/L) Average Monthly	0.19	0.23	0.21	0.206	0.228	0.135	0.159	0.186	0.174	0.141	0.125	0.157
Total Manganese (mg/L) Weekly Average	0.19	0.23	0.23	0.246	0.26	0.148	0.198	0.198	0.19	0.157	0.14	0.182

Recent Inspection Reports

Coaldale Lanford SH CSO 10-7-2020.pdf

PA0026476_SEWAG E_ADMIN_20210201.pdf

PA0026476_SEWAG E_CEI_20201007.pdf