pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0026646**
Facility Type	**Municipal**	APS ID	**30164**
Major / Minor	**Major**	Authorization ID	**1023729**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Antietam Valley Municipal Authority** **Berks County**	Facility Name	**Antietam Valley STP**
Applicant Address	502 Butter Lane Reading, PA 19606-1604	Facility Address	502 Butter Lane Reading, PA 19606-1604
Applicant Contact	Kerry Ustaszewski	Facility Contact	Kerry Ustaszewski
Applicant Phone	(610) 779-0150	Facility Phone	(610) 779-0150
Client ID	77399	Site ID	253991
Ch 94 Load Status	Not Overloaded	Municipality	Saint Lawrence Borough
Connection Status	No Limitations	County	Berks
Date Application Received	April 28, 2014	EPA Waived?	No
Date Application Accepted	May 23, 2014	If No, Reason	Major Facility

Purpose of Application: NPDES Renewal.

Summary of Review

The Antietam Valley Municipal Authority has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of a NPDES permit for the Antietam Valley STP. The amended permit was last reissued to the Antietam Valley Municipal Authority on December 21, 2009 and became effective on January 1, 2010. The permit was amended on November 29, 2011. The permit expired on December 31, 2014 but the terms and conditions of the permit have been administratively extended since that time.

Based on the review outlined in this fact sheet, it is recommended that the permit be drafted and a notice of the draft permit be published in the *Pennsylvania Bulletin* for public comments for 30 days. A file review of documents associated with the discharge or permittee may be available at the PA DEP southcentral regional office (SCRO), 909 Elmerton Avenue, Harrisburg, PA 17110. To make an appointment for file reviews, contact the SCRO file review coordinator at 717.705.4700.

Public Participation

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

Approve	Deny	Signatures	Date
x		Aaron Baar / Permits Section	July 22, 2019
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	1.225
Latitude	40Âº 19' 50.89"	Longitude	-75Âº 52' 23.26"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Antietam Creek (CWF)	Stream Code	01790
NHD Com ID	25963816	RMI	4.79
Drainage Area	9.98 mi^2	Yield (cfs/mi^2)	0.3998
Q_{7-10} Flow (cfs)	3.99	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	307.56	Slope (ft/ft)	
Watershed No.	3-C	Chapter 93 Class.	CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	PATHOGENS		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Pottstown		
PWS Waters	Schuykill River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	~15

Drainage Area

The discharge is to a Antietam Creek at RMI 4.79. A drainage area upstream of the discharge is determined to be 9.98 sq.mi. according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow

According to StreamStats, this area has a Q_{7-10} of 3.99 cfs and a drainage area of 9.98 mi^2, which results in a LFY of 0.3998 cfs/mi^2. This information was used to obtain a Q_{7-10}, a chronic 30-day (Q_{30-10}) and acute (Q_{1-10}) exposure stream flows for the discharge point as follows (Guidance No. 391-2000-023).

LFY = 3.99 cfs/9.98 mi^2 = 0.3998 cfs/mi^2
Q_{7-10} = 3.99 cfs
Q_{30-10} = 1.36 * 3.99 cfs = 5.4264 cfs
Q_{1-10} = 0.64 * 3.99 cfs = 2.5536 cfs

Antietam Creek

25 Pa Code §93.9 classifies Antietam Creek as a CWF waterway. Effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. The discharge is in a stream segment listed not attaining uses (pathogens/source unknown). No local TMDL has been taken into consideration during this review.

Public Water Supply Intake

The nearest downstream public water supply intake is the Borough of Pottstown intake located on Schuylkill River approximately 15 miles from the discharge. Considering the distance and nature, the discharge is not expected to significantly affect the water supply.

Class A Wild Trout Streams

The receiving stream is not a Class A Wild Trout stream; therefore no Class A Wild Trout Fishery is impacted by this discharge.

Treatment Facility Summary

Treatment Facility Name: Antietam Valley STP

WQM Permit No.	Issuance Date

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Oxidation Ditch	Gas Chlorine	1.225

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
2.45	2050	Not Overloaded	Anaerobic Digestion	Landfill

The Antietam Valley Municipal Authority owns and operates the sanitary wastewater treatment facility located in Saint Lawrence Borough, Berks County. The facility serves portions of Mount Penn Borough, Lower Alsace Township, Exeter Township, Saint Lawrence Borough and the City of Reading. Wastes are residential in nature, and all sewer systems are 100% separated. Having an annual average design flow of 1.225 mgd and a hydraulic design capacity of 2.45 MGD, this facility includes a headworks featuring grinding, fine screening, comminution and grit removal. Flow from the headworks is split between two systems. System 1 consists of two primary clarifiers, four aeration tanks, two secondary clarifiers and one anaerobic primary digester. System 2 consists of two aeration tanks, one secondary clarifier and an aerobic digester. Flows from System 1 and System 2 then flow into two oxidation tanks, secondary clarification, chlorine disinfection system, dichlorination system and the outfall (Outfall 001). No other chemicals are declared in the application.

Compliance History	
Summary of DMRs:	A summary of past DMR data is presented on the next page.
Summary of Inspections:	There are no inspection reports available in the File Room at the time this report was drafted.

Other Comments: A file review revealed that there is one Clean Water open violation associated with this facility - Unauthorized, unpermitted discharge of sewage to waters of the Commonwealth (6/20/2019).

Compliance History

DMR Data for Outfall 001 (from June 1, 2018 to May 31, 2019)

Parameter	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18	AUG-18	JUL-18	JUN-18
Flow (MGD) Average Monthly	1.421	1.03	1.412	1.357	1.512	1.51	1.972	1.028	2.143	2.263	1.066	0.901
Flow (MGD) Daily Maximum	2.987	1.588	3.307	2.116	3.69	2.744	3.335	1.445	6.058	5.936	2.892	2.366
pH (S.U.) Minimum	6.7	6.8	6.6	6.8	6.8	6.7	6.7	6.9	6.7	6.9	7.0	7.0
pH (S.U.) Maximum	7.2	7.1	7.2	7.1	7.4	7.1	7.1	7.2	7.2	7.3	7.3	7.5
DO (mg/L) Minimum	6.7	7.1	5.9	7.1	7.2	7.6	7.7	6.4	5.9	6.5	6.6	6.6
TRC (mg/L) Average Monthly	0.06	0.04	0.04	0.06	0.08	0.07	0.08	0.06	< 0.06	< 0.07	0.04	0.03
TRC (mg/L) Instantaneous Maximum	0.16	0.15	0.10	0.13	0.15	0.13	0.13	0.12	0.13	0.26	0.16	0.09
CBOD5 (lbs/day) Average Monthly	< 30	< 18	< 26	< 22	< 30	< 25	< 33	< 18	< 51	< 64	< 21	< 19
CBOD5 (lbs/day) Weekly Average	< 43	< 25	< 30	< 27	< 50	< 32	< 44	< 25	142	< 101	< 38	< 34
CBOD5 (mg/L) Average Monthly	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2
CBOD5 (mg/L) Weekly Average	< 2	< 2	< 2	< 2	3	< 2	< 2	< 2	3	< 3	3	< 2
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	1763	1445	1549	1621	1453	1435	1248	1411	1586	2035	1407	1648
BOD5 (mg/L) Raw Sewage Influent Average Monthly	123	165	128	149	118	122	80	165	166	84	178	205
TSS (lbs/day) Average Monthly	< 30	< 21	< 16	< 16	< 17	< 34	< 25	< 19	< 54	< 73	< 17	< 24
TSS (lbs/day) Raw Sewage Influent Average Monthly	1417	966	1323	1680	1736	1079	1933	1455	2017	1516	1487	1872

TSS (lbs/day) Weekly Average	63	< 49	< 27	27	31	52	43	< 58	136	< 136	31	74
TSS (mg/L) Average Monthly	< 2	< 2	< 1	< 1	< 1	< 3	< 2	< 2	< 3	< 2	< 2	< 2
TSS (mg/L) Raw Sewage Influent Average Monthly	101	107	113	147	136	90	115	166	191	76	186	238
TSS (mg/L) Weekly Average	4	< 6	< 2	3	2	5	2	< 5	3	< 4	4	4
Total Dissolved Solids (lbs/day) Average Monthly			4230			3837			2583			3060
Total Dissolved Solids (mg/L) Average Monthly			437			405			432			442
Fecal Coliform (CFU/100 ml) Geometric Mean	90	57	17	71	36	57	40	34	22	34	20	25
Ammonia (lbs/day) Average Monthly	< 1	< 0.9	< 3	< 1	< 6	< 1	< 2	< 0.9	< 3	< 5	< 2	< 0.9
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.17	< 0.1	< 0.29	< 0.1	< 0.11	< 0.1	< 0.11	< 0.16	< 0.14	< 0.1

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	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.21	XXX	0.68	1/day	Grab
CBOD5	255	383	XXX	25.0	40.0	50	2/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TSS	306	460	XXX	30.0	45.0	60	2/week	24-Hr Composite
Total Dissolved Solids	XXX	Report Daily Max	XXX	1,000	XXX	XXX	1/quarter	24-Hr Composite
Ammonia Nov 1 - Apr 30	77.0	XXX	XXX	7.5	XXX	15	2/week	24-Hr Composite
Ammonia May 1 - Oct 31	26.0	XXX	XXX	2.5	XXX	5	2/week	24-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 1.225
Latitude 40º 19' 50.88" **Longitude** -75º 52' 24.13"
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)
	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
Total Suspended Solids	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: These standards apply, subject to water quality analysis and BPJ where applicable.

Water Quality-Based Limitations

CBOD5, NH3-N and Dissolved Oxygen (DO)

WQM 7.0 version 1.0b is a water quality model designed to assist DEP to determine appropriate permit requirements for CBOD5, NH3-N and DO. DEP's guidance no. 391-2000-007 provides the technical methods contained in WQM 7.0 for conducting wasteload allocation and for determining recommended NPDES effluent limits for point source discharges. The model was utilized and the model output indicated that existing WQBELs of 25 mg/L for CBOD5 and 2.5 mg/L for ammonia (summer) are still appropriate.

The monitoring frequency and sample type for NH3-N, CBOD5 and DO are proposed to remain unchanged.

Toxics

PADEP's Toxic Screening Analysis (Version 2.6) was used to identify water quality pollutants of concern. Initial results from the effluent data in the application resulted in scores of parameters being identified as candidates for PENTOXSD modeling due to high detection criteria used by the testing lab. Three extra samples were requested to verify results; TDS, Chloride, Total Copper, Free Available Cyanide, Total Lead, Total Phenols, Chloroform and Dichlorobromomethane were still identified as candidates for PENTOXSD modeling based on the results of the extra sampling. These parameters were evaluated using PENTOXSD (Version 2.0d). The PENTOXSD output indicated that a WQBEL for Copper is recommended. Monitoring is also recommended for Free Available Cyanide, Chloroform and Dichlorobromomethane.

Given the limited data set provided, the reviewer recommends 1/week monitoring of Total Copper, Free Available Cyanide, Chloroform and Dichlorobromomethane in order to best determine during the next permit renewal whether any limits are warranted.

Total Residual Chlorine

Total Residual Chlorine (TRC) effluent levels must be regulated in accordance with 25 Pa Code §92a.48(b). DEP's TRC_CALC worksheet was utilized to determine if the existing limits of 0.21 mg/L (average monthly) and 0.68 mg/L (instantaneous maximum) are still appropriate. The model was utilized, and the model output indicated that existing limits are still appropriate.

Best Professional Judgment (BPJ) Limitations

Dissolved Oxygen

A minimum of 5.0 mg/L for DO is an existing effluent limit and will remain unchanged in the draft permit as recommended by DEP's SOP. This requirement has also been assigned to other sewage facilities in the region. 5.0 mg/L is taken directly from 25 Pa. Code § 93.7(a) and it is also determined to be appropriate according to water quality modeling.

Total Phosphorus & Total Nitrogen

DEP's SOP no. BPNPSM-PMT-033 recommends monitoring requirements for Total Phosphorus and Total Nitrogen for all sewage facilities. Therefore, routine monitoring for Total Phosphorous and Total Nitrogen are recommended to be introduced on a 2/week basis for this permit renewal.

Total Dissolved Solids

The existing TDS discharge limit of 1000 mg/L (AVG) will be maintained from the previous permit. DMR records indicate that the existing facility is meeting this limit.

Additional Considerations

DRBC

This fact sheet will be forwarded to the DRBC for review and comment.

Flow Monitoring

The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii).

Monitoring Frequency and Sample Type

The facility currently is required to collect 24-hr composite effluent samples 2/ week. The existing and proposed monitoring frequencies for all pollutants will remain the same as those specified in the existing permit.

Antidegradation Requirements

All effluent limitations and monitoring requirements have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected.

Anti-backsliding Requirement

All effluent limits proposed in this fact sheet are as stringent as effluent limits specified in the existing permit renewal. This approach is in accordance with 40 CFR §122.44(l(1).

Mass Loading Limitations

All effluent mass loading limits are based on the formula: design flow x concentration limit x conversion factor of 8.34.

Pre-Treatment

The application states that there are no industrial users connected to the treatment plant.

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%, 73%, 45%, 23%, and 11%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 45.

Summary of Four Most Recent Test Results

(NOTE – Enter results into one table, depending on which data analysis method was used).

NOEC/LC50 Data Analysis

	***Ceriodaphnia* Results (% Effluent)**			***Pimephales* Results (% Effluent)**			
Test Date	**NOEC Survival**	**NOEC Reproduction**	**LC50**	**NOEC Survival**	**NOEC Growth**	**LC50**	**Pass? ***
3/17/14	100%	73%	>100%	100%	100%	>100%	Pass
6/17/13	100%	100%	>100%	100%	100%	>100%	Pass
9/24/13	100%	100%	>100%	100%	100%	>100%	Pass
12/17/13	100%	100%	>100%	100%	100%	>100%	Pass

***** *A "passing" result is that which is greater than or equal to the TIWC value.*

TST Data Analysis

	***Ceriodaphnia* Results (Pass/Fail)**		***Pimephales* Results (Pass/Fail)**	
Test Date	**Survival**	**Reproduction**	**Survival**	**Growth**
3/17/14	Pass	Fail	Pass	Pass
6/17/13	Pass	Fail	Pass	Pass
9/24/13	Pass	Pass	Pass	Fail
12/17/13	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: N/A

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

Acute Partial Mix Factor (PMFa): **1.0** Chronic Partial Mix Factor (PMFc): **1.0**

1. Determine IWC – Acute (IWCa):

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

[(1.225 MGD x 1.547) / ((3.99 cfs x 1.0) + (1.225 MGD x 1.547))] x 100 = **32%**

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:

N/A

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

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

TIWCa = N/A

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

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

[(1.225 MGD x 1.547) / ((3.99 cfs x 1.0) + (1.225 MGD x 1.547))] x 100 = **32%**

3. Determine Dilution Series

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

Dilution Series = 100%, 66%, 32%, 16%, and 8%.

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:

WET testing for this renewal was conducted by QC laboratories (Eurofins QC). Per the email from Maria Schumack on October 26, 2017, it is assumed that all tests performed by Eurofins QC should be considered invalid. Quarterly sampling for the first year of the permit term and annual sampling will be resumed in the second year provided they pass all 4 quarterly tests

Proposed Effluent Limitations and Monitoring Requirements

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

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

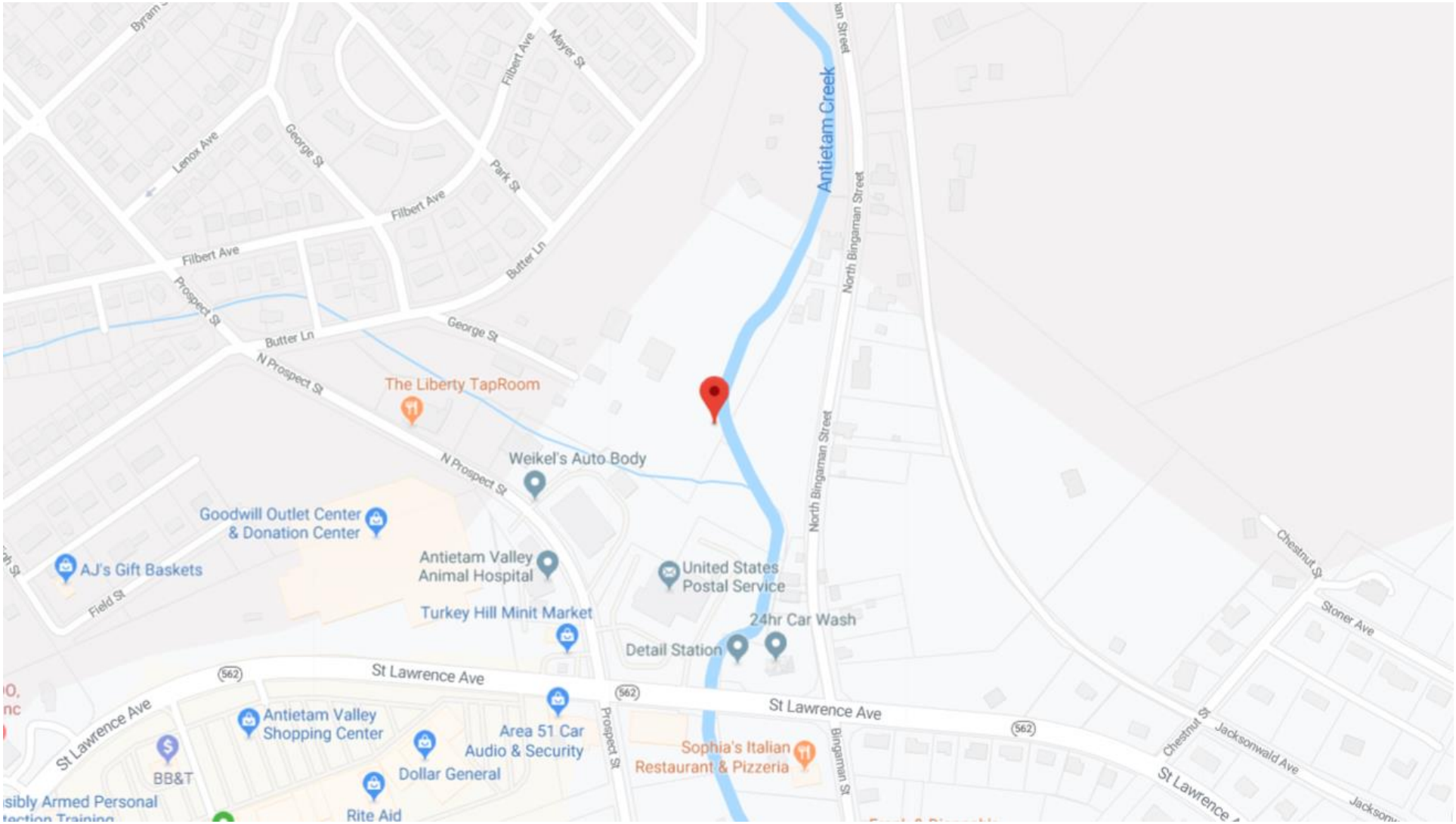
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.21	XXX	0.68	1/day	Grab
CBOD5	255	383	XXX	25.0	40.0	50	2/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TSS	306	460	XXX	30.0	45.0	60	2/week	24-Hr Composite
Total Dissolved Solids	XXX	Report Daily Max	XXX	1,000.0	XXX	XXX	1/quarter	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
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Ammonia Nov 1 - Apr 30	77.0	XXX	XXX	7.5	XXX	15	2/week	24-Hr Composite
Ammonia May 1 - Oct 31	26.0	XXX	XXX	2.5	XXX	5	2/week	24-Hr Composite

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

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

Compliance Sampling Location: Outfall 001

Permit No. PA0026646



Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☒	PENTOXSD for Windows Model (see Attachment)
☒	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Toxics Screening Analysis Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☒	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
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