Pennsylvania Department of Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0028401**
Facility Type	**Non-Municipal**	APS ID	**1068139**
Major / Minor	**Minor**	Authorization ID	**1404370**

Applicant and Facility Information

Applicant Name	**Pennsylvania American Water Company**	Facility Name	**Dravosburg Borough WWTP**
Applicant Address	852 Wesley Drive	Facility Address	320 Washington Avenue
	Mechanicsburg, PA 17055		Dravosburg, PA 15034-1240
Applicant Contact	Jim Runzer	Facility Contact	Charles R. Schultz
Applicant Phone	717.550.1540	Facility Phone	724.493.1181
Client ID	87712	Site ID	249772
Ch 94 Load Status	Not Overloaded	Municipality	Dravosburg Borough
Connection Status	**No Restrictions**	County	Allegheny
Date Application Received	July 26, 2022	EPA Waived?	No
Date Application Accepted		If No, Reason	CSO

Purpose of Application: Application for the renewal of an NPDES permit for the discharge of treated Sewage.

Summary of Review

Introduction

The Applicant has applied for the renewal of NPDES Permit No. PA0028401, which was previously issued on January 24, 2018, and expired on January 31, 2023. This permit will again be renewed under the Discharge Requirements for Non-Municipal Sewage Treatment Works.

The Applicant has entered into a Consent Order and Agreement (COA) with the Department on December 13, 2017 (covering facilities previously owned by the Municipality Authority of the City of McKeesport). The COA covers the transfer of all NPDES and WQM Permits, addresses O&M of the CSS & WWTP, continued implementation of Nine Minimum Controls (NMC), submission of a revised Long Term Control Plan (LTCP), submission of an Act 537 Plan Update, submission of WQM Permits, construction of WWTP & CSO structure improvement projects, and submittal of a Post Construction Compliance Monitoring Plan (PCCMP) for Department Approval.

Facility Overview

WQM Permit No. 461S25 authorized plant construction with a rated annual average design flow & design hydraulic capacity (Chapter 94 Reporting) of 0.48 MGD, and a design organic capacity of 1,688 lbs./day.

Secondary treatment is provided by an existing facility consisting of comminutor with a static bypass bar screen, raw sewage pumping, grit removal, two aeration tanks, two final clarifiers, and sludge holding tanks. Chlorine is used for disinfection prior to discharge (Outfall 002) to Monongahela River, which is designated as a Warm Water Fishery (WWF) per 25 Pa. Chapter 93 Designated Use, located in State Watershed 19-C.

Approve	Deny	Signatures	Date
X		William C. Mitchell, E.I.T. / Project Manager	December 10, 2025
X		Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	December 16, 2025

Summary of Review

A comprehensive listing of outfalls can be found below:

002	Discharge Point for IMP 102 & 202	Treated Sewage & CSO
IMP 102	Discharge Pipe of Chlorine Contact Tank	Treated Sewage
IMP 202	McClure Avenue Diversion Chamber	CSO

Combined Sewer Overflow (CSO) IMP 202 will again be permitted. This outfall is necessitated by stormwater 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. Part C.II, Combined Sewer Overflows, has been incorporated into the permit.

The renewal application does not list any industrial contributors to the sewer system.

Combined Sewer Overflows

Part C. II. requires the Applicant to continue implementation of the NMCs and demonstrate system-wide compliance with the NMCs. Site specific O&M obligations were taken from the NMC Plan Update (submitted December 5, 2017, and updated on April 8, 2021). A Department NMC inspection will occur after permit issuance to ensure continued compliance.

The Applicant shall implement the LTCP in accordance with the implementation schedule taken from the Department's LTCP Approval Letter, dated December 1, 2025, which was based upon the revised LTCP Report (dated December 2023).

In summary, the LTCP proposes to:

- Comply with EPA CSO Policy's Presumption Approach criteria to meet receiving Water Quality Standards (WQS) by capturing no less than 85% by volume of the combined sewage collected in the CSS during precipitation events on a system-wide average annual basis.

In addition to the LTCP approach, these requirements are established for LTCP approval:

- The Applicant shall submit a Post Construction Compliance Monitoring Plan (PCCMP) for Department approval 12 months after completion of all obligations contained in COA paragraph 6, 7, and 8 (**Item 5.b)**. The PCCMP should be sufficient to demonstrate to the Department that the selected LTCP approach meets the Presumption Approach narrative and capture criteria in addition to meeting receiving WQS in accordance with EPA CSO Policy.

The CSO Control Measures of the LTCP are based upon implementation of Alternative 2:

- Conversion of the Dravosburg Borough STP to a pump station to convey flow to the City of McKeesport WWTP (NPDE Permit No. PA0026913). CSO Outfall 002 (IMP 202) will remain active after the STP is eliminated, and this outfall will be placed in the NPDES Permit for the City of McKeesport WWTP.

Summary of Changes Since Last Permit Issuance

- *E. Coli* monitoring added
- Part C.II language revised (Combined Sewer Overflows)

Sludge use and disposal description and location(s): Liquid sludge is hauled by Hapchuk Inc. and is disposed of at the McKeesport WPCP (NPDES Permit No. PA0026913), which is owned by the Applicant. Application data indicates that the STP does not receive any hauled in waste.

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*,

Summary of Review
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.	002 – Discharge Point for IMP 102 & IMP 202	Design Flow (MGD)	0.48
Latitude	40º 20' 59.00"	Longitude	-79º 53' 3.00"
Quad Name	Glassport	Quad Code	1606
Wastewater Description:	Sewage Effluent & Untreated Combined Sewer Overflow		

Receiving Waters	Monongahela River (WWF)	Stream Code	37185
NHD Com ID	99408226	RMI	16.4
Drainage Area	5410	Yield (cfs/mi^2)	0.102
Q_{7-10} Flow (cfs)	550	Q_{7-10} Basis	US Army Corp. of Engineers & USGS Streamstats (Attachment 1)
Elevation (ft)	723.70	Slope (ft/ft)	0.001
Watershed No.	19-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use	NONE	Exceptions to Criteria	NONE
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Monongahela River TMDL

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

Nearest Downstream Public Water Supply Intake		Pennsylvania-American Water Company - Pittsburgh	
PWS Waters	Monongahela River	Flow at Intake (cfs)	1,230
PWS RMI	4.6	Distance from Outfall (mi)	11.8

Changes Since Last Permit Issuance: NONE

Other Comments: The STP discharges to the Monongahela River which has an EPA Approved TMDL and is impaired by PCBs & Chlordane. No WLAs have been developed for this sewage discharge as neither PCBs nor Chlordane is typically found in sewage but instead found in legacy sediments. No additional monitoring requirements for these pollutants will be placed on this facility at this time.

Treatment Facility Summary

Treatment Facility Name: Dravosburg Borough STP

WQM Permit No.	Issuance Date
461S25	06/29/1961

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Comminutor, Aerated Grit Tank, 2 Aeration Tanks, 2 Clarifiers, and Sludge Holding Tank	Gas Chlorine	

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.48	1668.0	Not Overloaded	Sludge Holding Tanks	Liquid Sludge Hauled to McKeesport WWTP

Changes Since Last Permit Issuance: NONE

Other Comments: N/A

Compliance History

Operations Compliance Check Summary Report

Facility: DRAVOSBURG BORO STP

NPDES Permit No.: PA0028401

Compliance Review Period: 12/1/20-12/4/25

Inspection Summary:

INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC
06/13/2025	Chapter 94 Inspection	PA Dept of Environmental Protection	Administratively Closed
04/29/2025	Compliance Evaluation	County Health Dept	Violation(s) Noted
02/27/2024	Compliance Evaluation	County Health Dept	Violation(s) Noted
03/02/2023	Compliance Evaluation	County Health Dept	Violation(s) Noted
04/25/2022	Compliance Evaluation	County Health Dept	Violation(s) Noted
08/20/2021	Combined Sewer Overflow-Non-Sampling	County Health Dept	No Violations Noted
04/28/2021	Compliance Evaluation	County Health Dept	Violation(s) Noted

Violation Summary:

VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE
04/29/2025	92A.44	NPDES - Violation of effluent limits in Part A of permit	05/16/2025
04/29/2025	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	05/16/2025
02/27/2024	92A.61(C)	NPDES - Failure to monitor pollutants as required by the NPDES permit	03/06/2024

02/27/2024	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	03/06/2024
03/02/2023	92A.41(A)10C	NPDES - Failure to collect representative samples	04/05/2023
03/02/2023	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	04/05/2023
04/25/2022	92A.44	NPDES - Violation of effluent limits in Part A of permit	05/26/2022
04/25/2022	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	05/26/2022
04/25/2022	92A.41(A)10B	NPDES - Failure to utilize approved analytical methods	05/26/2022
04/28/2021	92A.44	NPDES - Violation of effluent limits in Part A of permit	06/01/2021
04/28/2021	92A.41(A)10B	NPDES - Failure to utilize approved analytical methods	06/01/2021
04/28/2021	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	06/01/2021

Open Violations by Client ID:

Client ID 87712 has no open violations with Clean Water Program in Southwest Region.
The following other open violations are noted in Southwest, South Central and Northeast Regions:

FACILITY	INSP PROGRAM	PROGRAM SPECIFIC ID	INSP ID	VIOLATION ID	VIOLATION DATE	VIOLATION	INSP REGION
PA-AMERICAN WATER-BROWNSVILLE	Safe Drinking Water	5260005	4085661	8255419	11/12/2025	FAILURE TO MEET DESIGN AND CONSTRUCTION STANDARDS	SWRO
PA AMERICAN DILLINER SYSTEM	Safe Drinking Water	5300012	4018232	8242117	07/28/2025	FAILURE TO MEET DESIGN AND CONSTRUCTION STANDARDS	SWRO
PA AMER W CO SILVER SPR WS	WPC NPDES	PA0009440	4067687	8250987	09/26/2025	CSL - Unauthorized, unpermitted discharge of industrial wastes to waters of the Commonwealth	SCRO
PA AMERICAN WATER COMPANY SCRANTON WWTP	WPC NPDES	PA0026492	4017881	8244926	07/24/2025	NPDES - Unauthorized bypass occurred	NERO
PA AMERICAN WATER COMPANY SCRANTON WWTP	WPC NPDES	PA0026492	4017881	8244927	07/24/2025	NPDES - Illegal discharge to waters of the Commonwealth from a sanitary sewer overflow (SSO)	NERO

Enforcement Summary:

ENF TYPE	ENF TYPE DESC	EXECUTED DATE	VIOLATIONS	ENF FINALSTATUS
NOV	Notice of Violation	05/16/2025	92A.41(A)5; 92A.44	Administrative Close Out
NOV	Notice of Violation	03/06/2024	92A.41(A)5; 92A.61(C)	Administrative Close Out
NOV	Notice of Violation	04/05/2023	92A.41(A)10C; 92A.41(A)5	Comply/Closed
NOV	Notice of Violation	05/26/2022	92A.41(A)10B; 92A.41(A)5	Comply/Closed
NOV	Notice of Violation	06/01/2021	92A.41(A)10B; 92A.41(A)5; 92A.44	Administrative Close Out

Effluent Violation Summary:

MON PD	OUTFALL	PARAMETER	REPORTED VALUE	PERMIT LIMIT	UNIT	STAT_BASE_CODE	FACILITY COMMENTS
Oct-25	102	Carbonaceous Biochemical Oxygen Demand (CBOD5)	27.1	25.0	mg/L	Average Monthly	NPDES average monthly exceedance was due to the elevated weekly average CBOD5 results, however the weekly averages in October were below the weekly average limit. Due to a plant upgrade in the aeration tanks. Operations is working through making adjustments with the blowers and diffusers now that both aeration tanks are fully operational. Corrective Action Taken- Operations, Engineering and Water Quality are putting together a plan of action to address the elevated Dissolved Oxygen, CBOD5 and sludge pin flock to reduce the CBOD5 concentration
Sep-25	102	Carbonaceous Biochemical Oxygen Demand (CBOD5)	38.0	37.5	mg/L	Weekly Average	CBOD wkly avg. exceeded the permit limit. Investigation discovered a channel after the clarifier that allowed sludge to overflow into the effluent channel. Corrective action:The channel is now monitored/observed by the Operator to recognize future sludge overflow. Since the discovery the channel has been drained and clean to eliminate the sludge build up.

Sep-25	102	Fecal Coliform	2419.6	1000	No./100 ml	Instantaneous Maximum	Fecal Coliform sample exceeded the permitted Instantaneous Maximum. Investigation was completed and no definitive cause was identified. As a proactive measure, sampling equipment was cleaned to prevent potential cross contamination. Corrective Action: Drained, and cleaned the chlorine contact tank on 9/10/25 after being made aware of the fecal exceedance. A dissolved oxygen profile was taken in the Aeration Tank #1. Microorganisms were identified under the microscope. It should be noted that the Aeration Tank #2 is still "offline" waiting for airline completion. The chlorine residual was in the proper range for disinfection.
Apr-25	102	Carbonaceous Biochemical Oxygen Demand (CBOD5)	26.6	25.0	mg/L	Average Monthly	Cause of Violation:NPDES average monthly exceedance was due to the elevated weekly average CBOD5 results. It should be noted; the weekly average was not exceeded throughout the month of April. Limited adequate treatment in the aeration tanks also may have contributed to the average monthly exceedance. Corrective Action Taken: In 2025, Operations have scheduled to replace inefficient airlines in the aeration tanks. In addition, further investigation will take place throughout the plant for potential upgrades to other processes. A written action plan is currently being developed to assist in lowering the CBOD5 average monthly concentration.
Mar-25	102	Carbonaceous Biochemical Oxygen Demand (CBOD5)	30.7	25.0	mg/L	Average Monthly	NPDES average monthly exceedance was due to the elevated weekly average CBOD5 results. It should be noted; the weekly average was not exceeded throughout the month of March. In addition, a slight increase in flow and limited adequate treatment in the aeration tanks also may have contributed to the average monthly exceedance. In 2025, Operations have scheduled to replace inefficient airlines in the aeration tanks. In addition, further investigation will take place throughout the plant for potential upgrades to other processes.
Apr-24	102	Fecal Coliform	> 2419.6	10000	No./100 ml	Instantaneous Maximum	Heavy rain throughout the day was the root cause. The amount of precipitation increased the flow and amount of grit/debris into the plant. See Non-Compliance Reporting Form for more details.
Apr-24	102	Fecal Coliform	> 7	2000	No./100 ml	Geometric Mean	the one-time exceedance on 4/3/24 (>2,419.6) caused the geometric mean to have a ">" automatically triggering an exceedance. See attached Non-Compliance Reporting Form for more details.
Dec-21	102	Fecal Coliform	> 24196.0	10000	No./100 ml	Instantaneous Maximum	
Dec-21	102	Fecal Coliform	> 336.0	2000	No./100 ml	Geometric Mean	
Jun-21	102	Fecal Coliform	2755.0	1000	No./100 ml	Instantaneous Maximum	The chlorine injector was found to be clogged upon inspection, so there was not a sufficient amount of chlorine reaching the contact tank. The operator cleaned the chlorine injector and a follow-up fecal coliform sample was taken the next day and had a result of >1.0 MPN.

Mar-21	102	Fecal Coliform	> 24196.0	10000	No./100 ml	Instantaneous Maximum
Mar-21	102	Fecal Coliform	> 53.0	2000	No./100 ml	Geometric Mean

Unauthorized Discharges:

MONITORING_PERIOD	DISCHARGE_COMMENTS
Jun-23	A water main break on Euclid Ave reached the catch basins and caused an overflow at the Dravosburg Regulator.
May-23	Raw Sewage Pumps clogged and faulted causing the sewage to back up in the line and overflowed. The Mechanic cleared out the clogged pumps and found what appeared to be material from cut out taps from a lining project performed in Dravosburg. The contractors were then reminded to remove any debris created by the lining project.
Nov-21	6 inch cast iron force main had 2 foot hole along bottom of pipe. Water reached the surface creating wet spot in the homeowners yard. Colosimo repaired the broken section of pipe while using vactor truck to remove water from the work site during repair.
Nov-21	6 inch cast iron force main had leak in a previously repaired location. Location of this break was uphill from the initial break that occurred 11/8/21. Colosimo pumped water from dig site to gravity manhole, and made the repair to the broken pipe.
Nov-21	This is the 4th line break in 3 days, 6 inch cast iron force main. Water reached the surface on the street. Colosimo repaired the broken section of pipe while using vactor truck to remove water from the work site during repair.
Nov-21	This is the third line break in 3 days (6 inch cast iron force main). Water reached the surface and flowed to nearest catch basin on the street. Colosimo repaired the broken section of pipe while using vactor truck to remove water from the work site during repair.

Compliance Status: Facility is in general compliance with no open violations or pending enforcement actions.

Completed by: Amanda Illar

Completed date: 12/4/25

Development of Effluent Limitations

IMP 102 **Design Flow (MGD)** 0.48
Latitude 40º 20' 59.00" **Longitude** -79º 53' 3.00"
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
$CBOD_5$	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	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: The discharge was evaluated using WQM 7.0 Version 1.1 (Attachment 2) to evaluate $CBOD_5$, Ammonia Nitrogen, and Dissolved Oxygen. The modeling results show the above technology based effluent limitations are appropriate.

For existing discharges, if WQM modeling results for summer indicates that an average monthly limit of 25 mg/L (ammonia-nitrogen) is acceptable, the application manager will generally establish a year-round monitoring requirement for ammonia-nitrogen (Section I.A, Note 5, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits).

Water Quality-Based Limitations

Comments: Based upon module output files (WQM 7.0, TMS, and TRC_CALC), no WQBELs will be established at this time for this facility (Attachments 2, 3, & 4).

Best Professional Judgment (BPJ) Limitations

Comments: A minimum Dissolved Oxygen (DO) limit of 4.0 mg/L will be established based on BPJ to ensure adequate operation and maintenance (Section I.A, Note 6, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits).

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.

Additional Considerations

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Departments Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits (Document No. 386-0400-001).

Mass loading limits will be established for $CBOD_5$, TSS, NH_3-N, and where necessary Total P and Total N. In general, average monthly mass loading limits will be established for $CBOD_5$, TSS, NH_3-N, and where necessary Total P and Total N, and average weekly mass loading limits will be established for $CBOD_5$ and TSS (Section IV, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits).

For POTWs with design flows greater than 2,000 GPD and for non-municipal sewage facilities that service municipalities or portions thereof, the application manager will establish influent BOD_5 and TSS monitoring in the permit using the same frequency and sample type as is used for other effluent parameters (Section IV.E.8, SOP No BCW-PWT-002, New and Reissuance Sewage Individual NPDES Permit Applications).

Sewage dischargers will include monitoring, at a minimum, for E. Coli, in new and reissued permits, with a monitoring frequency of 1/quarter for design flows >= 0.05 and < 1.0 MGD per 25 Pa. Code § 92a.061, and Section I.A, Note 12, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

Nutrient monitoring is required to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). The discharge is to waters not impaired for nutrients. A 1/quarter monitoring requirement for Total N & Total P has been added to the permit per 25 Pa. Code § 92a.61 and Section I.A, Note 7 & 8, SOP No. BCW-PMT-033, Establishing Effluent Limitations for Individual Sewage Permits.

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" (386-0400-001), SOPs and/or BPJ.

IMP 102, 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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Daily Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/day	Grab
CBOD5	100.0	160.0	XXX	25.0	40.0	50	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	1/week	8-Hr Composite
TSS	120.0	180.0	XXX	30.0	45.0	60	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Nov 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Oct 31	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
Total Nitrogen	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite
Ammonia-Nitrogen	Report	XXX	XXX	Report	XXX	Report	1/week	8-Hr Composite

IMP 102 , 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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
Total Phosphorus	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	8-Hr Composite

Compliance Sampling Location: IMP 102, located at the discharge pipe of the chlorine contact tank prior to combining with flow from the CSO diversion chamber.

Other Comments: N/A

Attachment 1 – USGS StreamStats Report

StreamStats Report - PA0028401

Region ID: PA
Workspace ID: PA20251001115522325000
Clicked Point (Latitude, Longitude): 40.34890, -79.88327
Time: 2025-10-01 07:55:46 -0400

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	5410	square miles
ELEV	Mean Basin Elevation	1813	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	5410	square miles	2.26	1400
ELEV	Mean Basin Elevation	1813	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	709	ft^3/s
30 Day 2 Year Low Flow	939	ft^3/s
7 Day 10 Year Low Flow	417	ft^3/s
30 Day 10 Year Low Flow	485	ft^3/s
90 Day 10 Year Low Flow	717	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/)

USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.29.3

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

Attachment 2 – WQM 7.0 Version 1.1 – Summer Period

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
	19A	37185	MONONGAHELA RIVER	**16.400**	723.70	5410.00	0.00100	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	0.102	0.00	550.00	0.000	0.000	0.0	653.75	8.00	25.00	7.00	25.00	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
Dravosburg STP	PA0028401	0.4800	0.0000	0.0000	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	3.00	8.38	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
19A	37185	MONONGAHELA RIVER	**16.000**	723.60	5410.50	0.00100	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	0.102	0.00	0.00	0.000	0.000	0.0	730.50	8.00	25.00	7.00	25.00	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 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19A	37185	MONONGAHELA RIVER

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												
16.400	550.00	0.00	550.00	.7426	0.00100	8	653.75	81.72	0.11	0.232	24.99	7.00
Q1-10 Flow												
16.400	352.00	0.00	352.00	.7426	0.00100	NA	NA	NA	0.07	0.362	24.99	7.00
Q30-10 Flow												
16.400	748.00	0.00	748.00	.7426	0.00100	NA	NA	NA	0.14	0.171	25.00	7.00

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 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19A	37185	MONONGAHELA RIVER

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
16.400	Dravosburg STP	11.08	50	11.08	50	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
16.400	Dravosburg STP	1.37	25	1.37	25	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)		
16.40	Dravosburg STP	25	25	25	25	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19A	37185	MONONGAHELA RIVER

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
16.400	0.480	24.993	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
653.750	8.000	81.719	0.105
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.03	0.020	0.03	1.028
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.373	0.208	O'Connor	5
Reach Travel Time (days)			
0.232			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.023	2.03	0.03	7.54
0.046	2.03	0.03	7.54
0.070	2.03	0.03	7.54
0.093	2.03	0.03	7.54
0.116	2.03	0.03	7.54
0.139	2.02	0.03	7.54
0.162	2.02	0.03	7.54
0.186	2.02	0.03	7.54
0.209	2.02	0.03	7.54
0.232	2.02	0.03	7.54

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19A	37185	MONONGAHELA RIVER

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)
16.400	Dravosburg STP	PA0028401	0.480	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

Attachment 3 – TMS Version 1.4

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Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Dravosburg Borough STP** NPDES Permit No.: **PA0028401** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Treated 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
0.48	100	7						

					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		836									
	Chloride (PWS)	mg/L		291									
	Bromide	mg/L		0.116									
	Sulfate (PWS)	mg/L		82.9									
	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		22									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L											
	Dissolved Iron	µg/L											
	Total Iron	µg/L											
	Total Lead	µg/L		1									
	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		32									
	Total Molybdenum	µg/L											
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										
	Carbon Tetrachloride	µg/L	<										
	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										

Group 3	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 1.4, May 2023

Stream / Surface Water Information

Dravosburg Borough STP, NPDES Permit No. PA0028401, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: Monongahela River

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	037185	16.4	723.7	5410	0.001		Yes
End of Reach 1	037185	16	723.6	5410.5	0.001		Yes

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

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	16.4	0.1016	550			653.75	8					100	7		
End of Reach 1	16	0.1016				730.5	8								

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	16.4														
End of Reach 1	16														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Dravosburg Borough STP, NPDES Permit No. PA0028401, 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	Complete Mix Time (min)
16.4	550		550	0.743	0.001	8.	653.75	81.719	0.105	0.232	816.477
16	550.051		550.0508								

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	Complete Mix Time (min)
16.4	1845.29		1845.29	0.743	0.001	13.621	653.75	47.995	0.207	0.118	368.192
16	1845.444		1845.44								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.136 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

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	1,419	Chem Translator of 0.96 applied
Total Lead	0	0		0	64.581	81.6	8,278	Chem Translator of 0.791 applied
Total Zinc	0	0		0	117.180	120	12,149	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 720 PMF: 0.939 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

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	8.956	9.33	6,498	Chem Translator of 0.96 applied
Total Lead	0	0		0	2.517	3.18	2,216	Chem Translator of 0.791 applied

Total Zinc	0	0		0	118.139	120	83,458	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 720 PMF: 0.939 Analysis Hardness (mg/l): N/A Analysis pH: N/A

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	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): ###### PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

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	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

Pollutants	*Mass Limits*		*Concentration Limits*				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			

☑ ***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
Total Copper	910	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	2,216	µg/L	Discharge Conc ≤ 10% WQBEL
Total Zinc	7,787	µg/L	Discharge Conc ≤ 10% WQBEL

Attachment 4 – TRC_CALC

TRC_CALC

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

550	= Q stream (cfs)	0.5	= CV Daily
0.48	= Q discharge (MGD)	0.5	= CV Hourly
30	= 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 =	236.296	1.3.2.iii	WLA cfc =	230.363
PENTOXSD TRG	5.1a	LTAMULT afc =	0.373	5.1c	LTAMULT cfc =	0.581
PENTOXSD TRG	5.1b	LTA_afc=	88.050	5.1d	LTA_cfc =	133.922

Source		Effluent Limit Calculations		
PENTOXSD TRG	5.1f	AML MULT =	1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) =	0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) =	1.635	

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)