pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0085006**
Facility Type	**Municipal**	APS ID	**16**
Major / Minor	**Minor**	Authorization ID	**1183342**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Conoy Township**	Facility Name	**Conoy Township Bainbridge STP**
Applicant Address	211 Falmouth Road	Facility Address	2115 River Road
	Bainbridge, PA 17502-9801		Bainbridge, PA 17502
Applicant Contact	John Shearer	Facility Contact	Chandra Singh
Applicant Phone	(717) 367-4927	Facility Phone	(717) 464-7395
Client ID	77263	Site ID	239234
Ch 94 Load Status	Existing Hydraulic Overload	Municipality	Conoy Township
Connection Status	No Exceptions Allowed	County	Lancaster
Date Application Received	May 15, 2017	EPA Waived?	Yes
Date Application Accepted	July 27, 2017	If No, Reason	
Purpose of Application	NPDES Renewal.		

Summary of Review

Conoy Township has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The permit was issued on November 28, 2012 and became effective on December 1, 2012. The permit authorized discharge of treated sewage from the existing wastewater treatment plant (WWTP) located in Conoy Township, Lancaster County into Conoy Creek. The existing permit expiration date was November 30, 2017, and the permit has been administratively extended since that time.

Changes to Renewal: A monitor requirement for ammonia was added to the permit.

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.

Supplemental information for this report is located in an attachment.

Conoy TWP
Bainbridge STP PA0(

Approve	Deny	Signatures	Date
		Benjamin R. Lockwood / Environmental Engineering Specialist	October 21, 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)	.08
Latitude	40º 5' 6"	Longitude	76º 39' 37"
Quad Name	York Haven	Quad Code	1832
Wastewater Description:	Sewage Effluent		
Receiving Waters	Conoy Creek (TSF, MF)	Stream Code	8278
NHD Com ID	57464225	RMI	1.13
Drainage Area	17.6 mi^2	Yield (cfs/mi^2)	0.12
Q_{7-10} Flow (cfs)	2.11	Q_{7-10} Basis	USGS Gage # 01576500
Elevation (ft)	275	Slope (ft/ft)	
Watershed No.	7-G	Chapter 93 Class.	TSF, MF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired		
Cause(s) of Impairment	Pathogens, Habitat Alterations, Siltation		
Source(s) of Impairment	Source Unknown, Habitat Modification Other Than Hydromodification, Agriculture		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Columbia Water Company		
PWS Waters	Susquehanna River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	9.7

Changes Since Last Permit Issuance: A drainage area of 17.6 mi^2 and a Q_{7-10} flow of 2.11 cubic feet per second (cfs) were determined by establishing a correlation to the yield of USGS Gage Station #01576500 on the Conestoga River. The Q_{7-10} and drainage area at the gage are 38.6 cfs and 324 mi^2, respectively. These values are taken from the USGS document "Selected Streamflow Statistics for Streamgage Locations in and near Pennsylvania". The Q_{7-10} runoff rate at the gage station was calculated as follows:

Yield = (38.6 cfs)/ 324 mi^2 = 0.12 cfs/mi^2

The drainage area at the discharge point, taken from USGS PA StreamStats = 17.6 mi^2

The Q_{7-10} at the discharge point = 17.6 mi^2 x 0.12 cfs/mi^2 = 2.11 cfs

Treatment Facility Summary				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Activated Sludge	Hypochlorite	0.08
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.08	160	Existing Hydraulic Overload	Holding Tank	Other WWTP

Changes Since Last Permit Issuance: None

Other Comments: The treatment process is as follows: Comminutor – EQ Tank – 2 Aeration Tanks – 2 Clarifiers – Aerated Chlorine Contact Tank – 2 Sludge Holding Tanks – 4 Reed Beds – Outfall 001 to Conoy Creek

Compliance History	
Summary of DMRs:	A summary of the past 12-month DMR effluent data is presented on the next page of this fact sheet.
Summary of Inspections:	2/7/2013: A routine inspection was conducted. It was noted that the effluent in the settling tank and chlorine contact tank were clear. No other issues were noted. 10/16/2014: A routine inspection was conducted. Samples collected were within the permitted range for pH, D.O., and TRC. Overall treatment appeared to be good. The mixed liquor in the aeration tank had no foam and good floc formation. The EQ tank had about 18 inches of freeboard. There was some rising sludge in clarifier 2 and minor pin floc in both clarifiers. The outfall area was clear. 5/4/2016: A routine inspection was conducted. All treatment units were online. There was floating material/grease/vegetation on the EQ tank. The effluent was clear, and samples collected were within the permitted range. 3/7/2019: A routine inspection was conducted. The comminutor was functioning upon inspection. The influent wet well had approximately 40% coverage of grease and floatables. The EQ tank surface was free of grease and rag accumulation. Both aeration tanks were evenly aerated with circular mixing. Both clarifiers had surface scum and about 20% coverage of floating solids. The skimmers were not functioning during inspection. The clarifier effluent appeared clear. Field results collected were within permitted limits. The effluent had a yellow tint with fine white suspended solids. Algae growth was noted on rocks below outfall prior to entering receiving stream. The southern sludge holding tank had about 5' of freeboard and was not aerated. Dark brown solids covered the surface. Approximately 20% of the tanks surface was frozen. Mr. Singh noted that the reed beds have not been used in 3 years. The Township is working on replacement. Some screenings were visible on the beds.

Other Comments: There are currently no open violations associated with the permittee or the facility.

Compliance History

DMR Data for Outfall 001 (from September 1, 2018 to August 31, 2019)

Parameter	SEP-18	OCT-18	NOV-18	DEC-18	JAN-19	FEB-19	MAR-19	APR-19	MAY-19	JUN-19	JUL-19	AUG-19
Flow (MGD) Average Monthly	0.0935	0.0655	0.0950	0.0923	0.0876	0.0782	0.0822	0.0636	0.0683	0.0549	0.0597	0.0598
Flow (MGD) Daily Maximum	0.1559	0.968	0.1353	0.1207	0.1274	0.0987	0.1665	0.0820	0.1194	0.0746	0.0758	0.0811
pH (S.U.) Minimum	6.90	7.43	7.43	7.23	7.57	7.14	6.72	7.23	7.26	7.23	7.25	7.45
pH (S.U.) Maximum	8.48	8.65	8.10	8.05	8.20	8.11	8.28	7.97	7.96	8.22	8.24	8.10
DO (mg/L) Minimum	5.12	6.25	6.05	5.52	7.61	7.24	5.59	0.25	5.45	6.31	5.52	6.66
TRC (mg/L) Average Monthly	0.16	0.13	0.09	0.13	0.20	0.38	0.49	0.33	0.047	0.5	0.70	0.33
TRC (mg/L) Instantaneous Maximum	0.54	0.78	0.15	0.65	0.42	0.69	1.41	1.68	1.4	1.25	1.35	1.02
CBOD5 (lbs/day) Average Monthly	1.51	3.28	< 3.15	< 1.62	5.24	3.59	2.79	< 4.96	14	< 1.16	2.85	1.96
CBOD5 (lbs/day) Weekly Average	2.02	4.74	< 4.70	< 1.86	6.56	3.65	3.69	< 8.75	27	< 1.50	2.95	2.31
CBOD5 (mg/L) Average Monthly	3.35	5.85	< 4.05	< 2.15	6.80	5.50	4.85	< 10.20	19	< 2.40	6.20	3.35
CBOD5 (mg/L) Weekly Average	4.40	8.40	< 6.10	< 2.30	8.00	5.60	6.60	< 18.40	36	< 2.80	6.40	4.30
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	29.37	35.88	43.01	217.61	140.43	195.71	182.83	99.49	81	205.85	184.01	285.21
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	43.26	38.79	43.68	299.51	232.01	199.28	240.07	100.78	147	254.82	220.06	289.05
BOD5 (mg/L) Raw Sewage Influent Average Monthly	64.90	64.35	54.75	284.00	176.40	299.50	317.50	189.50	160	454.50	400.00	477.50
TSS (lbs/day) Average Monthly	< 1.79	3.12	< 3.14	< 2.99	5.91	< 4.58	5.84	17.06	< 41.50	2.54	< 1.93	< 2.43

TSS (lbs/day) Raw Sewage Influent Average Monthly	17.79	12.79	16.51	288.80	397.28	134.56	189.80	86.03	95	165.79	145.60	296.97
TSS (lbs/day) Raw Sewage Influent Daily Maximum	22.94	14.29	17.63	303.11	433.83	148.51	247.91	102.68	156	206.83	168.96	304.37
TSS (lbs/day) Weekly Average	< 1.83	3.30	< 3.21	< 3.23	9.02	< 6.56	8.51	28.99	< 81.03	3.43	< 2.02	< 2.71
TSS (mg/L) Average Monthly	< 4.00	5.60	< 4.00	< 4.00	7.50	< 7.00	10.20	30.05	< 55.50	5.20	< 4.20	< 4.00
TSS (mg/L) Raw Sewage Influent Average Monthly	39.50	23.00	21.00	390.00	530.00	206.00	329.50	167.00	181	366.50	316.50	495
TSS (mg/L) Weekly Average	< 4.00	6.00	< 4.00	< 4.00	11.00	< 10.00	15.20	49.30	< 107.00	6.40	< 4.40	< 4.00
Fecal Coliform (CFU/100 ml) Geometric Mean	1645	3	146	2.00	230	95.0	441.00	> 200000	51	5657	< 2	< 21
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	> 20000	7	454	3.00	2300	258	18600	> 20000	1000	20000	< 4	< 431
Nitrate-Nitrite (lbs/day) Annual Average				0.0924								
Nitrate-Nitrite (mg/L) Annual Average				0.12								
Total Nitrogen (lbs/day) Annual Average				19.71								
Total Nitrogen (mg/L) Annual Average				25.72								
TKN (lbs/day) Annual Average				19.7064								
TKN (mg/L) Annual Average				25.6								
Total Phosphorus (lbs/day) Annual Average				1.324								
Total Phosphorus (mg/L) Annual Average				1.72								

Compliance History

Effluent Violations for Outfall 001, from: October 1, 2018 To: August 31, 2019

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
DO	04/30/19	Min	0.25	mg/L	5.0	mg/L
TRC	07/31/19	Avg Mo	0.70	mg/L	0.5	mg/L
TRC	04/30/19	IMAX	1.68	mg/L	1.6	mg/L
TSS	05/31/19	Avg Mo	< 41.50	lbs/day	20	lbs/day
TSS	05/31/19	Wkly Avg	< 81.03	lbs/day	30	lbs/day
TSS	05/31/19	Avg Mo	< 55.50	mg/L	30	mg/L
TSS	04/30/19	Avg Mo	30.05	mg/L	30	mg/L
TSS	05/31/19	Wkly Avg	< 107.00	mg/L	45	mg/L
TSS	04/30/19	Wkly Avg	49.30	mg/L	45	mg/L
Fecal Coliform	04/30/19	Geo Mean	> 200000	CFU/100 ml	2000	CFU/100 ml
Fecal Coliform	06/30/19	Geo Mean	5657	CFU/100 ml	200	CFU/100 ml
Fecal Coliform	06/30/19	IMAX	20000	CFU/100 ml	1000	CFU/100 ml
Fecal Coliform	03/31/19	IMAX	18600	CFU/100 ml	10000	CFU/100 ml
Fecal Coliform	04/30/19	IMAX	> 20000	CFU/100 ml	10000	CFU/100 ml

Existing Effluent Limitations and Monitoring Requirements

The table below summarizes the effluent limits and monitoring requirements implemented in the existing NPDES permit.

Outfall 001

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	0.5	XXX	1.6	1/day	Grab
CBOD5	17	27	XXX	25	40	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	20	30	XXX	30	45	60	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Nitrate-Nitrite	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation
TKN	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Phosphorus	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .08
Latitude 40º 5' 6" **Longitude** 76º 39' 37"
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

Pursuant to 40 CFR § 122.44(d)(1)(i), more stringent requirements should be considered when pollutants are discharged at the levels which have the reasonable potential to cause or contribute to excursions above water quality standards.

WQM 7.0 ver. 1.0b is a water quality model designed to assist DEP in determining appropriate water quality based effluent limits (WQBELs) for carbonaceous biochemical oxygen demand ($CBOD_5$), ammonia (NH_3-N), and dissolved oxygen (D.O.). The model simulates two basic processes: In the NH_3-N module, the model simulates the mixing and degradation of NH_3-N in the stream and compares calculated instream NH_3-N concentrations to NH_3-N water quality criteria. In the D.O. module, the model simulates the mixing and consumption of D.O. in the stream due to the degradation of $CBOD_5$ and NH_3-N and compares calculated instream D.O. concentrations to D.O. water quality criteria. The model then determines the highest pollutant loadings that the stream can assimilate while still meeting water quality criteria under design conditions. DEP's Technical Guidance No. 391-2000-007 provides the technical methods contained in WQM 7.0 for determining wasteload allocations and for determining recommended NPDES effluent limits for point source discharges.

The model was utilized for this permit application. The model output indicated a $CBOD_5$ average monthly limit of 25 mg/l, an NH_3-N average monthly limit of 25 mg/l, and a D.O. minimum limit of 5.0 mg/l were protective of water quality. The $CBOD_5$ limit is the same as the existing limit, and will remain in the permit. SOP No. BPNPSM-PMT-033 (Establishing Effluent Limitations for Individual Sewage Permits) recommends, for existing discharges, a year-round monitoring requirement for ammonia-nitrogen at a minimum when WQM modeling results for summer indicates that an average monthly limit of 25 mg/L is acceptable. Accordingly, a monitoring requirement for NH_3-N has been added to the proposed effluent limitations. The flow data used to run the model was acquired from USGS PA StreamStats and USGS Stream Gage # 01576500 and is included as an attachment.

There are no industrial/commercial users contributing industrial wastewater to the system and Conoy Township does not currently have an EPA-approved pretreatment program. Accordingly, evaluating reasonable potential of toxic pollutants is not necessary as effluent levels of toxic pollutants are expected to be insignificant.

Best Professional Judgement (BPJ) Limitations

Dissolved Oxygen
A minimum D.O. limit of 5.0 mg/L is a D.O. water quality criterion found in 25 Pa. Code § 93.7(a). This limit is included in the existing NPDES permit based BPJ. It is still recommended to include this limit in the draft permit to ensure that the facility continues to achieve compliance with DEP water quality standards.

Total Residual Chlorine

The attached computer printout utilizes the equations and calculations as presented in the Department's May 1, 2003 Implementation Guidance for Total Residual Chlorine (TRC) (ID No. 391-2000-015) for developing chlorine limitations. The Guidance references Chapter 92, Section 92.2d (3) which establishes a standard BAT limit of 0.5 mg/l unless a facility-specific BAT has been developed. The attached printout indicates that a water quality limit of 0.5 mg/l would be needed to prevent toxicity concerns. It is recommended that a TRC limit of 0.5 mg/l monthly average and 1.6 mg/l instantaneous maximum be applied this permit cycle, the same as in the existing permit.

Additional Considerations

Chesapeake Bay Total Maximum Daily Load (TMDL)

DEP developed a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). This strategy can be located in the *Pennsylvania Chesapeake Watershed Implementation Plan* (WIP), dated January 11, 2011. Subsequently, an update to the WIP was published as the Phase 2 WIP. As part of the Phase 2 WIP, a *Phase 2 Watershed Implementation Plan Wastewater Supplement* (Phase 2 Supplement) was developed, providing an update on TMDL implementation for point sources and DEP's current implementation strategy for wastewater. The Phase 2 Supplement was most recently revised on September 6, 2017. Sewage discharges have been prioritized based on their design flow to the Bay. The highest priority (Phases 1, 2, and 3) dischargers will receive annual Cap Loads based on their design flow on August 29, 2005 and concentrations of 6 mg/l TN and 0.8 mg/l TP. These limits may be achieved through a combination of treatment technology, credits, or offsets. For Phase 4 and 5 facilities, Cap Loads are not currently being implemented for renewed or amended permits for facilities that do not increase design flow.

This facility is considered a Phase 5 non-significant discharger with a design flow less than 0.2 MGD but greater than 0.002 MGD. According to DEP's latest-revised Phase 2 Supplement, issuance of permits with monitoring and reporting for TN and TP is recommended for any Phase 5 non-significant sewage facilities (i.e., facilities with average annual design flows on August 29, 2005 less than 0.2 MGD but greater than 0.002 MGD). Furthermore, DEP's SOP No. BPNPSM-PMT-033 states that in general, at a minimum, monitoring for TN and TP should be included in new and reissued permits for sewage discharges with design flows > 2,000 gpd. TN and TP monitoring is included in the existing permit, and will remain in the renewal. Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001) recommends a measurement frequency of 2/month for NH_3-N and phosphorus. DEP's SOP No. BPNPSM-PMT-033 states that a lesser sampling frequency for TN and TP can be used for discharges to waters not impaired for nutrients. As this receiving stream does not have an impairment for nutrients, the existing sampling frequency of 1/year will remain in the permit for TN and TP.

Influent BOD_5 and Total Suspended Solids (TSS) Monitoring

As a result of negotiation with US EPA, influent monitoring of TSS and BOD_5 are required for any publicly owned treatment works (POTWs); therefore, influent sampling of BOD_5 and TSS will remain in the permit.

Anti-Degradation (93.4)

The effluent limits for this discharge 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. No High Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303d Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is an aquatic life impairment is due to habit alterations and siltation from habitat modification other than hydromodification, and siltation due

to agriculture. There is a recreational impairment due to pathogens from an unknown source. The proposed effluent limits include a limit for fecal coliform.

Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

Anti-Backsliding
Pursuant to 40 CFR § 122.44(l)(1), all proposed permit requirements addressed in this fact sheet are at least as stringent as the requirements implemented in the existing NPDES permit unless any exceptions addressed by DEP in this fact sheet.

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	0.5	XXX	1.6	1/day	Grab
CBOD5	17	27	XXX	25	40	50	2/month	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS	20	30	XXX	30	45	60	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	2/month	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Ammonia-Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Nitrate-Nitrite	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
TKN	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite
Total Nitrogen	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	Calculation

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 Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	8-Hr Composite

Compliance Sampling Location: Outfall 001

Other Comments: None

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.
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