Pennsylvania Department of Environmental Protection

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0234079**
Facility Type	**Municipal**	APS ID	**1079708**
Major / Minor	**Major**	Authorization ID	**1424803**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Tiadaghton Valley Municipal Authority (TVMA)**	Facility Name	**Tiadaghton Valley Municipal Authority WWTP**
Applicant Address	290 Rice Road	Facility Address	290 Rice Road
	Jersey Shore, PA 17740-8817		Jersey Shore, PA 17740-8817
Applicant Contact	Shawn Lorson	Facility Contact	Shawn Lorson
Applicant Phone	(570) 398-0104	Facility Phone	(570) 398-0104
Client ID	288264	Site ID	749166
Ch 94 Load Status	Not Overloaded	Municipality	Nippenose Township
Connection Status	No Limitations	County	Lycoming
Date Application Received	January 25, 2023	EPA Waived?	No
Date Application Accepted	February 3, 2023	If No, Reason	Major Facility, Significant CB Discharge

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

Summary of Review

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.

Approve	Deny	Signatures	Date
X		Jonathan P. Peterman / Project Manager	June 26, 2025
X		Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	June 26, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	1.05
Latitude	41º 11' 58.65"	Longitude	-77º 14' 20.26"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	West Branch Susquehanna River	Stream Code	18668
NHD Com ID	66917281	RMI	55.5
Drainage Area	5230 mi^2	Yield (cfs/mi^2)	0.01
Q_{7-10} Flow (cfs)	279	Q_{7-10} Basis	USGS Stream Gauge 01551500
Elevation (ft)	530	Slope (ft/ft)	n/a
Watershed No.	10-A	Chapter 93 Class.	WWF-MF
Existing Use	WWF-MF	Existing Use Qualifier	n/a
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, pH		
Source(s) of Impairment	Acid Mine Drainage		
TMDL Status	Issued 7/2/2009	Name	West Branch Susquehanna River Watershed TMDL
Nearest Downstream Public Water Supply Intake	PA American Water White Deer		
PWS Waters	West Branch of Susquehanna River	Flow at Intake (cfs)	682
PWS RMI	10.5	Distance from Outfall (mi)	50

Changes Since Last Permit Issuance: The updated Q_{7-10} data was obtained from the updated stream gage information obtained from *Stuckey, M.H., and Roland, M.A., 2011, Selected Streamflow Statistics for Streamgage Locations In and Near Pennsylvania*. A comparative analysis was previously conducted using the associated stream gage (01515000) which is located downstream of the discharge location in Williamsport. Q_{7-10} calculations are attached in Appendix A. As previously described in the 11/17/2011 fact sheet, the river is divided by a large island at the discharge point. Therefore, the above $Q_{7,10}$ was calculated at 50% of the $Q_{7,10}$ of the entire river. The reach length used for modeling purposes is from the discharge point to the confluence of the river below the island, which is approximately 0.5 miles.

Other Comments: None.

Anti-Backsliding

In accordance with 40 CFR 122.44(l)(1) and (2), this permit does not contain effluent limitations, standards, or conditions that are less stringent than the previous permit.

Sludge Use and Disposal Description and Location(s)

Approximately 102 dry tons are sent to the Wayne Twp. Landfill annually. There is a currently a WQM permit for new sludge drying beds.

Hauled-In Wastes

The application indicates that the facility receives hauled-in waste from residential septage haulers. The annual average volume is approximately 2,624,763 gallons. A Part-C condition will be placed in the draft permit.

TMDL Impairment

The Department's Geographic Information System (GIS) shows that the West Branch Susquehanna River is impaired and a TMDL does exist for the stream segment. High levels of metals caused these impairments (iron, manganese, aluminum) as well as pH. All impairments resulted from acid mine drainage. The TMDL addresses the three primary metals associated with acid mine drainage (iron, manganese, aluminum). There is currently no industrial waste being discharged into the treatment plant and this discharge is not expected to contribute to the level of metals in the stream. Given the regulations contained in 40 CFR §122.44(d)(1)(ii)&(iii), it can be determined that the type of effluent from this facility has no "Reasonable potential to cause, or contributes to an in-stream excursion above the allowable ambient concentration of a State numeric criteria within a State water quality standard for an individual pollutant." However, monitoring requirements for metals (iron, manganese and aluminum) were previously placed in the permit because point sources in the segment where the TMDL does not assign any wasteload allocations are not authorized to discharge these metals of concern. The result from the monitoring that was conducted over the previous permit cycles demonstrates that the facility is not contributing to this impairment and no furth monitoring is required. The result indicated that the 90th percentile discharge concentrations for these parameters are below water quality criteria. Additionally, the highest discharge concentration from the past 5 years of eDMR data was input into the TMS model and the model did not require monitoring or effluent limits. Therefore, the monitoring requirements will be removed until WLA are assigned to the whole watershed or the data indicates that the facility is contributing to the impairment. The monitoring results for these metals are attached in the Appendix E.

Chesapeake Bay Requirements

In 2010, the EPA established the Chesapeake Bay Total Maximum Daily Load (TMDL). The Chesapeake Bay TMDL sets limits on the amount of nutrients and sediment that can enter the Bay and its tidal rivers to meet water quality goals. In order to address the TMDL requirements, Pennsylvania developed a Chesapeake Watershed Implementation Plan (WIP) – Phase I. Since the publication of Pennsylvania's Phase I Chesapeake WIP in January 2011 and the Chesapeake Bay TMDL, several activities have occurred that necessitated the development of the Phase II WIP. Initially, a phased approach was utilized which imposed TN and TP cap loads in reissued permits for significant sewage dischargers. Accordingly, TVMA's renewed permit, issued 3/16/2012, included these TN and TP cap loads. In accordance with the Phase II WIP, the offsets were previously removed from the cap load and recognized in a footnote included in Part A of the permit. Per the April 6, 2015 revisions to the Chesapeake Bay Watershed Implementation Plan (WIP), Phase II, the monitoring frequencies for the Nitrogen series and Total Phosphorus were increased from 1/week to 2/week. Additionally, the Chesapeake Bay language at Part C I of the permit has been revised to reflect the revised WIP Phase III.

The limitations and monitoring requirements specified below are proposed for the draft permit, to comply with Pennsylvania's Chesapeake Bay Tributary Strategy:

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
	Monthly	Annual	Monthly	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Net Total Nitrogen	Report	19,178	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	2,557	XXX	XXX	XXX	XXX	1/month	Calculation

*TN = 1.05 MGD x 6.0 mg/l x 8.34 x 365 days/yr = 19,178 lb/yr
**TP = 1.05 MGD x 0.8 mg/l x 8.34 x 365 days/yr = 2,557 lb/yr

In addition to the above cap loads, the Department did approve nitrogen offsets of 5,000 lbs per year in a 9/14/2015 letter correspondence. The offsets were granted after verification of 200 EDUs that were built prior to 2003. As mentioned above, these offsets will be accounted for in a Chesapeake Bay footnote in Part A of the permit.

Treatment Facility Summary

Treatment Facility Name: Tiadagton Valley Municipal Authority WWTP

WQM Permit No.	Issuance Date	Comments
4111404 A-2	Pending	Sludge Drying bed upgrades.
4111404 A-1	10/31/2016	Railroad Street Pump Stations improvements.
4111404	3/16/2012	New plant construction.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Phosphorus Reduction	Sequencing Batch Reactor	Ultraviolet	1.05
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
1.5	4301	Not Overloaded	None	Landfill

Treatment Facility Name: Tiadaghton Valley Municipal Authority WWTP
Tributary Sewer System Information: All sewer systems are 100% separated. The Tiadaghton Valley Municipal Authority Wastewater Treatment Plant serves The following areas:

Municipality Served	Flow Contribution %
Jersey Shore Borough	86
Porter Township	8
Nippenose Township	6
Total	100

The discharge flow rates for the previous year (2022), in MGD, are as follows:

Existing Annual Average	Maximum Monthly Average	Month of Highest Flow
0.697	1.03	February 2022

Treatment System Components (See Appendix E for Plant Process Flow Diagram):
- The plant consists of a comminutor, mechanically cleaned influent screen, manual bar screen, vortex grit system, anaerobic tanks (3), anoxic/sludge return tanks (3), sequencing batch reactor tanks (3), a post equalization tank, and UV disinfection.

Compliance Sampling Location: Discharge from the UV tank.
Changes Since Last Permit Issuance: None.

Industrial Users

The application indicates that there are no industrial users that discharge to this facility.

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:

The dilution series used for the tests was: 100%, 60%, 30%, 2%, and 1%. See section below for TIWC. See Appendix F for WETT Spreadsheet.

Summary of Four Most Recent Test Results
Refer to the four most recent DEP WET Analysis Spreadsheets are attached in Appendix E. All results indicate a passing result.

TST Data Analysis

Test Date	*Ceriodaphnia* Results (Pass/Fail)		*Pimephales* Results (Pass/Fail)	
	Survival	Reproduction	Survival	Growth
Sept. 2019	Pass	Pass	Pass	Pass
June 2020	Pass	Pass	Pass	Pass
June 2021	Pass	Pass	Pass	Pass
May 2022	Pass	Pass	Pass	Pass

***** *A "passing" result is that in which the replicate data for the TIWC is not statistically significant from the control condition. This is exhibited when the calculated t value ("T-Test Result") is greater than the critical t value. A "failing" result is exhibited when the calculated t value ("T-Test Result") is less than the critical t value.*

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: No reasonable potential can be assumed.

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

Acute Partial Mix Factor (PMFa): **0.082** Chronic Partial Mix Factor (PMFc): **0.574**

1. Determine IWC – Acute (IWCa):

$(Q_d \times 1.547) / ((Q_{7\text{-}10} \times PMFa) + (Q_d \times 1.547))$

[(1.05 MGD x 1.547) / ((279 cfs x 0.051) + (1.05 MGD x 1.547))] x 100 = **6.75%**

Is IWCa < 1%? ☐ **YES** ☒ **NO (YES - Acute Tests Required OR NO - Chronic Tests Required)**

If the discharge is to the tidal portion of the Delaware River, indicate how the type of test was determined:

No.

Type of Test for Permit Renewal: **Chronic**

2a. Determine Target IWCa (If Acute Tests Required)

TIWCa = IWCa / 0.3 = N/A**%**

2b. Determine Target IWCc (If Chronic Tests Required)

$(Q_d \times 1.547) / (Q_{7\text{-}10} \times PMFc) + (Q_d \times 1.547)$

[(1.05 MGD x 1.547) / ((279 cfs x 0.574) + (1.05 MGD x 1.547))] x 100 = **0.42%**

3. Determine Dilution Series

(NOTE – check Attachment C of WET SOP for dilution series based on TIWCa or TIWCc, whichever applies).

Dilution Series = 100%, 60%, 30%, 2%, and 1%.

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

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

If WET limits will be established, identify the species and the limit values for the permit (TU).

N/A.

If WET limits will not be established, but reasonable potential was determined, indicate the rationale for not establishing WET limits:

N/A.

Part C of the permit will contain following requirements for this major sewage facility:

1. Part C Condition 114 “Whole Effluent Toxicity (WET)”

Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily 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	XXX	9.0 Daily Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	Report	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	218	350	XXX	25	40	50	2/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Suspended Solids	262	394	XXX	30	45	60	2/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
Aluminum, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite
Copper, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite
Iron, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite
Manganese, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite
Zinc, Total	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite
Ultraviolet light intensity (uW/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered

The existing effluent limits for Outfall 001 were based on a design flow of 1.05 MGD.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 1.05
Latitude 41º 12' 8.00" **Longitude** -77º 13' 44.00"
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)

Water Quality-Based Limitations

To establish whether or not water-quality based effluent limitations (WQBELs) are required, the Department models in-stream conditions. In order to determine limitations for CBOD5, ammonia-N and dissolved oxygen, the Department utilizes the WQM 7.0 v1.0b model and in order to determine limitations for toxics, the Department utilizes the Toxics Management Spreadsheet.

WQM 7.0 for Windows, Version 1.0b, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen
The model was run using the latest information on Q7-10 stream flow, background water quality, average annual design flow, and other discharge characteristics. The existing technology based effluent limit for $CBOD_5$ (25 mg/l) and NH3-N (25 mg/l) were used as inputs for the modeling. The DO minimum daily average criterion from §93.7 (5 mg/L for WWF) was used for the in-stream objective for the model. The summary of the output is as follows:

Parameter	Effluent Limit		
	30 Day Average	Maximum	Minimum
CBOD5	25	N/A	N/A
Ammonia-N	25	50	N/A
Dissolved Oxygen	N/A	N/A	3

The model does not recommend water-quality based effluent limitations with regards to CBOD5, Ammonia-N, and dissolved oxygen. Refer to Appendix B for the WQM 7.0 inputs and results. Based on the model output, the existing limitations are appropriate and will be maintained.

Toxics Management Spreadsheet (TMS)
This model is a single discharge wasteload allocation program for toxics that uses a mass-balance water quality analysis to determine recommended water quality-based effluent limits. The model incorporates consideration for mixing, first-order decay and other factors to computes a Wasteload Allocation (WLA) for each applicable criterion. Finally, the model determines a maximum water quality-based effluent limitation (WQBEL) for each parameter and outputs the more stringent of the WQBEL or the input concentration. The output of which is the recommends average monthly and maximum daily effluent limitations.

Sampling for pollutant groups was submitted with the application. This sampling information and the receiving stream information was entered into the Toxics Management Spreadsheet. The modeling results indicated that there are no parameters that were candidates for monitoring or limitations. Also, the highest discharge concentration from the past 5 years of eDMR data for copper and zinc were input into the TMS model and the model did not require monitoring or effluent limits. Therefore, the monitoring requirements will be removed. Refer to Appendix C for TMS inputs and results.

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 the abovementioned 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) 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	Weekly Average	Daily 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	XXX	9.0 Daily Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	Report	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	218	350	XXX	25	40	50	2/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Suspended Solids	262	394	XXX	30	45	60	2/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
Ultraviolet light intensity (uW/cm²)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
E. Coli	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab

*The proposed effluent limits for Outfall 001 were based on a design flow of 1.05 MGD.

General Information
All of the limits proposed above are consistent with other permits issued for major wastewater treatment plants in the region. The associated mass-based limits (lbs/day) for all parameters were based on the formula: design flow (average annual) (MGD) x concentration limit (mg/L) at design flow x conversion factor (8.34). All effluent limits were then rounded down in accordance with the rounding rules established in the *Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001)*, Chapter 5 - Specifying Effluent Limitations in NPDES Permits.

Flow
Reporting of the average monthly and daily maximum flow is consistent with monitoring requirements for other treatment plants of this size.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)
The results of the WQM 7.0 model show that the previously applied secondary treatment standards (25 PA Code §92a.47 (a) (1&2)) for $CBOD_5$ are protective of water quality and will remain.

Total Suspended Solids (TSS)
The previously applied technology based secondary treatment standards (25 PA Code §92a.47 (a) (1&2)) for TSS will remain as well.

pH
CFR Title 40 §133.102(c) and 25 PA Code §95.2(1) provide the basis of effluent limitations for pH. The existing limits will remain.

Fecal Coliforms
The existing fecal coliform limits with I-max limits were updated from the previous Chapter 92 code to correspond with what is specified in the updated 25 PA Code § 92a.47 (a)(4)&(5).

U.V. Intensity (uW/cm^2)
The facility a meter for this monitoring and the daily sample type (Meter) is appropriate. The output of the existing meter has been verified to report ultraviolet light intensity.

Dissolved Oxygen (DO)
Given results of the WQM 7.0 model, a discharge of effluent from this facility with a DO concentration of 3 mg/l would not result in an exceedance of water quality requirements for this stream. It is anticipated, based on similar technology, that the DO concentration in the effluent would be greater than 3.0 mg/l. Therefore, based on BPJ, only monitoring will be required for this facility. This will also provide historical data to establish baseline DO levels in the effluent for future reviews.

E. Coli
25 PA Code § 92a.61 provide the basis of monitoring requirements for E. Coli. Monthly monitoring will be required going forward.

Influent BOD_5 and TSS
The Department requires the reporting of raw sewage influent monitoring for BOD_5 and TSS in all POTW permits. This provides the Department with the ability to monitor the percent removal of each parameter as stipulated in section 2 of the Part A conditions and maintain records of the BOD_5 loading as required by 25 Pa. Code Chapter 94. The monitoring frequencies and sample types are identical to the effluent sampling.

Per- and Polyfluoroalkyl Substances (PFAS)
Scientific studies have shown that exposure to some Per- and Polyfluoralkyl Substances (PFAS) in the environment is linked to harmful health effects in humans and animals. As part of DEP's initiative to collect more data pertaining to PFAS, quarterly monitoring for PFAS-related compounds PFOA, PFOS, HFPO-DA, and PFBS has been proposed. This screening was not conducted during the application process. (This updated application requirement was introduced after the application was submitted.) The following footnote will be included in part A of the permit: "The permittee may discontinue monitoring for PFOA, PFOS, HFPO-DA, and PFBS if the results in 4 consecutive monitoring periods indicate non-detect results at or below Quantitation Limits of 4.0 ng/L for PFOA, 3.7 ng/L for PFOS, 3.5 ng/L for PFBS and 6.4 ng/L for HFPO-DA. When monitoring is discontinued, permittees must enter a No Discharge Indicator (NODI) Code of "GG" on DMRs."

Compliance History

Summary of Inspections –The last inspection was conducted by the Department on 4/22/25. The inspection did not reveal any issues and the facility was operating normally.
WMS Query Summary -A WMS Query was run at *Reports - Violations & Enforcements – Open Violations for Client Report* to determine whether there are any unresolved violations associated with the client that will affect issuance of the permit (per CSL Section 609). This query revealed that there were no unresolved violations.

Compliance History

DMR Data for Outfall 001 (from March 1, 2024 to February 28, 2025)

Parameter	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24
Flow (MGD) Average Monthly	0.549	0.491	0.606	0.523	0.545	0.511	0.722	0.535	0.510	0.695	0.929	0.736
Flow (MGD) Daily Maximum	1.408	0.570	1.434	0.786	0.807	0.732	2.53	1.201	0.845	1.293	3.379	1.412
pH (S.U.) Daily Minimum	6.59	6.66	6.63	6.62	6.71	6.6	6.6	6.57	6.65	6.71	6.78	6.66
pH (S.U.) Daily Maximum	6.89	6.80	6.81	6.86	7.01	6.86	6.85	6.86	6.98	6.95	7.10	6.93
DO (mg/L) Daily Minimum	1.73	1.84	1.65	1.71	1.08	1.65	1.65	1.67	1.18	1.37	1.62	1.63
CBOD5 (lbs/day) Average Monthly	19	10	16	< 10	< 11	< 13	< 15	< 14.0	20	24	27	< 15
CBOD5 (lbs/day) Weekly Average	34	13	19	14	15	< 21	20	23.0	33	63	70	< 19
CBOD5 (mg/L) Average Monthly	4.0	2.0	3.0	< 2.0	< 2.0	< 3.0	< 3.0	< 3.0	5.0	4.0	3.0	< 3.0
CBOD5 (mg/L) Weekly Average	8.0	3.0	4.0	3.0	3.0	< 5.0	4.0	4.0	7.0	7.0	5.0	< 3.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	1646	1252	1227	1678	1339	1377	1178	1288	1863	2446	2067	1927
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	3642	2356	3061	3658	2285	3179	2573	3275	2990	7406	2939	5170
BOD5 (mg/L) Raw Sewage Influent Average Monthly	362.0	283.0	209	363	280	325	199	272.0	411	387	315	325
TSS (lbs/day) Average Monthly	< 53	47	85	70	59	47	61	50	61.0	< 68	103	< 45
TSS (lbs/day) Raw Sewage Influent Average Monthly	1484	1549	1711	1879	2401	1604	1653	1222	1477	1704	2665	2958

TSS (lbs/day) Raw Sewage Influent Daily Maximum	2923	4667	4147	3381	9697	3175	3149	2477	3166	4041	5038	11734
TSS (lbs/day) Weekly Average	66	60	107	95	86	60	89	73	96.0	165	278	57
TSS (mg/L) Average Monthly	< 13	11.0	16	17	< 13	11	11	10.0	14	< 10	12	< 8.0
TSS (mg/L) Raw Sewage Influent Average Monthly	325	347	271	408	498	376	286	256	331	292	385	488
TSS (mg/L) Weekly Average	15	15.0	18	26	18	13	13	15.0	22	19	19	10.0
Fecal Coliform (No./100 ml) Geometric Mean	< 2.0	< 1.0	< 5.0	13.0	< 3.0	< 3.0	< 2.0	< 2.0	< 2.0	< 2.0	< 3.0	< 1.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	16.0	2.0	71.2	35.5	32.3	10.9	6.3	19.5	6.3	9.7	182.9	2.0
UV Intensity (mW/cm²) Daily Minimum	0.192	0.272	0.119	0.274	0.190	0.271	0.307	0.288	0.318	0.312	0.118	0.260
Nitrate-Nitrite (mg/L) Average Monthly	5.356	5.056	3.88	3.616	3.126	4.231	4.24	3.33	2.231	1.777	3.34	3.151
Nitrate-Nitrite (lbs) Total Monthly	614.3	665.2	632.3	483.7	437.7	531.8	691.2	551.9	291.5	284.3	514.7	473.4
Total Nitrogen (mg/L) Average Monthly	7.239	6.815	6.16	5.48	5.03	5.631	5.81	5.11	5.291	4.328	5.18	5.506
Total Nitrogen (lbs) Effluent Net Total Monthly	835.7	891.5	1103.1	722.0	712.8	706.4	990.8	846.9	689.6	817.0	798.2	919.7
Total Nitrogen (lbs) Total Monthly	835.7	891.5	1103.1	722.0	712.8	706.4	990.8	846.9	689.6	817.0	798.2	919.7
Total Nitrogen (lbs) Effluent Net Total Annual						12456						
Total Nitrogen (lbs) Total Annual						11870						
Ammonia (mg/L) Average Monthly	< 0.33	< 0.32	< 0.65	< 0.12	< 0.14	< 0.17	< 0.43	0.11	1.07	< 0.87	0.49	< 0.97
Ammonia (lbs) Total Monthly	< 40.2	< 41.2	< 185.8	< 15.1	< 21.0	< 21.3	< 97.4	18.2	137.4	< 214.1	75.5	< 200.1
Ammonia (lbs) Total Annual						< 2195						

TKN (mg/L) Average Monthly	1.88	1.76	2.28	1.87	1.90	1.40	1.567	1.78	3.06	2.551	1.84	2.355
TKN (lbs) Total Monthly	221.4	226.4	470.8	238.3	275.1	174.6	299.5	295.0	398.1	532.6	283.5	446.3
Total Phosphorus (mg/L) Average Monthly	1.686	0.97	0.63	1.126	1.196	0.539	0.449	1.12	2.728	2.28	3.99	0.655
Total Phosphorus (lbs) Effluent Net Total Monthly	197.9	122.5	106.9	149.2	5.03	68.5	81.4	185.6	351.6	391.7	614.8	102.8
Total Phosphorus (lbs) Total Monthly	197.9	122.5	106.9	149.2	170.3	68.5	81.4	185.6	351.6	391.7	614.8	102.8
Total Phosphorus (lbs) Effluent Net Total Annual						2541						
Total Phosphorus (lbs) Total Annual						2541						
Total Aluminum (mg/L) Daily Maximum			0.22			0.66			0.14			0.13
Total Copper (mg/L) Daily Maximum			0.0059			0.009			0.0057			< 0.005
Total Iron (mg/L) Daily Maximum			0.075			0.14			0.12			0.068
Total Manganese (mg/L) Daily Maximum			0.075			0.11			0.052			0.047
Total Zinc (mg/L) Daily Maximum			0.042			0.058			0.050			0.03

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment **B**)
☒	Toxics Management Spreadsheet (see Attachment **C**)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☒	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

APPENDIX A

$Q_{7\text{-}10}$ ANALYSIS AND STREAM DATA

StreamStats Report

Region ID: PA
Workspace ID: PA20250625115901468000
Clicked Point (Latitude, Longitude): 41.19458, -77.24337
Time: 2025-06-25 07:59:36 -0400

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	5.02	percent
DRNAREA	Area that drains to a point on a stream	5230	square miles
ELEV	Mean Basin Elevation	1649	feet
FOREST	Percentage of area covered by forest	85.7697	percent
GLACIATED	Percentage of basin area that was historically covered by glaciers	10.4325	percent
PRECIP	Mean Annual Precipitation	41	inches
ROCKDEP	Depth to rock	4.6	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	1.71	miles per square mile

USGS
science for a changing world

Prepared in cooperation with the Pennsylvania Department of Environmental Protection

Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania

Open-File Report 2011–1070

U.S. Department of the Interior
U.S. Geological Survey

Table 1. List of U.S. Geological Survey streamgage locations in and near Pennsylvania with updated streamflow statistics.—Continued

[Latitude and Longitude in decimal degrees; mi², square miles]

Streamgage number	Streamgage name	Latitude	Longitude	Drainage area (mi²)	Regulated[1]
01541303	West Branch Susquehanna River at Hyde, Pa.	41.005	-78.457	474	Y
01541308	Bradley Run near Ashville, Pa.	40.509	-78.584	6.77	N
01541500	Clearfield Creek at Dimeling, Pa.	40.972	-78.406	371	Y
01542000	Moshannon Creek at Osceola Mills, Pa.	40.850	-78.268	68.8	N
01542500	WB Susquehanna River at Karthaus, Pa.	41.118	-78.109	1,462	Y
01542810	Waldy Run near Emporium, Pa.	41.579	-78.293	5.24	N
01543000	Driftwood Branch Sinnemahoning Creek at Sterling Run, Pa.	41.413	-78.197	272	N
01543500	Sinnemahoning Creek at Sinnemahoning, Pa.	41.317	-78.103	685	N
01544000	First Fork Sinnemahoning Creek near Sinnemahoning, Pa.	41.402	-78.024	245	Y
01544500	Kettle Creek at Cross Fork, Pa.	41.476	-77.826	136	N
01545000	Kettle Creek near Westport, Pa.	41.320	-77.874	233	Y
01545500	West Branch Susquehanna River at Renovo, Pa.	41.325	-77.751	2,975	Y
01545600	Young Womans Creek near Renovo, Pa.	41.390	-77.691	46.2	N
01546000	North Bald Eagle Creek at Milesburg, Pa.	40.942	-77.794	119	N
01546400	Spring Creek at Houserville, Pa.	40.834	-77.828	58.5	N
01546500	Spring Creek near Axemann, Pa.	40.890	-77.794	87.2	N
01547100	Spring Creek at Milesburg, Pa.	40.932	-77.786	142	N
01547200	Bald Eagle Creek below Spring Creek at Milesburg, Pa.	40.943	-77.786	265	N
01547500	Bald Eagle Creek at Blanchard, Pa.	41.052	-77.604	339	Y
01547700	Marsh Creek at Blanchard, Pa.	41.060	-77.606	44.1	N
01547800	South Fork Beech Creek near Snow Shoe, Pa.	41.024	-77.904	12.2	N
01547950	Beech Creek at Monument, Pa.	41.112	-77.702	152	N
01548005	Bald Eagle Creek near Beech Creek Station, Pa.	41.081	-77.549	562	Y
01548500	Pine Creek at Cedar Run, Pa.	41.522	-77.447	604	N
01549000	Pine Creek near Waterville, Pa.	41.313	-77.379	750	N
01549500	Blockhouse Creek near English Center, Pa.	41.474	-77.231	37.7	N
01549700	Pine Creek below Little Pine Creek near Waterville, Pa.	41.274	-77.324	944	Y
01550000	Lycoming Creek near Trout Run, Pa.	41.418	-77.033	173	N
01551500	WB Susquehanna River at Williamsport, Pa.	41.236	-76.997	5,682	Y
01552000	Loyalsock Creek at Loyalsockville, Pa.	41.325	-76.912	435	N
01552500	Muncy Creek near Sonestown, Pa.	41.357	-76.535	23.8	N
01553130	Sand Spring Run near White Deer, Pa.	41.059	-77.077	4.93	N
01553500	West Branch Susquehanna River at Lewisburg, Pa.	40.968	-76.876	6,847	Y
01553700	Chillisquaque Creek at Washingtonville, Pa.	41.062	-76.680	51.3	N
01554000	Susquehanna River at Sunbury, Pa.	40.835	-76.827	18,300	Y
01554500	Shamokin Creek near Shamokin, Pa.	40.810	-76.584	54.2	N
01555000	Penns Creek at Penns Creek, Pa.	40.867	-77.048	301	N
01555500	East Mahantango Creek near Dalmatia, Pa.	40.611	-76.912	162	N
01556000	Frankstown Branch Juniata River at Williamsburg, Pa.	40.463	-78.200	291	N
01557500	Bald Eagle Creek at Tyrone, Pa.	40.684	-78.234	44.1	N
01558000	Little Juniata River at Spruce Creek, Pa.	40.613	-78.141	220	N
01559000	Juniata River at Huntingdon, Pa.	40.485	-78.019	816	LF
01559500	Standing Stone Creek near Huntingdon, Pa.	40.524	-77.971	128	N
01559700	Sulphur Springs Creek near Manns Choice, Pa.	39.978	-78.619	5.28	N
01560000	Dunning Creek at Belden, Pa.	40.072	-78.493	172	N

Table 2. Selected low-flow statistics for streamgage locations in and near Pennsylvania.—Continued

[ft^3/s; cubic feet per second; —, statistic not computed; <, less than]

Streamgage number	Period of record used in analysis[1]	Number of years used in analysis	1-day, 10-year (ft^3/s)	7-day, 10-year (ft^3/s)	7-day, 2-year (ft^3/s)	30-day, 10-year (ft^3/s)	30-day, 2-year (ft^3/s)	90-day, 10-year (ft^3/s)
01546000	1912–1934	17	1.8	2.2	6.8	3.7	12.1	11.2
01546400	1986–2008	23	13.5	14.0	19.6	15.4	22.3	18.7
01546500	1942–2008	67	26.8	29.0	41.3	31.2	44.2	33.7
01547100	1969–2008	40	102	105	128	111	133	117
01547200	1957–2008	52	99.4	101	132	106	142	115
01547500	[2]1971–2008	38	28.2	109	151	131	172	153
01547500	[3]1956–1969	14	90.0	94.9	123	98.1	131	105
01547700	1957–2008	52	.5	.6	2.7	1.1	3.9	2.2
01547800	1971–1981	11	1.6	1.8	2.4	2.1	2.9	3.5
01547950	1970–2008	39	12.1	13.6	28.2	17.3	36.4	23.8
01548005	[2]1971–2000	25	142	151	206	178	241	223
01548005	[3]1912–1969	58	105	114	147	125	165	140
01548500	1920–2008	89	21.2	24.2	50.1	33.6	68.6	49.3
01549000	1910–1920	11	26.0	32.9	78.0	46.4	106	89.8
01549500	1942–2008	67	.6	.8	2.5	1.4	3.9	2.6
01549700	1959–2008	50	33.3	37.2	83.8	51.2	117	78.4
01550000	1915–2008	94	6.6	7.6	16.8	11.2	24.6	18.6
01551500	[2]1963–2008	46	520	578	1,020	678	1,330	919
01551500	[3]1901–1961	61	400	439	742	523	943	752
01552000	1927–2008	80	20.5	22.2	49.5	29.2	69.8	49.6
01552500	1942–2008	67	.9	1.2	3.1	1.7	4.4	3.3
01553130	1969–1981	13	1.0	1.1	1.5	1.3	1.8	1.7
01553500	[2]1968–2008	41	760	838	1,440	1,000	1,850	1,470
01553500	[3]1941–1966	26	562	619	880	690	1,090	881
01553700	1981–2008	28	9.1	10.9	15.0	12.6	17.1	15.2
01554000	[2]1981–2008	28	1,830	1,990	3,270	2,320	4,210	3,160
01554000	[3]1939–1979	41	1,560	1,630	2,870	1,880	3,620	2,570
01554500	1941–1993	53	16.2	22.0	31.2	25.9	35.7	31.4
01555000	1931–2008	78	33.5	37.6	58.8	43.4	69.6	54.6
01555500	1931–2008	78	4.9	6.5	18.0	9.4	24.3	16.6
01556000	1918–2008	91	43.3	47.8	66.0	55.1	75.0	63.7
01557500	1946–2008	63	2.8	3.2	6.3	4.2	8.1	5.8
01558000	1940–2008	69	56.3	59.0	79.8	65.7	86.2	73.7
01559000	1943–2008	66	104	177	249	198	279	227
01559500	1931–1958	28	9.3	10.5	15.0	12.4	17.8	15.8
01559700	1963–1978	16	.1	.1	.2	.1	.3	.2
01560000	1941–2008	68	8.5	9.4	15.6	12.0	20.2	16.2
01561000	1932–1958	27	.4	.5	1.6	.8	2.5	1.7
01562000	1913–2008	96	64.1	67.1	106	77.4	122	94.5
01562500	1931–1957	27	1.1	1.6	3.8	2.3	5.4	3.7
01563200	[2]1974–2008	35	—	—	—	112	266	129
01563200	[3]1948–1972	25	10.3	28.2	86.1	64.5	113	95.5
01563500	[2]1974–2008	35	384	415	519	441	580	493
01563500	[3]1939–1972	34	153	242	343	278	399	333
01564500	1940–2008	69	3.6	4.2	10.0	6.2	14.4	10.6

APPENDIX B

WQM 7.0 MODEL INPUT/OUTPUT

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
10D	18668	WEST BRANCH SUSQUEHANNA RI	**55.500**	530.00	5230.00	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	0.100	0.00	279.00	0.000	0.000	0.0	0.00	0.00	20.00	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
TVMA	PA0234079	1.0500	1.0500	1.0500	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

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
10D	18668	WEST BRANCH SUSQUEHANNA RI	**55.000**	525.00	5235.00	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	0.100	0.00	557.00	0.000	0.000	0.0	0.00	0.00	20.00	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 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA 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												
55.500	279.00	0.00	279.00	1.6243	0.00189	1.227	309.19	252.03	0.74	0.041	20.03	7.00
Q1-10 Flow												
55.500	262.26	0.00	262.26	1.6243	0.00189	NA	NA	NA	0.71	0.043	20.03	7.00
Q30-10 Flow												
55.500	326.43	0.00	326.43	1.6243	0.00189	NA	NA	NA	0.81	0.038	20.02	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	0.94	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.17	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
10D	18668	WEST BRANCH SUSQUEHANNA 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
55.500	TVMA	16.72	50	16.72	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
55.500	TVMA	1.88	25	1.88	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)		
55.50	TVMA	25	25	25	25	3	3	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA RIVER

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
55.500	1.050	20.029	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
309.187	1.227	252.032	0.740
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.13	0.099	0.14	0.702
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.213	6.541	Tsivoglou	5
Reach Travel Time (days)			
0.041			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.004	2.13	0.14	8.23
0.008	2.13	0.14	8.24
0.012	2.13	0.14	8.24
0.017	2.13	0.14	8.24
0.021	2.13	0.14	8.24
0.025	2.13	0.14	8.24
0.029	2.13	0.14	8.24
0.033	2.13	0.14	8.24
0.037	2.13	0.14	8.24
0.041	2.12	0.14	8.24

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA 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)
55.500	TVMA	PA0234079	1.050	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			3

APPENDIX C

TOXICS MANAGEMENT SPREADSHEET

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Toxics Management Spreadsheet
Version 1.4, May 2025

Discharge Information

Instructions | Discharge | Stream

Facility: **TVMA** NPDES Permit No.: **PA0234079** Outfall No.: **001**

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

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
1.05	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		469									
	Chloride (PWS)	mg/L		185									
	Bromide	mg/L		0.093									
	Sulfate (PWS)	mg/L		37.7									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		660									
	Total Antimony	µg/L		0.38									
	Total Arsenic	µg/L		0.63									
	Total Barium	µg/L		24.4									
	Total Beryllium	µg/L	<	0.29									
	Total Boron	µg/L		140									
	Total Cadmium	µg/L		0.13									
	Total Chromium (III)	µg/L	<	1.3									
	Hexavalent Chromium	µg/L	<	2									
	Total Cobalt	µg/L	<	2.5									
	Total Copper	µg/L		16									
	Free Cyanide	µg/L		1.55									
	Total Cyanide	µg/L		0.014									
	Dissolved Iron	µg/L	<	34.6									
	Total Iron	µg/L		230									
	Total Lead	µg/L		0.52									
	Total Manganese	µg/L		110									
	Total Mercury	µg/L	<	0.16									
	Total Nickel	µg/L		2.6									
	Total Phenols (Phenolics) (PWS)	µg/L		0.027									
	Total Selenium	µg/L	<	0.84									
	Total Silver	µg/L	<	0.53									
	Total Thallium	µg/L	<	0.081									
	Total Zinc	µg/L		63									
	Total Molybdenum	µg/L	<	4.7									
	Acrolein	µg/L	<	4									
	Acrylamide	µg/L											
	Acrylonitrile	µg/L	<	1.4									
	Benzene	µg/L	<	0.41									
	Bromoform	µg/L	<	1.5									

Group 3	Carbon Tetrachloride	µg/L	<	0.52										
	Chlorobenzene	µg/L	<	0.42										
	Chlorodibromomethane	µg/L												
	Chloroethane	µg/L	<	0.75										
	2-Chloroethyl Vinyl Ether	µg/L	<	0.34										
	Chloroform	µg/L		1.6										
	Dichlorobromomethane	µg/L	<	0.42										
	1,1-Dichloroethane	µg/L	<	0.26										
	1,2-Dichloroethane	µg/L	<	0.35										
	1,1-Dichloroethylene	µg/L	<	0.28										
	1,2-Dichloropropane	µg/L	<	0.3										
	1,3-Dichloropropylene	µg/L	<	0.66										
	1,4-Dioxane	µg/L	<	1.9										
	Ethylbenzene	µg/L	<	0.31										
	Methyl Bromide	µg/L												
	Methyl Chloride	µg/L												
	Methylene Chloride	µg/L	<	0.75										
	1,1,2,2-Tetrachloroethane	µg/L	<	0.24										
	Tetrachloroethylene	µg/L	<	0.3										
	Toluene	µg/L	<	0.24										
	1,2-trans-Dichloroethylene	µg/L	<	0.33										
	1,1,1-Trichloroethane	µg/L	<	0.43										
	1,1,2-Trichloroethane	µg/L	<	0.46										
	Trichloroethylene	µg/L	<	0.33										
	Vinyl Chloride	µg/L	<	0.28										
Group 4	2-Chlorophenol	µg/L	<											
	2,4-Dichlorophenol	µg/L	<	0.74										
	2,4-Dimethylphenol	µg/L	<	0.79										
	4,6-Dinitro-o-Cresol	µg/L	<	2.1										
	2,4-Dinitrophenol	µg/L	<	2.9										
	2-Nitrophenol	µg/L	<	0.82										
	4-Nitrophenol	µg/L	<	0.43										
	p-Chloro-m-Cresol	µg/L	<	1.1										
	Pentachlorophenol	µg/L	<	1.9										
	Phenol	µg/L	<	0.31										
	2,4,6-Trichlorophenol	µg/L	<	0.28										
Group 5	Acenaphthene	µg/L	<	0.73										
	Acenaphthylene	µg/L	<	0.77										
	Anthracene	µg/L	<	0.8										
	Benzidine	µg/L	<	5.4										
	Benzo(a)Anthracene	µg/L	<	0.94										
	Benzo(a)Pyrene	µg/L	<	0.93										
	3,4-Benzofluoranthene	µg/L	<	0.91										
	Benzo(ghi)Perylene	µg/L	<	0.97										
	Benzo(k)Fluoranthene	µg/L	<	0.87										
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.82										
	Bis(2-Chloroethyl)Ether	µg/L	<	0.86										
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.71										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	0.65										
	4-Bromophenyl Phenyl Ether	µg/L	<	0.76										
	Butyl Benzyl Phthalate	µg/L	<	0.8										
	2-Chloronaphthalene	µg/L	<	0.71										
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.73										
	Chrysene	µg/L	<	0.97										
	Dibenzo(a,h)Anthrancene	µg/L	<	0.92										
	1,2-Dichlorobenzene	µg/L	<	0.73										
	1,3-Dichlorobenzene	µg/L	<	0.69										
	1,4-Dichlorobenzene	µg/L	<	0.69										
	3,3-Dichlorobenzidine	µg/L	<	0.99										
	Diethyl Phthalate	µg/L	<	0.77										
	Dimethyl Phthalate	µg/L	<	0.77										
	Di-n-Butyl Phthalate	µg/L	<	0.98										
	2,4-Dinitrotoluene	µg/L	<	0.57										

	2,6-Dinitrotoluene	µg/L	<	0.67									
	Di-n-Octyl Phthalate	µg/L	<	1.3									
	1,2-Diphenylhydrazine	µg/L	<	0.8									
	Fluoranthene	µg/L	<	0.86									
	Fluorene	µg/L	<	0.74									
	Hexachlorobenzene	µg/L	<	0.98									
	Hexachlorobutadiene	µg/L	<	0.83									
	Hexachlorocyclopentadiene	µg/L	<	0.7									
	Hexachloroethane	µg/L	<	0.7									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.85									
	Isophorone	µg/L	<	0.74									
	Naphthalene	µg/L	<	2.2									
	Nitrobenzene	µg/L	<	0.72									
	n-Nitrosodimethylamine	µg/L	<	0.41									
	n-Nitrosodi-n-Propylamine	µg/L	<	0.7									
	n-Nitrosodiphenylamine	µg/L	<	0.83									
	Phenanthrene	µg/L	<	0.8									
	Pyrene	µg/L	<	0.92									
	1,2,4-Trichlorobenzene	µg/L	<	0.72									
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											

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2025

Stream / Surface Water Information

TVMA, NPDES Permit No. PA0234079, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **West Branch Susquehanna River**

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	018668	55.5	530	5230			Yes
End of Reach 1	018668	55	525	5235			Yes

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

Location	RMI	LFY (cfs/mi²)*	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	55.5	0.1										100	7		
End of Reach 1	55	0.1													

Q_h

Location	RMI	LFY (cfs/mi²)	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	55.5														
End of Reach 1	55														

Diethyl Phthalate	0	0		0	N/A	N/A	N/A	
Dimethyl Phthalate	0	0		0	N/A	N/A	N/A	
Di-n-Butyl Phthalate	0	0		0	N/A	N/A	N/A	
2,4-Dinitrotoluene	0	0		0	0.05	0.05	33.6	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	33.6	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	20.2	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00008	0.00008	0.054	
Hexachlorobutadiene	0	0		0	0.01	0.01	6.72	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	67.2	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.67	
Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.0007	0.0007	0.47	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	3.36	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	2,217	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	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

☑ ***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).

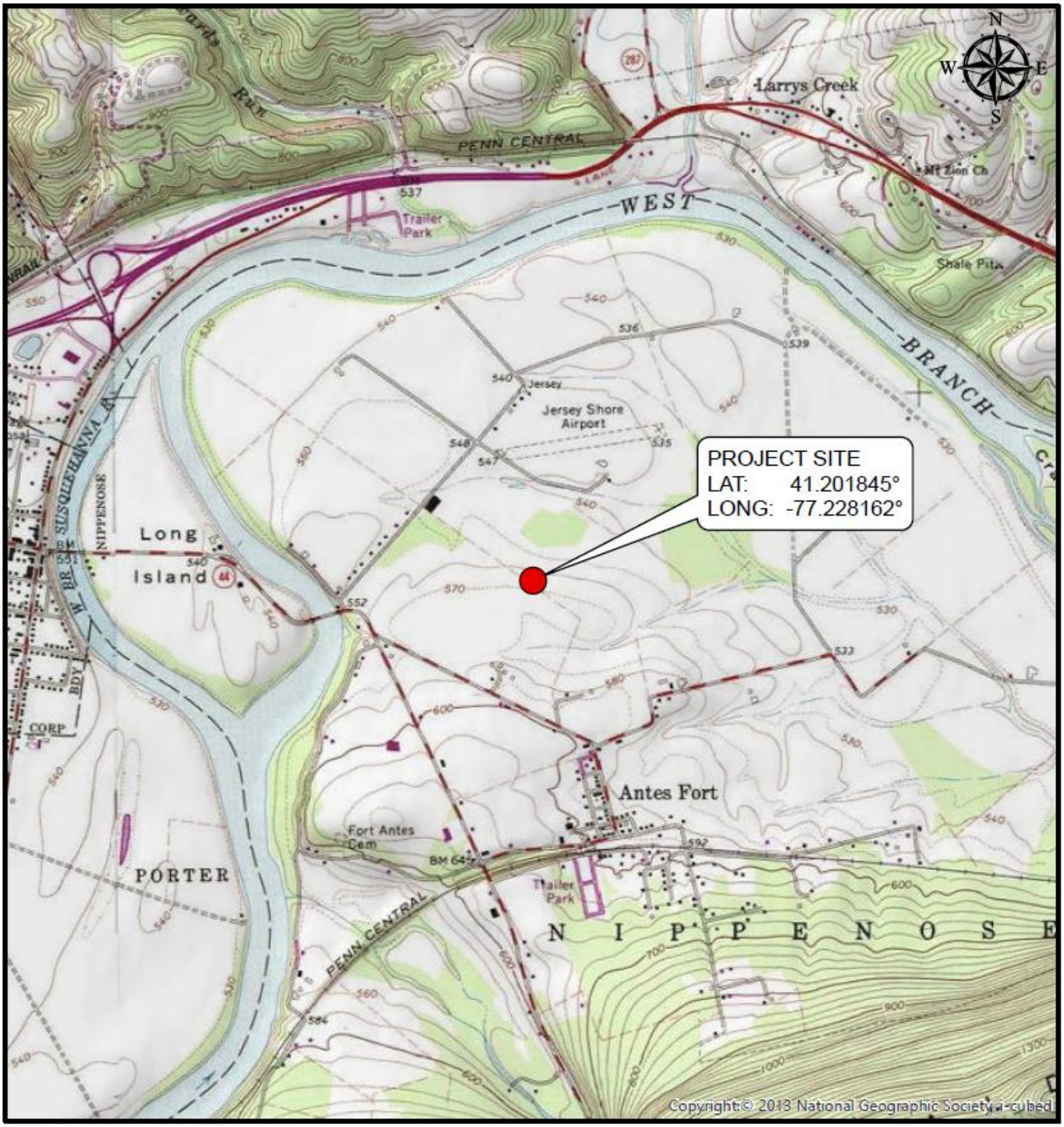
Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	9,732	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	752	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	1,343	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	272,497	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	105,106	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	27.7	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	11,577	µg/L	Discharge Conc < TQL
Hexavalent Chromium	211	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	1,233	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	182	µg/L	Discharge Conc ≤ 10% WQBEL
Free Cyanide	285	µg/L	Discharge Conc ≤ 25% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	40,299	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	484,462	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	427	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	134,331	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	6.72	µg/L	Discharge Conc < TQL
Total Nickel	6,088	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	670	µg/L	Discharge Conc < TQL
Total Silver	49.1	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	32.2	µg/L	Discharge Conc < TQL
Total Zinc	1,555	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	38.9	µg/L	Discharge Conc ≤ 25% WQBEL
Acrylonitrile	40.3	µg/L	Discharge Conc < TQL
Benzene	390	µg/L	Discharge Conc < TQL
Bromoform	4,702	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	269	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorobenzene	13,433	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	233,569	µg/L	Discharge Conc < TQL
Chloroform	766	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	638	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	6,650	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	4,433	µg/L	Discharge Conc < TQL

1,2-Dichloropropane	605	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	181	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	9,135	µg/L	Discharge Conc < TQL
Methylene Chloride	13,434	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	134	µg/L	Discharge Conc < TQL
Tetrachloroethylene	6,717	µg/L	Discharge Conc < TQL
Toluene	7,657	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	13,433	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	38,928	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	369	µg/L	Discharge Conc < TQL
Trichloroethylene	403	µg/L	Discharge Conc < TQL
Vinyl Chloride	13.4	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	1,343	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	8,564	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	269	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	1,343	µg/L	Discharge Conc < TQL
2-Nitrophenol	103,808	µg/L	Discharge Conc < TQL
4-Nitrophenol	29,845	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	2,076	µg/L	Discharge Conc < TQL
Pentachlorophenol	20.2	µg/L	Discharge Conc < TQL
Phenol	537,325	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	1,008	µg/L	Discharge Conc < TQL
Acenaphthene	1,077	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	40,299	µg/L	Discharge Conc < TQL
Benzidine	0.067	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.67	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.067	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.67	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	6.72	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	20.2	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	26,866	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	215	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	3,504	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	13.4	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	107,465	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	80.6	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.067	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	10,640	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	940	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	9,473	µg/L	Discharge Conc ≤ 25% WQBEL

3,3-Dichlorobenzidine	33.6	µg/L	Discharge Conc < TQL
Diethyl Phthalate	51,904	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	32,440	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	1,427	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	33.6	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	33.6	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	20.2	µg/L	Discharge Conc < TQL
Fluoranthene	2,595	µg/L	Discharge Conc < TQL
Fluorene	6,717	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.054	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	6.72	µg/L	Discharge Conc ≤ 25% WQBEL
Hexachlorocyclopentadiene	64.9	µg/L	Discharge Conc < TQL
Hexachloroethane	67.2	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.67	µg/L	Discharge Conc < TQL
Isophorone	4,567	µg/L	Discharge Conc < TQL
Naphthalene	1,817	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	1,343	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.47	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	3.36	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	2,217	µg/L	Discharge Conc < TQL
Phenanthrene	64.9	µg/L	Discharge Conc < TQL
Pyrene	2,687	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	9.4	µg/L	Discharge Conc ≤ 25% WQBEL

APPENDIX D

FACILITY MAP AND SCHEMATIC

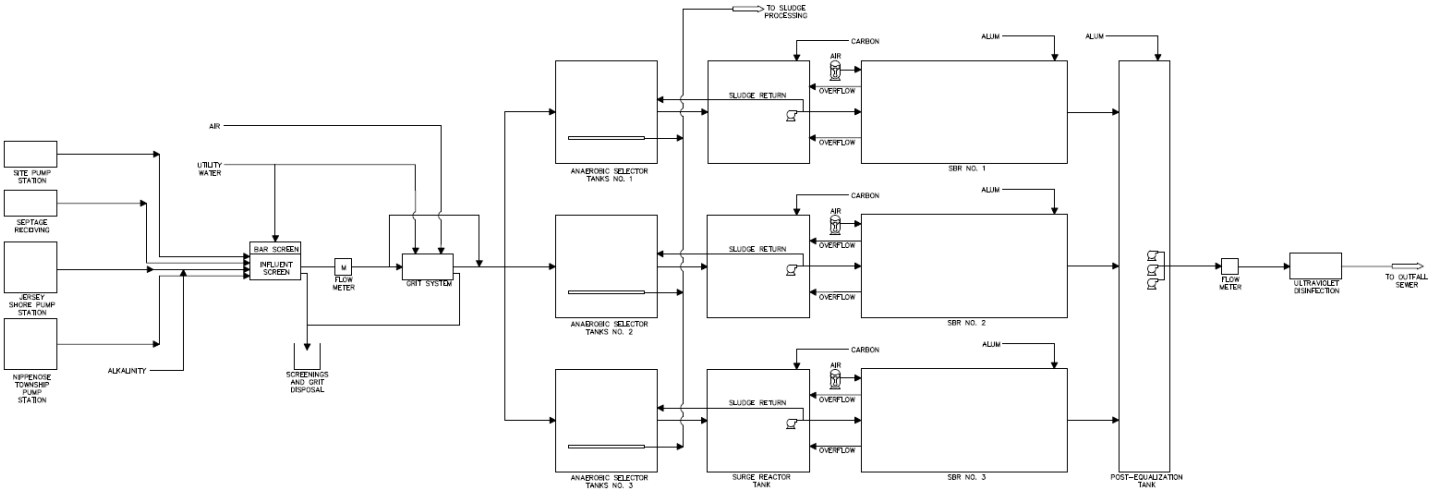


U.S.G.S 7.5 MINUTE SERIES
LINDEN STATION QUADRANGLE
CONTOUR INTERVAL 20 FT
N.G.V.D. 1929

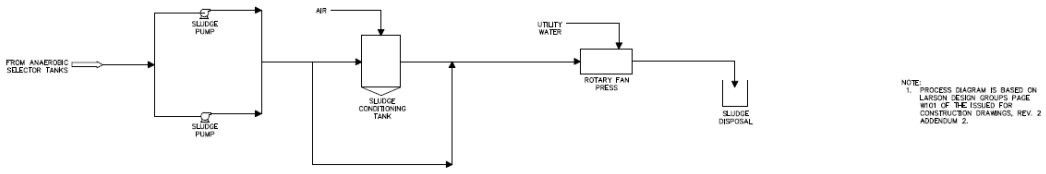
PROJECT LOCATION MAP

TIADAGHTON VALLEY MUNICIPAL AUTHORITY
WASTEWATER TREATMENT PLANT
NIPPENOSE TOWNSHIP, LYCOMING COUNTY, PA

2,500 1,250 0 2,500 5,000 7,500
Feet



PROCESS SCHEMATIC LIQUID STREAM
N.T.S.



PROCESS SCHEMATIC SOLIDS STREAM
N.T.S.

APPENDIX E

WETT INFO

WET Summary and Evaluation

Facility Name	Tiadaghton Valley Municipal Authority WWTP
Permit No.	PA00234079
Design Flow (MGD)	
Q_{7-10} Flow (cfs)	
PMF_a	
PMF_c	

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/17/19			
Ceriodaphnia	Survival	PASS			

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/17/19			
Ceriodaphnia	Reproduction	PASS			

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/17/18			
Pimephales	Survival	PASS			

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/17/18			
Pimephales	Growth	PASS			

Reasonable Potential? NO

Permit Recommendations

Test Type
TIWC % Effluent
Dilution Series , , , , % Effluent
Permit Limit
Permit Limit Species

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.1
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name
Tiadaghton Valley Municipal Authority WWTP

Permit No.
PA00234079

Test Completion Date 9/23/2019

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail **PASS**

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
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9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.1
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name
Tiadaghton Valley Municipal Authority WWTP

Permit No.
PA00234079

Test Completion Date 9/23/2019

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail **PASS**

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	0.1
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name
Tiadaghton Valley Municipal Authority WWTP

Permit No.
PA00234079

Test Completion Date 9/24/2019

Replicate No.	Control	TIWC
1	9	10
2	10	10
3	9	9
4	9	9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	9.250	9.500
Std Dev.	0.500	0.577
# Replicates	4	4

T-Test Result	6.4742
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Growth
TIWC (decimal)	0.1
No. Per Replicate	4
TST b value	0.75
TST alpha value	0.25

Facility Name: Tiadaghton Valley Municipal Authority WWTP

Permit No.: PA00234079

Test Completion Date: 9/24/2019

Replicate No.	Control	TIWC
1	0.605	0.617
2	0.701	0.585
3	0.717	0.516
4	0.645	0.68
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.667	0.600
Std Dev.	0.052	0.068
# Replicates	4	4

T-Test Result	2.5305
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

WET Summary and Evaluation

Facility Name	Tiadaghton Valley Municipal Authorty WWTP
Permit No.	PA00234079
Design Flow (MGD)	
Q_{7-10} Flow (cfs)	
PMF_a	
PMF_c	

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		6/17/20			
Ceriodaphnia	Survival	PASS			

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		6/17/20			
Ceriodaphnia	Reproduction	PASS			

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		6/18/20			
Pimephales	Survival	PASS			

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		6/18/20			
Pimephales	Growth	PASS			

Reasonable Potential? NO

Permit Recommendations

Test Type
TIWC % Effluent
Dilution Series , , , , % Effluent
Permit Limit
Permit Limit Species

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.01
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name
Tiadaghton Valley Municipal Authorty WWTP

Permit No.
PA00234079

Test Completion Date 6/17/2020

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail PASS

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Reproduction
TIWC (decimal)	0.01
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name: Tiadaghton Valley Municipal Authorty WWTP

Permit No.: PA00234079

Replicate No.	Test Completion Date: 6/17/2020 Control	TIWC
1	22	25
2	14	23
3	19	17
4	26	28
5	25	24
6	17	26
7	27	25
8	23	27
9	22	23
10	26	25
11		
12		
13		
14		
15		
Mean	22.100	24.300
Std Dev.	4.280	3.020
# Replicates	10	10
T-Test Result	5.5422	
Deg. of Freedom	17	
Critical T Value	0.8633	
Pass or Fail	PASS	

Replicate No.	Test Completion Date: Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		
T-Test Result		
Deg. of Freedom		
Critical T Value		
Pass or Fail		

Replicate No.	Test Completion Date: Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		
T-Test Result		
Deg. of Freedom		
Critical T Value		
Pass or Fail		

Replicate No.	Test Completion Date: Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		
T-Test Result		
Deg. of Freedom		
Critical T Value		
Pass or Fail		

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	0.01
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name
Tiadaghton Valley Municipal Authorty WWTP

Permit No.
PA00234079

Test Completion Date 6/18/2020

Replicate No.	Control	TIWC
1	10	7
2	9	10
3	10	10
4	9	10
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	9.500	9.250
Std Dev.	0.577	1.500
# Replicates	4	4

T-Test Result	2.7836
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	PASS

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Growth
TIWC (decimal)	0.01
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name
Tiadaghton Valley Municipal Authorty WWTP

Permit No.
PA00234079

Test Completion Date: 6/18/2020

Replicate No.	Control	TIWC
1	5.35	4.64
2	5.94	6.16
3	4.48	4.46
4	5.29	4.36
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	5.265	4.905
Std Dev.	0.600	0.845
# Replicates	4	4

T-Test Result	1.9984
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

WET Summary and Evaluation

Facility Name	Tiadaghton Valley Municipal Authorty WWTP
Permit No.	PA00234079
Design Flow (MGD)	
Q_{7-10} Flow (cfs)	
PMF_a	
PMF_c	

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	6/21/21			
Ceriodaphnia	Survival	PASS			

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	6/21/21			
Ceriodaphnia	Reproduction	PASS			

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	6/22/21			
Pimephales	Survival	PASS			

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	6/22/21			
Pimephales	Growth	PASS			

Reasonable Potential? NO

Permit Recommendations

Test Type
TIWC % Effluent
Dilution Series , , , , % Effluent
Permit Limit
Permit Limit Species

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.01
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name
Tiadaghton Valley Municipal Authorty WWTP

Permit No.
PA00234079

Test Completion Date 6/21/2021

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail **PASS**

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Reproduction
TIWC (decimal)	0.01
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name
Tiadaghton Valley Municipal Authorty WWTP

Permit No.
PA00234079

Test Completion Date
6/21/2021

Replicate No.	Control	TIWC
1	21	42
2	40	40
3	40	38
4	19	36
5	40	49
6	48	42
7	40	40
8	44	44
9	40	43
10	46	39
11		
12		
13		
14		
15		
Mean	37.800	41.300
Std Dev.	9.830	3.622
# Replicates	10	10

T-Test Result	4.9855
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	**PASS**

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	0.01
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: Tiadaghton Valley Municipal Authorty WWTP

Permit No.: PA00234079

Test Completion Date: 6/22/2021

Replicate No.	Control	TIWC
1	10	10
2	9	10
3	10	10
4	10	10
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	9.750	10.000
Std Dev.	0.500	0.000
# Replicates	4	4

T-Test Result	12.5523
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
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9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Growth
TIWC (decimal)	0.01
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name
Tiadaghton Valley Municipal Authorty WWTP

Permit No.
PA00234079

Test Completion Date 6/22/2021

Replicate No.	Control	TIWC
1	0.391	0.473
2	0.46	0.423
3	0.384	0.42
4	0.532	0.457
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.442	0.443
Std Dev.	0.069	0.026
# Replicates	4	4

T-Test Result	3.8549
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

WET Summary and Evaluation

Facility Name	Tiadaghton Valley Municipal Authority
Permit No.	PA0234079
Design Flow (MGD)	
Q_{7-10} Flow (cfs)	
PMF_a	
PMF_c	

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		5/3/22			
Pimephales	Survival	PASS			

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		5/3/22			
Pimephales	Growth	PASS			

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		5/4/22			
Ceriodaphnia	Survival	PASS			

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		5/4/22			
Ceriodaphnia	Reproduction	PASS			

Reasonable Potential? NO

Permit Recommendations

Test Type
TIWC % Effluent
Dilution Series , , , , % Effluent
Permit Limit
Permit Limit Species

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	1
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: Tiadaghton Valley Municipal Authority

Permit No.: PA0234079

Test Completion Date: 5/3/2022

Replicate No.	Control	TIWC
1	8	8
2	9	7
3	9	9
4	8	7
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	8.500	7.750
Std Dev.	0.577	0.957
# Replicates	4	4

T-Test Result	2.9342
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	PASS

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Growth
TIWC (decimal)	1
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: Tiadaghton Valley Municipal Authority

Permit No.: PA0234079

Test Completion Date: 5/3/2022

Replicate No.	Control	TIWC
1	0.504	0.544
2	0.541	0.47
3	0.586	0.476
4	0.393	0.457
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.507	0.487
Std Dev.	0.083	0.039
# Replicates	4	4

T-Test Result	2.9075
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.000	0.000
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

Test Completion Date:

Replicate No.	Control	TIWC
1		
2		
3		
4		
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11		
12		
13		
14		
15		
Mean		
Std Dev.		
# Replicates		

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	

APPENDIX F

eDMR DATA (METALS)

PERMIT	AUTH CLIE	CLIENT ID	MONITORING	MONITORING	REPORT FR	OUTFALL	MONITORI	PARAMETER	CONCUNIT	CONC 2VAL	CONC 2LIM	CONC 2SBC	SAMPLE FR	SAMPLE TYPE		
PA0234079	TIADAGHT	288264	07/01/2020	09/30/2020	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.091	Monitor an	Daily Maxi	1/quarter	24-Hr Composite	90th Percentile	0.604 mg/L
PA0234079	TIADAGHT	288264	10/01/2020	12/31/2020	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.068	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2021	03/31/2021	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.168	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2021	06/30/2021	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.092	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2021	09/30/2021	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.067	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2021	12/31/2021	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.140	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2022	03/31/2022	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.091	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2022	06/30/2022	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.092	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2022	12/31/2022	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.340	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2023	03/31/2023	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.740	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2023	06/30/2023	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.079	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2023	09/30/2023	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.160	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2023	12/31/2023	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.110	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2024	03/31/2024	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.130	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2024	06/30/2024	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.140	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2024	09/30/2024	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.660	Monitor an	Daily Maxi	1/quarter	24-Hr Composite	<-- Highest Value	
PA0234079	TIADAGHT	288264	10/01/2024	12/31/2024	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.220	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2025	03/31/2025	Quarterly	001	Final Effluе	Aluminum, Total	mg/L	0.580	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2020	09/30/2020	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite	90th Percentile	0.0106 mg/L
PA0234079	TIADAGHT	288264	10/01/2020	12/31/2020	Quarterly	001	Final Effluе	Copper, Total	mg/L	0.007	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2021	03/31/2021	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2021	06/30/2021	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2021	09/30/2021	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2021	12/31/2021	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2022	03/31/2022	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2022	06/30/2022	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2022	12/31/2022	Quarterly	001	Final Effluе	Copper, Total	mg/L	0.01	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2023	03/31/2023	Quarterly	001	Final Effluе	Copper, Total	mg/L	0.016	Monitor an	Daily Maxi	1/quarter	24-Hr Composite	<-- Highest Value	
PA0234079	TIADAGHT	288264	04/01/2023	06/30/2023	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2023	09/30/2023	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2023	12/31/2023	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2024	03/31/2024	Quarterly	001	Final Effluе	Copper, Total	mg/L <	0.005	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2024	06/30/2024	Quarterly	001	Final Effluе	Copper, Total	mg/L	0.0057	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2024	09/30/2024	Quarterly	001	Final Effluе	Copper, Total	mg/L	0.009	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2024	12/31/2024	Quarterly	001	Final Effluе	Copper, Total	mg/L	0.0059	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2025	03/31/2025	Quarterly	001	Final Effluе	Copper, Total	mg/L	0.012	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2020	09/30/2020	Quarterly	001	Final Effluе	Iron, Total	mg/L <	0.07	Monitor an	Daily Maxi	1/quarter	24-Hr Composite	90th Percentile	0.149 mg/L
PA0234079	TIADAGHT	288264	10/01/2020	12/31/2020	Quarterly	001	Final Effluе	Iron, Total	mg/L <	0.07	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2021	03/31/2021	Quarterly	001	Final Effluе	Iron, Total	mg/L <	0.07	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2021	06/30/2021	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.052	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2021	09/30/2021	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.053	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2021	12/31/2021	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.12	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2022	03/31/2022	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.14	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2022	06/30/2022	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.058	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2022	12/31/2022	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.12	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2023	03/31/2023	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.23	Monitor an	Daily Maxi	1/quarter	24-Hr Composite	<-- Highest Value	
PA0234079	TIADAGHT	288264	04/01/2023	06/30/2023	Quarterly	001	Final Effluе	Iron, Total	mg/L <	0.05	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2023	09/30/2023	Quarterly	001	Final Effluе	Iron, Total	mg/L <	0.05	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2023	12/31/2023	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.053	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2024	03/31/2024	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.068	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2024	06/30/2024	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.12	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2024	09/30/2024	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.14	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2024	12/31/2024	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.075	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2025	03/31/2025	Quarterly	001	Final Effluе	Iron, Total	mg/L	0.17	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2020	09/30/2020	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.0575	Monitor an	Daily Maxi	1/quarter	24-Hr Composite	90th Percentile	0.075 mg/L
PA0234079	TIADAGHT	288264	10/01/2020	12/31/2020	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.059	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2021	03/31/2021	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.054	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2021	06/30/2021	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.032	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2021	09/30/2021	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.074	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2021	12/31/2021	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.066	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2022	03/31/2022	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.075	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2022	06/30/2022	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.061	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2022	12/31/2022	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.051	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2023	03/31/2023	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.048	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2023	06/30/2023	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.056	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2023	09/30/2023	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.051	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2023	12/31/2023	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.054	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2024	03/31/2024	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.047	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2024	06/30/2024	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.052	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2024	09/30/2024	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.11	Monitor an	Daily Maxi	1/quarter	24-Hr Composite	<-- Highest Value	
PA0234079	TIADAGHT	288264	10/01/2024	12/31/2024	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.075	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2025	03/31/2025	Quarterly	001	Final Effluе	Manganese, Total	mg/L	0.065	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2020	09/30/2020	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.0591	Monitor an	Daily Maxi	1/quarter	24-Hr Composite	90th Percentile	0.05833 mg/L
PA0234079	TIADAGHT	288264	10/01/2020	12/31/2020	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.052	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2021	03/31/2021	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.05	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2021	06/30/2021	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.052	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2021	09/30/2021	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.025	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2021	12/31/2021	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.042	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2022	03/31/2022	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.034	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2022	06/30/2022	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.032	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2022	12/31/2022	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.055	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2023	03/31/2023	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.063	Monitor an	Daily Maxi	1/quarter	24-Hr Composite	<-- Highest Value	
PA0234079	TIADAGHT	288264	04/01/2023	06/30/2023	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.057	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2023	09/30/2023	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.032	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2023	12/31/2023	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.047	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2024	03/31/2024	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.03	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	04/01/2024	06/30/2024	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.05	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	07/01/2024	09/30/2024	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.058	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	10/01/2024	12/31/2024	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.042	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		
PA0234079	TIADAGHT	288264	01/01/2025	03/31/2025	Quarterly	001	Final Effluе	Zinc, Total	mg/L	0.044	Monitor an	Daily Maxi	1/quarter	24-Hr Composite		