pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0267082**
Facility Type	**Municipal**	APS ID	**1009054**
Major / Minor	**Minor**	Authorization ID	**1301202**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**West Cocalico Township Authority**	Facility Name	**West Cocalico Township Authority WWTP**
Applicant Address	156B West Main Street, PO Box 95	Facility Address	Creamery Road T989
	Reinholds, PA 17569-0095		West Cocalico, PA 17569
Applicant Contact	Carolyn Hildebrand	Facility Contact	Brian Norris
Applicant Phone	(717) 336-6265	Facility Phone	(717) 336-6265
Client ID	24878	Site ID	840972
Ch 94 Load Status	Not overloaded	Municipality	West Cocalico Township
Connection Status	No limitations	County	Lancaster
Date Application Received	December 24, 2019	EPA Waived?	No
Date Application Accepted	January 16, 2020	If No, Reason	New CB Discharger
Purpose of Application	New NPDES Permit.		

Summary of Review

West Cocalico Township Authority has applied to the Pennsylvania Department of Environmental Protection (DEP) for issuance of a National Pollutant Discharge Elimination System (NPDES) permit for the proposed wastewater treatment plant (WWTP) located in West Cocalico Township.

West Cocalico Township Authority owns an existing WWTP with the NPDES permit number PA0083429. A renewal application for this permit was received on December 24, 2019. West Cocalico's most recent Act 537 Plan was approved on March 7, 2019. It provided for the replacement of the Reinholds interceptor and the construction of a new 0.310 mgd WWTP. The new WWTP will serve the existing connections in the Reinholds area, as well as provide extension of public sewer to the Blainsport, Rose Drive, Galen Hall, and Resh Road areas of the township. The existing WWTP will be decommissioned and a pump station will be constructed in its place. This NPDES application is for the proposed discharge from the new 0.310 mgd WWTP. A Water Quality Management (WQM) permit application will need to be submitted before the final NPDES permit is issued.

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*

Approve	Deny	Signatures	Date
		Benjamin R. Lockwood / Environmental Engineering Specialist	March 5, 2020
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

Summary of Review
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. West Cocalico Township Authority

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	.31
Latitude	40º 15' 39.9"	Longitude	76º 7' 17.5"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Little Cocalico Creek (TSF, MF)	Stream Code	7719
NHD Com ID	57461319	RMI	1.52
Drainage Area	7.40	Yield (cfs/mi^2)	0.12
Q_{7-10} Flow (cfs)	0.89	Q_{7-10} Basis	USGS Gage #01576500
Elevation (ft)	435	Slope (ft/ft)	
Watershed No.	7-J	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		
Source(s) of Impairment	Unknown		
TMDL Status	N/A	Name	N/A
Nearest Downstream Public Water Supply Intake	Ephrata Area Joint Water Authority		
PWS Waters	Cocalico Creek	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	10

Streamflows: A drainage area of 7.40 mi^2 and a Q_{7-10} flow of 0.89 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 = 7.40 mi^2

The Q_{7-10} at the discharge point = 7.40 mi^2 x 0.12 cfs/mi^2 = 0.89 cfs

Preliminary Effluent Limits

The following are the preliminary effluent limits developed for the proposed WWTP, with a design flow of 0.31 mgd.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	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	0.28	XXX	0.91	1/day	Grab
$CBOD_5$	64	103 Wkly Avg	XXX	25	40	50	1/week	24-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	77	116 Wkly Avg	XXX	30	45	60	1/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 – Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 – Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Total Copper	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Ammonia May 1 – Oct 31	9.0	XXX	XXX	3.5	XXX	7.0	1/week	24-Hr Composite
Ammonia Nov 1 – Apr 30	27	XXX	XXX	10.5	XXX	21	1/week	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hour Composite

Discharge Parameter	Chesapeake Bay Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs)		Concentrations (mg/l)				
	Monthly	Annual	Minimum	Monthly Average	Maximum	Monitoring Frequency	Sample Type
Ammonia-N	Report	Report	XXX	Report	XXX	1/week	24-Hr Composite
Kjeldahl-N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	1/week	24-Hr Composite
Net Total Nitrogen	XXX	7,306	XXX	XXX	XXX	1/month	Calculation
Net Total Phosphorus	XXX	974	XXX	XXX	XXX	1/month	Calculation

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .31
Latitude 40º 15' 39.9" **Longitude** 76º 7' 17.5"
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 ($CBOD_5$), NH_3-N and dissolved oxygen (D.O.). 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 renewal. The model output indicated a $CBOD_5$ average monthly limit of 25 mg/l, an NH_3-N average monthly limit of 3.72 mg/l, and a D.O. minimum limit of 5.0 mg/l were protective of water quality.

The flow data used to run the model was acquired from USGS PA StreamStats, and is included as an attachment. Stream pH and temperature inputs for this model run were based on data acquired from the National Water Quality Monitoring Council website. Data was analyzed from the Water Quality Network (WQN) Station ID 273 from October 2004 to June 2019 for pH and October 2004 to October 2017 for Temperature. DEP's Standard Operating Procedure (SOP) No. BPNPSM-PMT-033 (Establishing Effluent Limitations for Individual Sewage Permits) recommends using the 90th percentile of long-term data for background and discharge characteristics when using WQM 7.0. A 90th percentile analysis was performed on the data and resulted in a Stream pH of 8.4 and a Stream Temperature of 24°C. Using these values resulted in a $CBOD_5$ limit of 25 mg/l and a NH_3-N limit of 3.5 mg/l, rounded in accordance with DEP's Technical Guidance No. 362-0400-001. These limits will be included in the permit.

Toxics

As this facility has not yet been constructed, effluent sample results for toxic pollutants were taken from the NPDES renewal application for West Cocalico's existing WWTP, and will be used as a basis for this facility. The sample results were entered into DEP's Toxics Screening Analysis worksheet and PENTOXSD to develop appropriate permit requirements for toxic pollutants of concern. A stream hardness value of 270 mg/l and pH of 8.4 were used in modeling, taken from WQN Station ID 273. Based on effluent sample results reported on the application, Total Copper and Total Lead are candidates for PENTOXSD modeling as these pollutants are discharged at a level that has the reasonable potential to cause excursions

above the state water quality criteria. The resulting Water Quality-Based Effluent Limits (WQBELs) from PENTOXSD are shown in the following table:

Parameter	Max. Concentration in Application or DMRs (µg/l)	Most Stringent WQBEL (µg/l)	Screening Recommendation
Total Copper	30	50.319	Establish Limits
Total Lead	<10	23.432	Monitor

When the WQBEL produced from PENTOXSD was entered into the Toxics Screening Analysis, the worksheet recommended limits for Total Copper and monitoring for Total Lead. This data was analyzed based on the guidelines found in DEP's Water Quality Toxics Management Strategy (Document No. 361-0100-003) and DEP's SOP No. BPNPSM-PMT-033. PENTOXSD Model Results are attached to this fact sheet. The Toxics Screening Analysis uses the following logic:

a. Establish average monthly and instantaneous maximum (IMAX) limits in the draft permit where the maximum reported concentration exceeds 50% of the WQBEL.
b. For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
c. For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10%-50% of the WQBEL.

Due to the fact that modeling was based on sampling from the existing WWTP, effluent sample results have the potential to change with the construction and operation of the new WWTP. As a result, Total Copper and Total Lead monitoring requirements have been added to the permit. The need for Total Copper and Total Lead effluent limits will be re-evaluated during the next permit renewal cycle using the data collected during this permit term.

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 0.28 mg/l would be needed to prevent toxicity concerns. It is recommended that a TRC limit of 0.28 mg/l monthly average and 0.91 mg/l instantaneous maximum be applied to this permit.

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). It is recommended to include this limit in the permit to ensure that the facility will achieve compliance with DEP water quality standards.

Total Phosphorus
DEP's SOP No. BCW-PMT-033 states that for sewage discharges with design flows > 2,000 gpd, monitoring will be included at a minimum for Total Phosphorus. For sewage discharges to the Chesapeake Bay watershed, monitoring will be consistent with the Phase 2 WIP Wastewater Supplement. Therefore, monitoring for Total Phosphorus has been included in the 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. A new update to the WIP was published as the Phase 3 WIP in August 2019. As part of the Phase 3 WIP, a *Phase 3 Watershed Implementation Plan Wastewater Supplement* (Phase 3 Supplement) was developed, and was most recently revised on December 17, 2019, and is the basis for the development of any Chesapeake Bay related permit parameters. 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. For new Phase 4 and 5 sewage dischargers, in general DEP will issue new permits containing Cap Loads of "0" and new facilities will be expected to purchase credits and/or apply offsets to achieve compliance.

West Cocalico Township Authority's WWTP will be a Phase 4 new discharger (Average Annual Design Flow ≥ 0.2 MGD and < 0.4 MGD). West Cocalico Township Authority's WWTP will consist of flow from West Cocalico's existing WWTP, as well as flow from the new service areas. The discharge from this existing facility will be eliminated once it is connected to the new WWTP.

- West Cocalico Township Authority WWTP – Annual Average Design Flow of 0.15 mgd (PA0083429)

West Cocalico WWTP PA0083429 is a Phase 5 facility, and does not have existing Cap Loads. The Phase 3 WIP Supplement states that when a facility eliminates its discharge and connects to a new facility, the lesser of the existing TN and TP loads or Cap Loads will be transferred to the new facility's Cap Load. WWTP PA0083429 has an existing average Tn concentration of <18.7 mg/l and a TP concentration of 3.7 mg/l, as reported in the NPDES renewal application received December 24, 2019.

The Cap Loads for this facility using existing TN and TP concentrations are as follows:

West Cocalico Township Authority WWTP
TN Cap Load: 0.15 mgd x 18.7 mg/l x 8.34 x 365 days/yr = 8,538 lbs/yr
TP Cap Load: 0.15 mgd x 3.7 mg/l x 8.34 x 365 days/yr = 1,689 lbs/yr

The Cap Loads of 7,306 lbs/yr TN and 974 lbs/yr TP are more stringent for this facility. Since the Cap Loads for a new facility would be 0, with the addition of the Cap Loads from the existing WWTP, the Cap Loads for the new West Cocalico WWTP will be 7,306 lbs/yr TN and 974 lbs/yr TP. This is consistent with the preliminary effluent limits.

West Cocalico will also connect 145 on-lot disposal systems (OLDs) to the new WWTP. Based on the Phase 3 Supplement, an offset of 25 lbs/yr TN per dwelling may be approved if the OLDs were in existence prior to January 1, 2003. All of the homes associated with the OLDs were built prior to 2003 and are eligible for offsets. The list of offsets is included as an attachment to this fact sheet. Based on this information, an offset of 3,625 lbs/yr TN (145 OLDs x 25 lbs/yr TN per OLDs) will be applied to this permit.

The Phase 3 Supplement states that from this point forward, permits will be issued with the wasteload allocations (WLAs) as Cap Loads and will identify offsets separately to facilitate nutrient trading activities and compliance with the TMDL. Therefore, the offsets will be included in the permit separately from the Cap Loads.

Based on the schedule provided in the 537 Plan, construction of the proposed WWTP project is expected to begin within 14 months of permits being issued. The Part II permit submission is due within 16 months of the Act 537 Approval month, which was March 2019. Based on this schedule, construction would begin sometime around March 2022 at the lastest. DEP considers a Cap Load compliance year as the year-long period starting October 1st and ending September 30th. It is not reasonable for WVA to comply with Cap Loads for compliance year 2023 at that time. Considering this, these Cap Loads should become effective October 1st, 2023 and monitoring /reporting requirements will be written in the permit as an interim requirement.

Total Dissolved Solids (TDS)

Total Dissolved Solids and its major constituents including Bromide, Chloride, and Sulfate have become statewide pollutants of concern and threats to DEP's mission to prevent violations of water quality standards. The requirement to monitor these pollutants is necessary under the following DEP Central Office directive:

For point source discharges and upon issuance or reissuance of an individual NPDES permit:

- Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and

report for TDS, sulfate, chloride, and bromide. Discharges of 0.1 MGD or less should monitor and report for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.

- Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for bromide. Discharges of 0.1 MGD or less should monitor and report for bromide if the concentration of bromide in the discharge exceeds 10 mg/L.

- Where the concentration of 1,4-dioxane (CAS 123-91-1) in a discharge exceeds 10 µg/l and the discharge flow exceeds 0.1 mgd, Part A of the permit should include monitor and report for 1,4-dioxane. Discharges of 0.1 mgd or less should monitor and report for 1,4-dioxane if the concentration of 1,4-dioxane in the discharge exceeds 100 µg/l.

West Cocalico reported a maximum effluent concentration of 568 mg/l for TDS on the application for WWTP PA0083429. Based upon this data, monitoring of TDS, Bromide, Chloride, and Sulfate will not be required. These parameters will be re-evaluated during the next permit renewal cycle.

Compliance Schedule

A compliance schedule is necessary for the construction of the WWTP. The following conditions will be incorporated into Part C of the NPDES permit:

A. The permittee shall achieve compliance with Cap Loads in accordance with the following schedule:

1.	Start Construction	Within 14 months of permit issuance
2.	Progress report(s)	Quarterly
3.	Compliance with effluent limitations	Permit Effective Date
4.	Compliance with Cap Loads	10/1/2023

B. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit to DEP a written notice of compliance or non-compliance with the specific schedule requirement. Each notice of non-compliance shall include the following information:

1. A short description of the non-compliance.
2. A description of any actions taken or proposed by the permittee to comply with the elapsed schedule requirement.
3. A description of any factors which tend to explain or mitigate the non-compliance.
4. An estimate of the date that compliance with the elapsed schedule requirement will be achieved and an assessment of the probability that the next scheduled requirement will be met on time.

Fecal Coliform

PA Code § 92a.47.(a)(4) requires a monthly average limit of 200/100 mL as a geometric mean and an instantaneous maximum limit not greater than 1,000/100 mL from May through September for fecal coliform. PA Code § 92a.47.(a)(5) requires a monthly average limit of 2,000/100 mL as a geometric mean and an instantaneous maximum limit not greater than 10,000/100 mL from October through April for fecal coliform. These limits have been included in the permit.

Sampling Frequency & Sample Type

The monitoring requirements were established based on the BPJ and/or Table 6-3 of DEP's technical guidance No. 362-0400-001.

Flow Monitoring

Flow monitoring is recommended by DEP's technical guidance and is also required by 25 PA Code §§ 92a.27 and 92a.61.

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 be included in the permit. A 24-hr composite sample type will be required to be consistent with the proposed sampling frequency for effluent TSS and $CBOD_5$.

Mass Loading Limitation

All mass loading effluent limitations recommended in the draft permit are concentration-based, calculated using a formula: design flow (MGD) x concentration limit (mg/l) x conversion factor of 8.34.

Anti-Degradation

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.

303(d) Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. 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 September 30, 2023.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum 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	0.28	XXX	0.91	1/day	Grab
CBOD5	64	103	XXX	25	40	50	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	77	116	XXX	30	45	60	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Ammonia Nov 1 - Apr 30	27	XXX	XXX	10.5	XXX	21	1/week	24-Hr Composite
Ammonia May 1 - Oct 31	9.0	XXX	XXX	3.5	XXX	7.0	1/week	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Copper	XXX	XXX	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite
Total Lead	XXX	XXX	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001

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 September 30, 2023.

Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs)		Concentrations (mg/L)			Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Instant. Maximum		
Ammonia-N	Report	Report	XXX	Report	XXX	1/week	24-Hr Composite
Kjeldahl-N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	1/week	24-Hr Composite
Net Total Nitrogen	XXX	Report	XXX	XXX	XXX	1/year	Calculation
Net Total Phosphorus	XXX	Report	XXX	XXX	XXX	1/year	Calculation

Compliance Sampling Location: Outfall 001

Other Comments: None

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: October 1, 2023 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	0.28	XXX	0.91	1/day	Grab
CBOD5	64	103	XXX	25	40	50	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	77	116	XXX	30	45	60	1/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2,000 Geo Mean	XXX	10,000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1,000	1/week	Grab
Ammonia Nov 1 - Apr 30	27	XXX	XXX	10.5	XXX	21	1/week	24-Hr Composite
Ammonia May 1 - Oct 31	9.0	XXX	XXX	3.5	XXX	7.0	1/week	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Copper	XXX	XXX	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite
Total Lead	XXX	XXX	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001

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: October 1, 2023 through Permit Expiration Date.

Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs)		Concentrations (mg/L)			Minimum Measurement Frequency	Required Sample Type
	Monthly	Annual	Minimum	Monthly Average	Instant. Maximum		
Ammonia-N	Report	Report	XXX	Report	XXX	1/week	24-Hr Composite
Kjeldahl-N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Nitrate-Nitrite as N	Report	XXX	XXX	Report	XXX	1/week	24-Hr Composite
Total Nitrogen	Report	Report	XXX	Report	XXX	1/month	Calculation
Total Phosphorus	Report	Report	XXX	Report	XXX	1/week	24-Hr Composite
Net Total Nitrogen	XXX	7,306	XXX	XXX	XXX	1/year	Calculation
Net Total Phosphorus	XXX	974	XXX	XXX	XXX	1/year	Calculation

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.
☐	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: