pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0248029**
Facility Type	**Municipal**	APS ID	**339051**
Major / Minor	**Minor**	Authorization ID	**1190948**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Hustontown Joint Sewer Authority Fulton County**	Facility Name	**Hustontown STP**
Applicant Address	PO Box 606	Facility Address	Spring Drive
	Hustontown, PA 17229-0606		Hustontown, PA 17229-0606
Applicant Contact	John Mixell	Facility Contact	John Mixell
Applicant Phone	(717) 360-2294	Facility Phone	(717) 360-2294
Client ID	147978	Site ID	543168
Ch 94 Load Status	Not Overloaded	Municipality	Dublin Township
Connection Status	No Limitations	County	Fulton
Date Application Received	July 14, 2017	EPA Waived?	Yes
Date Application Accepted	August 15, 2017	If No, Reason	
Purpose of Application	NPDES permit renewal.		

Summary of Review

Hustontown Joint Sewer Authority has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on January 29, 2013 and became effective on February 1, 2013. The permit expired on January 31, 2018 but the terms and conditions of the permit have been extended since that time.

The Authority owns, operates, and maintains the wastewater treatment plant located in Taylor Township, Fulton County. The design flow is 0.028 MGD. The facility had numerous effluent violations in 2018-2019. On February 24, 2020, Mr. Clark, DEP WQS, via email indicated that the facility is within compliance (see the email attached).

WQM Part II No. 2906401 original was issued on October 5, 2006.

Changes from the previous permit: Unit of Fecal Coliform changed from CFU/100 ml to No./100 ml.

Based on the review outline in this fact sheet, it is recommended that the permit be drafted and published in the Pennsylvania Bulletin for public comments for 30 days.

Approve	Deny	Signatures	Date
X		Hilary H. Le / Environmental Engineering Specialist	February 28, 2020
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Clean Water Program Manager	

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.028
Latitude	40º 2' 55.74"	Longitude	-78º 1' 54.66"
Quad Name	Hustontown	Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Unnamed Tributary to Lamberson Branch (HQ-CWF)	Stream Code	13000
NHD Com ID	66213917	RMI	0.15
Drainage Area	0.07 mi.^{2}	Yield (cfs/mi^2)	See comments below
Q_{7-10} Flow (cfs)	See comments below	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	1075.27 ft	Slope (ft/ft)	
Watershed No.	12-C	Chapter 93 Class.	HQ-CWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Mifflintown Borough Municipal Authority		
PWS Waters	Juniata River	Flow at Intake (cfs)	
PWS RMI	34.4 miles	Distance from Outfall (mi)	Approximate 88 miles

Changes Since Last Permit Issuance: none

Drainage Area

The discharge is to Unnamed Tributary to Lamberson Branch at RMI 0.15 miles. A drainage area upstream of the discharge is estimated to be 0.07 mi.^{2}, according to USGS PA StreamStats available at https://streamstats.usgs.gov/ss/.

Stream Flow

There are no nearby stream gages with low flow data that have extensive or recent periods of record. Since USGS PA StreamStats estimated the drainage area that is below the minimum value allowed by USGS's regression equations, the USGS StreamStats on Sideling Hill Creek in the Fulton County will be used to calculate the Q_{7-10} at the point of discharge using a low flow yield method. The Q_{7-10} here is 2.54 cfs and the drainage area is 86.5 mi.^{2} which results in a Q_{7-10} low flow yield of 0.029 cfs/mi.^{2}. This information is used to obtain a chronic or 30-day (Q_{30-10}), and an acute or 1-day (Q_{1-10}) exposure stream flow for the discharge point as follows (Guidance No. 391-2000-023):

Low Flow Yield = 2.54 cfs/86.5 mi.^{2} = 0.029 cfs/mi.^{2}
Q_{7-10} = 0.07 mi.^{2} x 0.029 cfs/mi.^{2} = 0.002 cfs
Q_{30-10} = 1.36 x 0.002 cfs = 0.0027 cfs
Q_{1-10} = 0.64 x 0.002 cfs = 0.0013 cfs

Unnamed Tributary to Lamberson Branch of Woodbridge Creek to Aughwick Creek

25 Pa Code § 93.9n classifies Unnamed Tributary to Lamberson Branch of Woodbridge Creek to Aughwick Creek as High Quality-Cold Water Fishes (HQ-CWF) surface water. Based on the 2018 Integrated Report, assessment unit ID 20516, is not impaired. A TMDL currently does not exist for this stream segment, therefore, no TMDL has been taken into consideration during this review.

Water Supply

The nearest downstream public water supply intake is an experimental system for Mifflintown Borough Municipal Authority on the Juniata River in Mifflin Borough, approximately 88 miles downstream of this discharge. Considering distance and dilution, the discharge is not expected to impact the water supply.

Treatment Facility Summary				
Treatment Facility Name: Hustontown STP				
WQM Permit No.	**Issuance Date**			
2906401	10/5/2006			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary With Ammonia And Phosphorus	Sequencing Batch Reactor	Chlorine With Dechlorination	0.028
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
0.028	83.6	Not Overloaded	Aerobic Digestion	Land Application

Changes Since Last Permit Issuance: none

The treatment plant consists of influent wet well, 2 SBR tanks, a chlorine contact tank, a de-chlorination (1 aerobic digester), a post aeration, a sludge digester, 6 sludge holding tanks, and outfall.

Sodium Hypochlorite is used for disinfection. Soda Ash is used for pH adjustment. Del Pac 2020 is used for Total Phosphorus removal.

Compliance History	
Summary of DMRs:	The DMRs reported from January 1, 2019 to December 31, 2019 is summarized in the Table below (Pages # 4 & 5).
Summary of Inspections:	2/4/2020: Mr. Clark, DEP WQS, conducted follow up inspection. The recommendations were to have copies of all sludge disposal record for last 5 years available at treatment plant, and update monthly log sheets. All treatment units were in service, effluent was clear with pin floc., and field tests results were within permit limits. The sample on 2/4/2020 test results indicated within permit limits. 1/7/2020: Mr. Clark, DEP WQS, conducted compliance evaluation inspection. The recommendations were such as keep copy of sludge disposal records on-site, replace D.O. meter probe cap and calibrate meter, use military time or AM/PM when recording daily test grab and test time, and obtain # 7 buffer solution. All treatment units were in service, effluent was clear, and field tests results were within permit limits. There were no violations noted during inspection. 12/19/2019: Mr. Buss, DEP Compliance Specialist, conducted eDMR Chesapeake Bay Annual Report inspection. There was a recommendation such as on the Chesapeake Bay Supplemental Report, use the “Q” Columns to indicate that lab results were greater than or less than laboratory detection limits by using the symbols “>” or “<”, the Department requests that you begin using DEP developed spreadsheets for monthly DMR supplemental reports. There were violations noted during inspection such as the Cap load for total Nitrogen was exceeded by 67 lbs. 9/11/2019: Mr. Clark, DEP WQS, conducted follow up inspection. The effluent was clear, and field test results were within permit limits. There were violations noted during inspection such as field test results for Total Residual Chlorine (TRC) was over the permit limit.
Other Comments:	There were open violations associated with the permittee or the facility, until February 24, 2020.

Compliance History

DMR Data for Outfall 001 (from January 1, 2019 to December 31, 2019)

Parameter	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19
Flow (MGD) Average Mon	0.013819	0.013114	0.011018	0.010263	0.010799	0.012380	0.013950					
Flow (MGD) Daily Maxim	0.022405	0.025117	0.017397	0.016452	0.018600	0.017855	0.023238					
pH (S.U.) Minimum	6.5	6.3	6.5	6.3	6.2	6.0	6.4					
pH (S.U.) Maximum	8.0	7.8	7.6	7.3	7.4	7.0	7.1					
DO (mg/L) Minimum	7.1	6.4	5.8	5.4	6.8	6.2	7.4					
TRC (mg/L) Average Mon	0.01	0.005	0.008	0.007	0.01	0.003	0.006					
TRC (mg/L) IMAX	0.03	0.02	0.03	0.03	0.05	0.03	0.04					
CBOD5 (lbs/day) Average Monthly	0.24	0.25	0.20	0.17	0.20	0.26	0.53					
CBOD5 (lbs/day) Weekly Average	0.27	0.26	0.22	0.18	0.26	0.31	0.81					
CBOD5 (mg/L) Average Monthly	2.0	2.2	2.0	2.5	2.6	2.6	4.1					
CBOD5 (mg/L) Weekly Average	2.0	2.4	2.0	2.6	3.3	3.1	6.2					
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	27.5	26.8	32.7	8.6	34.5	8.3	27.7					
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	33.2	28.8	50.7	13.2	48.1	8.3	32.9					
BOD5 (mg/L) Raw Sewage Influent Average Monthly	261	254	323	131	240	80.3	218					
TSS (lbs/day) Average Monthly	0.50	0.39	0.31	0.26	0.44	0.70	0.83					
TSS (lbs/day) Raw Sewage Influent Average Monthly	27.1	41.6	69	8.9	17.6	21.4	19.8					
TSS (lbs/day) Raw Sewage Influent Daily Maximum	30.8	49.1	127	12.3	20.8	38.3	28.2					
TSS (lbs/day) Weekly Average	0.54	0.65	0.33	0.32	0.56	1.09	1.03					
TSS (mg/L) Average Monthly	4.3	4.0	3.3	3.8	5.8	7.0	6.5					
TSS (mg/L) Raw Sewage Influent Average Monthly	260	398	666	137	124	202	156					

TSS (mg/L) Weekly Average	5.0	7.0	3.5	4.5	7.0	11	8.0					
Fecal Coliform (CFU/100 ml) Geometric Mean	1	1	2.0	2	1	109	6					
Fecal Coliform (CFU/100 ml) IMAX	1	1	2.0	2	2	209	8					
Nitrate-Nitrite (mg/L) Average Monthly	8.27	2.50	1.57	2.56	4.03	2.42	1.79					
Nitrate-Nitrite (lbs) Total Monthly	27.15	74.97	4.69	4.91	15.77	0.25	6.80					
Total Nitrogen (mg/L) Average Monthly	10.87	26.83	4.44	4.53	5.72	4.45	4.43					
Total Nitrogen (lbs) Effluent Net Total Monthly	35.60	83.85	13.42	8.67	25.46	13.74	16.92					
Total Nitrogen (lbs) Total Monthly	35.60	83.85	13.42	8.67	25.46	13.74	16.92					
Total Nitrogen (lbs) Effluent Net Total Annual				727								
Total Nitrogen (lbs) Total Annual				727								
Ammonia (lbs/day) Average Monthly			0.05	0.03	0.09	0.05	0.06					
Ammonia (mg/L) Average Monthly			0.50	0.50	0.66	0.50	0.50					
Ammonia (lbs) Total Monthly	1.62	1.57	1.52	0.95	2.91	1.54	1.91					
Ammonia (lbs) Total Annual				533								
TKN (mg/L) Average Monthly	2.13	2.33	2.38	1.47	1.54	1.53	2.15					
TKN (lbs) Total Monthly	6.89	7.31	7.21	2.81	6.79	4.67	8.21					
Total Phosphorus (lbs) Effluent Net Total Monthly	5.67	3.72	6.25	5.76	7.09	2.90	0.79					
Total Phosphorus (lbs) Total Monthly	5.67	3.72	6.25	5.76	7.09	2.90	0.79					
Total Phosphorus (lbs) Effluent Net Total Annual				69								
Total Phosphorus (lbs) Total Annual				69								

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.028
Latitude 40º 2' 56.00" **Longitude** -78º 1' 55.00"
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

The ACT 537 amendment approved the discharge location and determined that the Social or Economic Justification (SEJ) limits would apply for this discharge. Therefore, the effluent limits are the more restrictive of Antidegradation Best Available Combination of Technologies (ABACT) or Water Quality-Based Effluent Limits (WQBEL) for each parameter of concern. The parameters of concern for discharge and a comparison of ABACT vs WQBELs are outlined in the following Table:

	$CBOD_5$	TSS	NH_3-N	Phosphorus	TRC	Fecal Coliform
ABACT	10 mg/L	10 mg/L	1.5 mg/L	1.0 mg/L	0.0 mg/L	200/100 ml
WQBEL	25 mg/L	30 mg/L	1.44 mg/L			

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$):
The model was utilized for this permit application. The attached computer printout of the WQM 7.0 stream model indicates that a monthly average limit of 25 mg/L, or secondary treatment, is adequate to protect the water quality of the stream. However, as per the previous protection report, the existing limits of 10 mg/L monthly average (AML), 15 mg/L weekly average (AWL), and 20 mg/L instantaneous maximum (IMAX) will remain in the permit as per guidance document 391-2000-014. Mass limits are calculated as follows:

Mass based AML (lb/day) = 10 (mg/L) x 0.028 (MG/day) x 8.34 (lb/MG)(L/mg) = 2.34 lb/day
Mass based AWL (lb/day) = 15 (mg/L) x 0.028 (MG/day) x 8.34 (lb/MG)(L/mg) = 3.50 lb/day

Total Suspended Solids (TSS):
The existing limits of 10 mg/L monthly average (AML), 15 mg/L average weekly (AWL), and 20 mg/L IMAX will remain in the permit as per guidance document 391-2000-014. Past DMRs and inspection reports show that the facility has been consistently achieving this limit. Mass limits are calculated as follows:

Mass based AML (lb/day) = 10 (mg/L) x 0.028 (MG/day) x 8.34 (lb/MG)(L/mg) = 2.34 lb/day
Mass based AWL (lb/day) = 15 (mg/L) x 0.028 (MG/day) x 8.34 (lb/MG)(L/mg) = 3.50 lb/day

Dissolved Oxygen (D.O.):
A minimum D.O. of 5.0 mg/L is required per 25 Pa. Code § 93.7. This is consistent with the previous permit and current Department criteria.

Ammonia (NH_3-N):

The following data is necessary to determine the in-stream NH_3-N criteria used in the attached WQM 7.0 computer model of the stream:

• Discharge pH	=	7.0	(Default)
• Discharge Temperature	=	20°C	(Default)
• Stream pH	=	7.0	(Default)
• Stream Temperature	=	25°C	(Default)
• Background NH_3-N	=	0	(Default)

NH_3-N calculations are based on the Department's Implementation Guidance of Section 93.7 Ammonia Criteria, dated 11/4/97 (ID No. 391-2000-013).

The attached printout of the WQM 7.0 data indicates that at a discharge of 0.028 MGD, limits of 1.46 mg/L NH_3-N as a monthly average and 2.92 mg/L NH_3-N IMAX are necessary to protect the aquatic life from toxicity effects. The slightly more stringent in previous permit of 1.4 mg/L monthly average and 2.8 mg/L IMAX will remain in the proposed permit.

Also, the NH_3-N winter effluent limit will be 4.2 mg/L for average monthly and 8.4 mg/L for IMAX based on a typical multiplier of 3.0 used by DEP to calculate. Past DMR data showed that the discharge consistently contains NH_3-N levels less than 0.1 mg/L. Therefore, the facility has consistently been achieving concentrations well below these limits.

pH:

The effluent discharge pH should remain above 6 and below 9 standard units according to 25 Pa Code § 95.2(2).

Fecal Coliforms:

Because the stream is classified as High Quality a year-round fecal coliform limit of 200/100ml will remain in the proposed permit.

Total Residual Chlorine:

The attached computer printout (Attachment C) utilizes the equations and calculations as presented in the Department's 2003 Implementation Guidance for Residual Chlorine (TRC) (ID # 391-2000-015) for developing chlorine limitations. The attached printout indicates that an average monthly water quality limit of 0.015 mg/L and 0.051 mg/L IMAX would be needed to prevent toxicity concerns. The existing permit limit of less than 0.02 mg/L AML and less than 0.06 mg/L IMAX will remain in the proposed permit. The treatment facility is meeting this limit.

Total Nitrogen (TN) & Total Phosphorous (TP):

This discharge is in the Chesapeake Bay Watershed. 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 682 lbs/year and TP 85 lbs/year monitoring is already included in the existing permit and will remain in the proposed permit.

Toxics:

There are no toxic parameters of concern associated with this discharge.

Class A Wild Trout Fisheries

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

303d Listed Streams

The discharge from this facility is not to a 303d listed stream segment.

Antidegradation

The effluent limits for this discharge have been developed to ensure that the existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. The basin is classified as a HQ-CWF. This discharge is approvable based on the Water Quality Antidegradation Implementation Guidance Manual as the best available alternative. No Exceptional Value Waters are impacted by this discharge.

Anti-Backsliding

Unless stated otherwise in this fact sheet, all permit requirements proposed in this fact sheet are at least as stringent as existing permit requirements in accordance with 40 CFR §122.44(l)(1).

WQM 7.0 MODEL INPUTS

Node 1: Point of First Use on Trib 13000 to Lamberson Branch

Elevation:	1075.27 ft (USGS National Map Viewer)
Drainage Area:	0.07 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	0.15 mile (PA DEP eMapPA)
Low Flow Yield:	0.029 $cfs/mi.^2$
Discharge Flow:	0.028 MGD (NPDES PA0248029 Application)

Node 2: Just before confluence from Lamberson Branch

Elevation:	1005.85 ft (USGS National Map Viewer)
Drainage Area:	0.12 $mi.^2$ (USGS PA StreamStats)
River Mile Index:	0.01 mile (PA DEP eMapPA)
Low Flow Yield:	0.029 $cfs/mi.^2$
Discharge Flow:	0.00 MGD

WQM 7.0 data is attached.

Hustontown WQM 7.0 data.pdf

TRC results:

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

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

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.034	1.3.2.iii	WLA cfc = 0.025
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 0.013	5.1d	LTA_cfc = 0.015

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.015	AFC
		INST MAX LIMIT (mg/l) = 0.051	

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

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	Daily Maximum	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
Total Residual Chlorine	XXX	XXX	XXX	<0.02	XXX	<0.06	1/day	Grab
$CBOD_5$	2.3	3.5 Wkly Avg	XXX	10	15	20	2/month	8-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Suspended Solids	2.3	3.5 Wkly Avg	XXX	10	15	20	2/month	8-Hr Composite
Fecal Coliform (CFU/100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Ammonia-Nitrogen May 1 - Oct 31	0.3	XXX	XXX	1.4	XXX	2.8	2/month	8-Hr Composite
Ammonia-Nitrogen Nov 1 - April 30	0.9	XXX	XXX	4.2	XXX	8.4	2/month	8-Hr Composite

Existing Effluent Limitations and Monitoring Requirements

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	2/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Net Total Nitrogen	Report	682	XXX	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	Report	85	XXX	XXX	XXX	XXX	1/month	Calculation

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	Daily Maximum	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	< 0.02	XXX	< 0.06	1/day	Grab
$CBOD_5$	2.3	3.5 Wkly Avg	XXX	10	15	20	2/month	8-Hr Composite
TSS	2.3	3.5 Wkly Avg	XXX	10	15	20	2/month	8-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	2/month	Grab
Ammonia May 1 - Oct 31	0.3	XXX	XXX	1.4	XXX	2.8	2/month	8-Hr Composite
Ammonia Nov 1 - Apr 30	0.9	XXX	XXX	4.2	XXX	8.4	2/month	8-Hr Composite

Compliance Sampling Location:

Other Comments:

Proposed Effluent Limitations and Monitoring Requirements

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	Minimum	Monthly Average	Maximum	Instant. Maximum		
Ammonia--N	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Kjeldahl--N	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	XXX	2/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	XXX	2/month	8-Hr Composite
Total Nitrogen (lbs) Effluent Net	XXX	682 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation
Total Phosphorus (lbs) Effluent Net	XXX	85 Total Annual	XXX	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location:

Other Comments:

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.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 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, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 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, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☒	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other: