pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0051934**
Facility Type	**Municipal**	APS ID	**1001629**
Major / Minor	**Major**	Authorization ID	**1288281**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Aqua Pennsylvania Wastewater Inc.**	Facility Name	**King Rd Sewer System & STP**
Applicant Address	762 W. Lancaster Avenue	Facility Address	529 King Road
	Bryn Mawr, PA 19010		Royersford, PA 19468-1120
Applicant Contact	Matthew Miller	Facility Contact	Frank Rodden
Applicant Phone		Facility Phone	(610) 792-2112
Client ID	62614	Site ID	451122
Ch 94 Load Status	Not Overloaded	Municipality	Limerick Township
Connection Status	No Limitations	County	Montgomery
Date Application Received	August 29, 2019	EPA Waived?	No
Date Application Accepted	Not Applicable	If No, Reason	Major Facility
Purpose of Application	NPDES permit renewal		

Summary of Review

The permittee, Aqua Pennsylvania Wastewater Inc., submitted this application to renew NPDES Permit PA0051934 which expires on February 29, 2020. The NPDES permit for this facility effective on March 1, 2015 was issued to Limerick Township; the permit was transferred to Aqua Pennsylvania Wastewater, Inc. effective February 1, 2019. The expiration date of February 29, 2020 was retained in the transfer. The facility is permitted to discharge 1.7 million gallons per day (MGD). No expansion or modification was requested in the renewal application. As the permittee is now a private company, the permit was changed from a Publicly Owned Treatment Work (POTW) to a Non-Municipal Sewage Treatment Works.

The facility has a pretreatment process consisting of a mechanical fine screen, aerated grit chamber and grit classifier. The flow is then sent to AeroMod activated sludge biological treatment systems that include two-stage aeration and clarification. The flow is then sent through in-line ultraviolet (UV) disinfection and an effluent meter. There are two aerobic sludge digesters and holding tanks on-site. Sludge is mechanically thickened by rotary drum and hauled off-site to the Pottstown Wastewater Treatment Plant for further processing and final disposal.

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		Harmonie Hawley, PhD, PE / Environmental Engineering Specialist /s/	12/19/2019
X		Pravin C. Patel, P.E. / Environmental Engineer Manager /s/	12/19/2019

Summary of Review

Effluent limitations for sewage effluent and stormwater are the same as the previous permit. WET testing limitations were added to this permit renewal due to failed tests during the past year. Effluent limitations for treated sewage effluent and stormwater are discussed below.

Part C Conditions:

I. Other Requirements
- No Stormwater to Sanitary Sewers
- Necessary Property Rights
- Proper Sludge Disposal
- Abandon STP when Municipal Sewers Available
- Responsible Operator
- Operation and Maintenance Plan

II. Industrial Pretreatment Program
III. Whole Effluent Toxicity
IV. Requirements Applicable to Stormwater Outfalls
V. PCB Pollutant Minimization Plan and Monitoring

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	1.7
Latitude	40º 11' 32.49"	Longitude	-75º 33' 5.93"
Wastewater Description:	Sewage Effluent		
Outfall No.	003	Design Flow (MGD)	Stormwater (0)
Latitude	40º 11' 28"	Longitude	-75º 32' 52"
Wastewater Description:	Stormwater		
Outfall No.	004	Design Flow (MGD)	Stormwater (0)
Latitude	40º 11' 32"	Longitude	-75º 32' 54"
Wastewater Description:	Stormwater		
Outfall No.	005	Design Flow (MGD)	Stormwater (0)
Latitude	40º 11' 35"	Longitude	-75º 32' 56"
Wastewater Description:	Stormwater		

Quad Name	Phoenixville	Quad Code	1741
Receiving Waters	Schuylkill River (WWF, MF)	Stream Code	00833
NHD Com ID	25989370	RMI	42.75
Drainage Area	1190	Yield (cfs/mi^2)	0.25
Q_{7-10} Flow (cfs)	301	Q_{7-10} Basis	WQN & PA StreamStats
Elevation (ft)	110	Slope (ft/ft)	0.00053
Watershed No.	3-D	Chapter 93 Class.	WWF, MF
Existing Use	Same	Existing Use Qualifier	N/A
Exceptions to Use	N/A	Exceptions to Criteria	N/A
Assessment Status	Impaired-fish consumption		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBS)		
Source(s) of Impairment	Unknown		
TMDL Status	Final April 7, 2007	Name	Schuylkill River PCB TMDL

Background/Ambient Data		Data Source
pH (SU)	8.3	WQN 0111
Hardness (mg/L)	160	WQN 0111

Nearest Downstream Public Water Supply Intake		Phoenixville Water Department	
PWS Waters	Schuylkill River	Flow at Intake (cfs)	9.3
PWS RMI	39.75	Distance from Outfall (mi)	3

Changes Since Last Permit Issuance: No changes.

Other Comments: None

Treatment Facility Summary

Treatment Facility Name: King Road STP

WQM Permit No.	Issuance Date
4603408	Transferred 05/02/2019
4603408	Transferred 02/10/2009
4603408	03/08/2003

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	UV light	1.7

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
1.7	3900	Not Overloaded	N/A	N/A

Changes Since Last Permit Issuance: The permit was transferred to Aqua Pennsylvania Wastewater Inc. during the previous NPDES permit cycle. As the permittee is now a private company, the permit was changed from a Publicly Owned Treatment Work (POTW) to a Non-Municipal Sewage Treatment Works.

Other Comments: Annual average flowrate was reported as 0.807 MGD for 2016; 0.816 MGD for 2017; 0.991 MGD for 2018; and 0.906 MGD thus far in 2019 in the permit renewal application.

Compliance History

DMR Data for Outfall 002 (from September 1, 2018 to August 31, 2019)

Parameter	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18
Flow (MGD) Average Monthly	0.712	0.802	0.798	0.863	0.791	0.961	0.923	0.945	0.931	1.049	0.78	1.000
Flow (MGD) Daily Maximum	0.777	1.347	1.124	1.227	1.180	1.861	1.229	1.703	1.808	1.834	0.974	1.860
pH (S.U.) Daily Minimum	7.2	7.2	6.8	6.3	6.3	6.4	6.6	6.7	6.8	6.8	6.7	6.7
pH (S.U.) Instantaneous Maximum	7.6	7.5	7.5	7.0	7.3	6.9	6.9	7.0	7.3	7.1	7.0	7.1
DO (mg/L) Daily Minimum	6.4	6.7	6.5	6.8	7.3	8.0	8.0	8.2	7.8	7.5	7.2	6.7
CBOD5 (lbs/day) Average Monthly	< 13	< 14	< 13	19	< 17	< 22	< 22	21	< 20	< 18	56	44
CBOD5 (lbs/day) Weekly Average	14	18	< 13	24	24	29	27	33	31	25	68	59
CBOD5 (mg/L) Average Monthly	< 2.0	< 2.0	< 2.0	3.0	< 3.0	< 3.0	< 3.0	3	< 3	< 2	9	6
CBOD5 (mg/L) Raw Sewage Influent Average Monthly	224	205	186	193	240	193	190	172	301	179	258	169
CBOD5 (mg/L) Weekly Average	2.3	3.0	2.0	4.0	4.0	4.0	4.0	4	5	3	10	7
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	1688	1493	1614	1723	1970	1513	1992	1407	2427	1665	1657	1105
BOD5 (mg/L) Raw Sewage Influent Average Monthly	283	247	253	254	328	219	257	209	370	204	267	151.5
TSS (lbs/day) Average Monthly	15	10	26	84	49	46	48	56	36	27	36	24
TSS (lbs/day) Weekly Average	21	19	46	121	66	53	61	67	68	45	53	33
TSS (mg/L) Average Monthly	2.0	2.0	4.0	12.0	8.0	7.0	7.0	8	6	3	6	3
TSS (mg/L) Raw Sewage Influent Average Monthly	284	183	183	228	188	142	180	182	186	182	371	241

TSS (mg/L) Weekly Average	3.0	3.0	7.0	16.0	11.0	8.0	9.0	10	11	6	9	4
Total Dissolved Solids (mg/L) Average Monthly			430.0			624.0			486			664
Fecal Coliform (No./100 ml) Geometric Mean	12	15	19	23	8	4	6	7	7	13	24	15
Fecal Coliform (No./100 ml) Instantaneous Maximum	19	48	48	26	11	8	11	16	16	44	43	35
UV Transmittance (%) Daily Minimum	100	100	100	100	100	100	100	100	100	100	100	100
Total Nitrogen (lbs/day) Average Monthly	52	33	75	148	110	< 131	146	130	98	< 171	< 158	< 163
Total Nitrogen (mg/L) Average Monthly	8.8	5.3	11.7	22	18	< 19	19	19	14.6	< 21	< 25	< 21
Total Nitrogen (mg/L) Instantaneous Maximum		6.8	23	26	26	23	21					
Ammonia (lbs/day) Average Monthly	< 3	< 3	< 3	< 4	< 22	< 3	< 0.8	< 3	< 11	< 4	< 3	< 4
Ammonia (mg/L) Average Monthly	< 0.50	< 1.0	< 1.0	< 1.0	< 4.0	< 0.5	< 0.1	< 1	< 2	< 1	< 1	< 1
Total Phosphorus (lbs/day) Average Monthly	33	23	30	30	28	26	34	29	18	25	29	37
Total Phosphorus (mg/L) Average Monthly	5.5	3.8	4.6	4.5	4.6	3.7	4.4	4.3	2.7	3	4.7	4.8
Total Phosphorus (mg/L) Instantaneous Maximum		4.9	5.4	5.7	6.3	4.4	4.8					
Total Copper (lbs/day) Daily Maximum			0.1			0.1			0.09			0.1
Total Copper (mg/L) Daily Maximum			0.017			0.016			0.015			0.015
Total Zinc (lbs/day) Daily Maximum			0.7			1			0.6			0.7
Total Zinc (mg/L) Daily Maximum			0.100			0.143			0.101			0.104

PCBs (Dry Weather) (pg/L) Daily Maximum									746			
PCBs (Wet Weather) (pg/L) Daily Maximum									8270			

DMR Data for Outfall 003 (from September 1, 2018 to August 31, 2019)

Parameter	AUG-19	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19	JAN-19	DEC-18	NOV-18	OCT-18	SEP-18
pH (S.U.) Instantaneous Maximum									7.3			
CBOD5 (mg/L) Instantaneous Maximum									5.0			
COD (mg/L) Instantaneous Maximum									34.4			
TSS (mg/L) Instantaneous Maximum									< 4.0			
Oil and Grease (mg/L) Instantaneous Maximum									< 10.0			
Fecal Coliform (No./100 ml) Instantaneous Maximum									500			
TKN (mg/L) Instantaneous Maximum									< 0.50			
Total Phosphorus (mg/L) Instantaneous Maximum									0.07			
Dissolved Iron (mg/L) Instantaneous Maximum									0.057			

Compliance History

No non-compliance was found while reviewing DMRs submitted over the past 2 years. WET tests (discussed below) failed, but quarterly sampling was implemented.

Development of Effluent Limitations

Outfall No. 002 **Design Flow (MGD)** 1.7
Latitude 40º 11' 32.00" **Longitude** -75º 32' 59.00"
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)

Comments:
$CBOD_5$, TSS, NH_3-N, DO, pH, and fecal coliform remain unchanged from the previous permit. For fecal coliform, the instantaneous maximum (IMAX) was not to exceed 1,000/100 ml from May 1st to September 30th and not to exceed 1,000/100 ml in greater than 10 percent of the samples tested from October 1st through April 30th. These limits will be kept for this permit renewal. The limit for a geometric mean of 200/100 ml remains unchanged for this permit. This limit is for the Delaware River Basin Commission (DRBC) Administrative Manual-Part III Water Quality Regulations with amendments through December 4, 2013. Monitoring frequencies are consistent with the Standard Operating Procedure (SOP) for "Establishing Effluent Limitations for Individual Sewage Permits" (Final November 9, 2012; Revised January 10, 2019; Version 1.6). A monitoring frequency lower than those listed in Table 6-3 from a Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001) is allowed due to no non-compliance over the past 2 years. The frequency of 1/week for $CBOD_5$, NH3-N, TSS, and fecal coliform, and 1/day for pH, DO and UV monitoring, will remain unchanged.

Chlorine is not used at this facility as back-up disinfection and is not stored on-site, thus no limits are set for TRC. The UV meter measures transmittance in percent (%). UV monitoring is required at the same frequency as would be used for TRC per the SOP "Establishing Effluent Limitations for Individual Sewage Permits" (Final November 9, 2012; Revised January 10, 2019; Version 1.6).

Effluent monitoring and frequency of monitoring for Total Nitrogen (TN) and Total Phosphorous (TP) will not be changed for this renewal. TN and TP monitoring is consistent with the Standard Operating Procedure (SOP) for "Establishing Effluent Limitations for Individual Sewage Permits" (Final November 9, 2012; Revised January 10, 2019; Version 1.6). As the Schuylkill River is not impaired for nutrients and the plant is meeting requirements for these parameters, a monitoring frequency lower than those listed in Table 6-3 from a Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001) is allowed. The frequency of 1/week will remain unchanged.

PCBs will continue to be monitored for compliance with the Schuylkill River PCB TMDL (Final PCB TMDL Development for the Schuylkill River, Pennsylvania, Established on 4/7/2007 by the US Environmental Protection Agency). No numerical permit limit is listed (Appendix B, Table B-1) for this permit and plant; however, monitoring is required. A waste-load allocation (WLA) is listed for this plant as 2.83E-4 g/day (Appendix D, Table B-1), but the plant is not required to meet that WLA at this time. The WLA was based on a water quality criterion of 0.044 ng/L (PCB TMDL and a Delaware River

Basin Commission, 2003 study). The wet weather PCB concentration was reported as 8,270 pg/L (December 2018 DMR), which corresponds to 0.053 g/d at full flow (1.7 MGD). The reported dry weather PCB concentration for the same year was 746 pg/L, corresponding to 0.0047 g/d at full flow. These values are higher than the WLA, so a requirement is included in Part C of the permit to conduct annual sampling for dry and wet weather and develop a Pollutant Minimization Plan (this is the same requirement as the previous permit issued in 2015 and the permit prior to the 2015 issued permit).

Total Dissolved Solids (TDS) will remain on this permit. The limit is set to 1,000 mg/L. As in previous reviews, the maximum reported concentration for TDS exceeds 50% of the DRBC effluent standard of 1,000 mg/L, so limits are included in Part A of the permit and the sampling frequency will remain quarterly. TDS concentrations of 430 mg/L was reported in June, 2019; 624 mg/L was reported for March, 2019; 456 mg/L in December, 2018; and 664 mg/L in September, 2018.

Modeling results from WQM can be found in Attachment A.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (Attachments B and C) determined the following parameters were candidates for limitations: Total Copper, Total Thallium and 2,6-Dinitrotoluene

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
None	N/A	N/A	Pentoxsd & Toxics Screening Analysis

Comments:
Pentoxsd and the Toxics Screening Analysis spreadsheet results indicate that Total Copper should be monitored. Total Thallium and 2,6-Dinitrotoluene do not need limits or monitoring.

Best Professional Judgment (BPJ) Limitations

Comments:

Influent $CBOD_5$, BOD_5 and TSS monitoring is consistent with the SOP for New and Reissuance Sewage Individual NPDES Permit Applications (Final November 9, 2012; Revised October 11, 2013; Version 1.8) and will remain in this permit. $CBOD_5$ and TSS reporting are required based on previous permits and to monitor 85% removal of influent $CBOD_5$ and TSS; and BOD_5 reporting is required by Chapter 94.

Anti-Backsliding

In the previous permit, zinc was determined to be a reasonable potential and added to the permit for monitoring. While total zinc did not matriculate as a candidate for reasonable potential in this review, monitoring of zinc is retained in this permit.

$CBOD_5$ was reduced from 25 mg/l to 20 mg/l and NH_3-N was reduced from 20 mg/l to 8 mg/l in the permit preceding the 2015 renewal (i.e. 2009) to be consistent with other discharges in the same geographical area. A review of the DMRs submitted over the past two (2) years indicate compliance with these effluent limitations, thus the limits are retained for this renewal.

Attachment A Attachment B Attachment C

Development of Effluent Limitations

Outfall No.	003	**Design Flow (MGD)**	0
Latitude	40º 11' 28"	**Longitude**	-75º 32' 52"
Wastewater Description:	Stormwater		

Anti-Backsliding

Monitoring parameters and frequencies are retained from the previous permit. The parameters are based on technology-based limitations.

As was determined in previous evaluations, Outfall 003 is considered representative of Outfalls 003, 004 and 005, thus monitoring is only required at Outfall 003.

Whole Effluent Toxicity (WET)

For Outfall 002, ☐ **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: Quarterly testing began in November 2018 and the TRE is due December 2019

The dilution series used for the tests was: 100%, 60%, 30%, 2%, and 1%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 2%.

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

Test Date	*Ceriodaphnia* Results (% Effluent)			*Pimephales* Results (% Effluent)			Pass? *
	NOEC Survival	NOEC Reproduction	LC50	NOEC Survival	NOEC Growth	LC50	

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

TST Data Analysis

(NOTE – In lieu of recording information below, the application manager may attach the DEP WET Analysis Spreadsheet).

Test Date	*Ceriodaphnia* Results (Pass/Fail)		*Pimephales* Results (Pass/Fail)	
	Survival	Reproduction	Survival	Growth
11/20/2018	N/A	N/A	Fail	Fail
2/26/2019	Pass	Pass	Pass	Pass
5/24/2019	Pass	Pass	Pass	Pass
8/26/2019	Pass	Fail	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: The results for 11/20/2018 are a retest due to a failed test in October 2018; the October 2018 results are not available at this time. The facility implemented quarterly sampling after the November 2018 re-test (February 2019, May 2019, August, 2019). The TRE is due in December 2019. *C. daphnia* was not monitored in November 2018 as it passed the October 2018 sample round. For the fourth test for *C. daphnia*, October 2017 results are provided and were a pass for survival and reproduction for *C. daphnia*. An additional WET test result was submitted to DEP for an October 2019 test (received November 21, 2019) which showed passes for all four endpoints. As this result is after renewal was requested, and due to a history of WET test failures and for limit consistency, Part A limitations will be added to the permit for both species. The WETT Analysis Spreadsheet is included as Attachment D.

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

Acute Partial Mix Factor (PMFa): **0.041** Chronic Partial Mix Factor (PMFc): **0.284**

1. Determine IWC – Acute (IWCa):

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

[(1.7 MGD x 1.547) / ((301 cfs x 0.041) + (1.7 MGD x 1.547))] x 100 = **17.6%**

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:

Not Applicable – not tidal

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

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

TIWCa = IWCa / 0.3 = **%**

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

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

[(1.7 MGD x 1.547) / ((301 cfs x 0.284) + (1.7 MGD x 1.547))] x 100 = **3%**

3. Determine Dilution Series

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

Dilution Series = 100%, 60%, 30%, 3%, and 1%.

WET Limits

Has reasonable potential been determined? ☒ YES ☐ NO

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

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

Ceridaphnia dubia and Pimephales promelas 33.3 TUc ($1/TIWC_c = 1/0.03$)

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

Not Applicable as WET limits are established**.**

Attachment D

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 002, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
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
CBOD5 Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
CBOD5	284	425	XXX	20.0	30.0	40	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	425	638	XXX	30.0	45.0	60	1/week	24-Hr Composite
TSS Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
Total Dissolved Solids	XXX	XXX	XXX	1000.0 Avg Qrtly	XXX	2500	1/quarter	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000* 90%SAMPLES	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000*	1/week	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
Total Nitrogen	Report	XXX	XXX	Report	XXX	Report	1/week	24-Hr Composite
Ammonia	114	XXX	XXX	8.0	XXX	16	1/week	24-Hr Composite

Outfall 002, 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	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	Report	XXX	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite
Total Copper	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Zinc	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
PCBs (Dry Weather) (pg/L)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	24-Hr Composite
PCBs (Wet Weather) (pg/L)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/year	24-Hr Composite
Chronic WET - Ceriodaphnia Survival (TUc)	XXX	XXX	XXX	33.3 Daily Max	XXX	XXX	See Permit	24-Hr Composite
Chronic WET - Ceriodaphnia Reproduction (TUc)	XXX	XXX	XXX	33.3 Daily Max	XXX	XXX	See Permit	24-Hr Composite
Chronic WET - Pimephales Survival (TUc)	XXX	XXX	XXX	33.3 Daily Max	XXX	XXX	See Permit	24-Hr Composite
Chronic WET - Pimephales Growth (TUc)	XXX	XXX	XXX	33.3 Daily Max	XXX	XXX	See Permit	24-Hr Composite

Compliance Sampling Location: 002

Other Comments: See Part C of permit

*Not to exceed 1,000/100 ml as an instantaneous maximum from May 1st through September 30th. Not to exceed 1,000/100 ml in greater than 10 percent of the samples tested from October 1st through April 30th.

WET testing has been added to Part A of the permit and shown in the above table. Limitations were added for both species as described in the WET section.

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 003, 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
CBOD5	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
COD	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
TSS	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Oil and Grease	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Fecal Coliform (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
TKN	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Dissolved Iron	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

Compliance Sampling Location: 003

Other Comments: During previous reviews, Outfall 003 was determined to be representative of Oufalls 003, 004 and 005 in previous permits. Sampling is not required at Outfalls 004 and 005.

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment A)
☒	PENTOXSD for Windows Model (see Attachment B)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☒	Toxics Screening Analysis Spreadsheet (see Attachment C)
☐	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 for "Establishing Effluent Limitations for Individual Sewage Permits" (Final November 9, 2012; Revised January 10, 2019; Version 1.6) SOP for New and Reissuance Sewage Individual NPDES Permit Applications (Final November 9, 2012; Revised October 11, 2013; Version 1.8) SOP: Whole Effluent Toxicity (WET), SOP No. BPNPSM-PMT-031 (Final November 9, 2012; Revised May 13, 2014; Version 1.4)

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☒	Other: Schuylkill River PCB TMDL (Final PCB TMDL Development for the Schuylkill River, Pennsylvania, Established on 4/7/2007 by the US Environmental Protection Agency)