Pennsylvania Department of Environmental Protection

Southeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0051934**
Facility Type	**Non-Municipal**	APS ID	**1122930**
Major / Minor	**Major**	Authorization ID	**1501743**

Applicant and Facility Information

Applicant Name	**Aqua PA Wastewater Inc.**	Facility Name	**King Rd Sewer System & STP**
Applicant Address	762 W Lancaster Avenue	Facility Address	529 King Road
	Bryn Mawr, PA 19010-3402		Royersford, PA 19468-1120
Applicant Contact	Todd Duerr	Facility Contact	Brandon Shakespeare
Applicant Phone	(610) 675-6825	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	September 17, 2024	EPA Waived?	No
Date Application Accepted		If No, Reason	Major Facility

Purpose of Application .

Summary of Review

The permittee, Aqua Pennsylvania Wastewater Inc., submitted this application to renew NPDES Permit PA0051934 discharging 1.7 million gallons per day (MGD). No expansion or modification was requested in the renewal application.

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.

Effluent limitations for sewage effluent and stormwater are mostly the same as the previous permit. This renewal will include new quarterly monitoring requirements for Total Copper, Total Zinc, and Phenanthrene. WET testing limitations were removed to this permit renewal as no reasonable potential was determined.

Effluent limitations for treated sewage effluent and stormwater are discussed below.

Sludge use and disposal description and location(s): All sludge generated at the WWTP is hauled away as thickened liquid to the Pottstown Wastewater Treatment Plant for further processing before final disposal.

Part C Conditions:

Approve	Deny	Signatures	Date
X		*Charley Yang* Charley Yang / Environmental Engineering Specialist	July 1, 2025
X		*Pravin Patel* Pravin C. Patel, P.E. / Environmental Engineer Manager	07/01/2025

Summary of Review

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

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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	1.7
Latitude	40Âº 11' 32.49"	Longitude	-75Âº 33' 5.93"
Quad Name	Phoenixville	Quad Code	1741
Wastewater Description:	Sewage Effluent		
Receiving Waters	Schuylkill River (WWF, MF)	Stream Code	00833
NHD Com ID	25989370	RMI	43.4
Drainage Area	1190	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	WQM & PA StreamStats
Elevation (ft)	92.8	Slope (ft/ft)	
Watershed No.	3-D	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBS)		
Source(s) of Impairment	Unknown		
TMDL Status	Final	Name	Schuylkill River PCB TMDL

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

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: RMI was updated from 42.75 to 43.4

Other Comments: None

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	0
Latitude	40Âº 11' 22.71"	Longitude	-75Âº 32' 57.03"
Quad Name		Quad Code	
Wastewater Description:	Stormwater		
Receiving Waters	Schuylkill River (WWF, MF)	Stream Code	00833
NHD Com ID	133794695	RMI	43.4
Drainage Area		Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)		Q_{7-10} Basis	
Elevation (ft)		Slope (ft/ft)	
Watershed No.	3-D	Chapter 93 Class.	WWF, MF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	SOURCE UNKNOWN		
TMDL Status	Final	Name	Schuylkill River PCB TMDL

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake			
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance:

Other Comments:

Treatment Facility Summary

Treatment Facility Name: King Road STP

WQM Permit No.	Issuance Date
4620405	11/13/2020
4603408	05/02/2019
4688471	02/14/2019

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

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

Changes Since Last Permit Issuance:

Other Comments:

Compliance History	
Summary of DMRs:	Relatively consistent results under the permit limits. A few non-compliance (exceedance) cases but didn't deem to be a huge concern.
Summary of Inspections:	Per the inspection from 10/29/2024, the site seems to be in compliance with the permit condition.

Other Comments:

Compliance History

DMR Data for Outfall 002 (from May 1, 2024 to April 30, 2025)

Parameter	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24
Flow (MGD) Average Monthly	0.9102	0.856	0.8384	0.7635	0.817	0.724	0.704	0.725	0.798	0.773	0.766	0.779
Flow (MGD) Daily Maximum	1.426	1.120	1.551	0.9480	1.078	0.860	0.770	0.795	1.275	E	1.002	0.947
pH (S.U.) Daily Minimum	6.7	7.0	6.9	6.9	7.1	6.9	7.1	6.9	6.36	6.8	6.8	6.7
pH (S.U.) Instantaneous Maximum	7.4	7.3	7.4	7.4	7.5	7.4	7.7	7.5	7.8	7.3	7.3	7.2
DO (mg/L) Daily Minimum	7.5	8.0	6.8	7.8	7.6	7	6.5	6.6	6.3	6.4	6.6	6.7
CBOD5 (lbs/day) Average Monthly	33	32	35	30	39	21	14	15	< 15	17	14	21
CBOD5 (lbs/day) Weekly Average	39	39	40	38	49	23	20	20	< 15	30	18	25
CBOD5 (mg/L) Average Monthly	4.7	4.3	5.2	4.6	5	4	2	3	< 2.0	3	2	3
CBOD5 (mg/L) Raw Sewage Influent Average Monthly	373	349	421	308	444	313	257	308	264	263	238	373
CBOD5 (mg/L) Weekly Average	5.9	5.6	5.5	5.1	6	4	4	3	2.0	4	2	3
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	4379	3114	2942	2355	3505	1935	1776	1935	1994	1235	2347	2537
BOD5 (mg/L) Raw Sewage Influent Average Monthly	634	414	429	360	475	333	306	334	351	201	354	384
TSS (lbs/day) Average Monthly	48	52	61	60	71	28	31	31	34	24	23	36
TSS (lbs/day) Weekly Average	61	66	73	98	82	41	43	35	38	59	42	43
TSS (mg/L) Average Monthly	7.0	7.0	9.0	9.0	10	5	5	5	5.0	4	3.0	5

TSS (mg/L) Raw Sewage Influent Average Monthly	441	382	416	348	391	312	447	338	351	377	311	2917
TSS (mg/L) Weekly Average	10.0	9.0	10.0	13.0	11	7	8	6	6.0	8	5.0	7
Total Dissolved Solids (mg/L) Average Quarterly		668.0			614			537			476	
Fecal Coliform (No./100 ml) Geometric Mean	9	11	12	11	22	30	27	44	29	35	26	16
Fecal Coliform (No./100 ml) 90% of Samples	13	16	22	20	40	48	38					
Fecal Coliform (No./100 ml) Instantaneous Maximum								59	93	210	41	36
UV Transmittance (%) Daily Minimum	61.0	67.5	42.9	56.7	60	58	62.6	63.6	57.1	52.2	51.2	59.6
Total Nitrogen (lbs/day) Average Monthly	< 67	< 94	< 79	89	171	144	127	130	150	160	144	150
Total Nitrogen (mg/L) Average Monthly	< 9.68	< 12.49	< 11.65	13.82	23.5	24.89	21.86	< 22.33	21.65	24.74	21.53	22.54
Total Nitrogen (mg/L) Daily Maximum	10.3	14.65	< 13.9	19.14	38.87	27.23	23.6	< 25.79	26.04	27.5	23.5	25.62
Ammonia (lbs/day) Average Monthly	< 3	< 4	< 3	< 3	< 4	< 3	< 3	< 3	< 3	< 1	< 3	< 3
Ammonia (mg/L) Average Monthly	< 0.5	< 0.5	< 0.5	< 0.5	< 1	< 0.1	< 1	< 1	< 1.0	< 1.0	< 1	< 0.5
Total Phosphorus (lbs/day) Average Monthly	31	35	25	29	32	35	32	34	36	41	40	36
Total Phosphorus (mg/L) Average Monthly	4.5	4.7	3.8	4.60	4.6	6	5.5	5.9	5.2	6.4	5.9	5.5
Total Phosphorus (mg/L) Daily Maximum	4.9	5.1	5.2	5.00	5.4	6.3	5.7	6.4	6.2	7	6.4	6.3
Total Copper (lbs/day) Daily Maximum		0.055			0.003			0.06			67	
Total Copper (mg/L) Daily Maximum		0.009			0.01			0.008			0.010	

PCBs (Dry Weather) (pg/L) Daily Maximum					229							
PCBs (Wet Weather) (pg/L) Daily Maximum					991							
Chronic WET - Ceriodaphnia Survival (TUc) Daily Maximum		GG			GG			1.0			GG	
Chronic WET - Ceriodaphnia Reproduction (TUc) Daily Maximum		GG			GG			1.0			GG	
Chronic WET - Pimephales Survival (TUc) Daily Maximum		GG			GG			1.0			GG	
Chronic WET - Pimephales Growth (TUc) Daily Maximum		GG			GG			1.0			GG	

Compliance History

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.

Water Quality-Based Limitations

A "Reasonable Potential Analysis" (Attachment) determined the following parameters were candidates for limitations:

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

Parameter	Limit (mg/l)	SBC	Model
Total Copper	report		TMS
Total Zinc	report		TMS
Phenanthrene	report		TMS

Comments: TMS Model was ran with the provided analysis results table and eDMR. This renewal will include new quarterly monitoring requirements for Total Copper, Total Zinc, and Phenanthrene.

Best Professional Judgment (BPJ) Limitations

Comments:

Anti-Backsliding

Most of the monitoring parameters and frequencies are retained from the previous permit. Monitoring requirements were added for Total Copper, Total Zinc, and Phenanthrene. The parameters are based on technology-based limitations.

Development of Effluent Limitations

Outfall No.	003	**Design Flow (MGD)**	0
Latitude	40º 11' 28.00"	**Longitude**	-75º 32' 52.00"
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: **Annual**

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	
11/10/2023 & 9/1/2023	100	100	>100	100	100	>100	Pass
5/20/2022	100	100	>100	100	100	>100	Pass
2/12/2021	100	100	>100	100	100	>100	Pass
2/12/2021	100	100	>100	100	100	>100	Pass

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

TST Data Analysis

See WET Summary Sheet

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: Current permit has WETT limits which will be removed from this permit term since an reasonable potential was not demonstrated. This backsliding complies with the Anti-backsliding prohibition exception as stated in CWA Section 402(o)(2)(i) and 40 CFR § 122.44.(l)(2)(i)(B)(1)

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:

N/A

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).

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

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" (386-0400-001), 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	284	425	XXX	20.0	30.0	40	1/week	24-Hr Composite
CBOD5 Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS Raw Sewage Influent	XXX	XXX	XXX	Report	XXX	XXX	1/week	24-Hr Composite
TSS	425	638	XXX	30.0	45.0	60	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	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	Report Daily Max	XXX	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)	Required
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
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
Phenanthrene	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	Report Daily Max	XXX	XXX	See Permit	24-Hr Composite
Chronic WET - Ceriodaphnia Reproduction (TUc)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	See Permit	24-Hr Composite
Chronic WET - Pimephales Survival (TUc)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	See Permit	24-Hr Composite
Chronic WET - Pimephales Growth (TUc)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	See Permit	24-Hr Composite

Compliance Sampling Location: Outfall 002

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" (386-0400-001), 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: Outfall 003

Other Comments: None

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment)
☒	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 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, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 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, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☒	Other: WET Summary and Evaluation

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Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **King Road** NPDES Permit No.: **PA0051934** Outfall No.: **002**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **sewage**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
1.7	150	7						

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		6									
	Chloride (PWS)	mg/L		169									
	Bromide	mg/L	<	0.12									
	Sulfate (PWS)	mg/L		76.8									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		10									
	Total Antimony	µg/L		0.7									
	Total Arsenic	µg/L		1									
	Total Barium	µg/L		66									
	Total Beryllium	µg/L		1									
	Total Boron	µg/L		200									
	Total Cadmium	µg/L		0.2									
	Total Chromium (III)	µg/L		1.3									
	Hexavalent Chromium	µg/L		0.25									
	Total Cobalt	µg/L		0.3									
	Total Copper	µg/L		18.64			0.33						
	Free Cyanide	µg/L											
	Total Cyanide	µg/L		10									
	Dissolved Iron	µg/L		30									
	Total Iron	µg/L		20									
	Total Lead	µg/L		1									
	Total Manganese	µg/L		8									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		4									
	Total Phenols (Phenolics) (PWS)	µg/L		3									
	Total Selenium	µg/L	<	1									
	Total Silver	µg/L	<	0.4									
	Total Thallium	µg/L	<	0.3									
	Total Zinc	µg/L		89									
	Total Molybdenum	µg/L	<	3									
	Acrolein	µg/L	<	2									
	Acrylamide	µg/L	<	2									
	Acrylonitrile	µg/L	<	0.5									
	Benzene	µg/L	<	0.5									
	Bromoform	µg/L	<	0.5									
	Carbon Tetrachloride	µg/L	<	0.5									
	Chlorobenzene	µg/L	<	0.5									

Group 3	Chlorodibromomethane	µg/L	<	0.5									
	Chloroethane	µg/L	<	0.5									
	2-Chloroethyl Vinyl Ether	µg/L	<	5									
	Chloroform	µg/L	<	0.5									
	Dichlorobromomethane	µg/L	<	0.5									
	1,1-Dichloroethane	µg/L	<	0.5									
	1,2-Dichloroethane	µg/L	<	0.5									
	1,1-Dichloroethylene	µg/L	<	0.5									
	1,2-Dichloropropane	µg/L	<	0.5									
	1,3-Dichloropropylene	µg/L	<	0.5									
	1,4-Dioxane	µg/L	<	0.5									
	Ethylbenzene	µg/L	<	0.5									
	Methyl Bromide	µg/L	<	0.5									
	Methyl Chloride	µg/L	<	0.5									
	Methylene Chloride	µg/L	<	0.5									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5									
	Tetrachloroethylene	µg/L	<	0.5									
	Toluene	µg/L	<	0.5									
	1,2-trans-Dichloroethylene	µg/L	<	0.5									
	1,1,1-Trichloroethane	µg/L	<	0.5									
	1,1,2-Trichloroethane	µg/L	<	0.5									
	Trichloroethylene	µg/L	<	0.5									
	Vinyl Chloride	µg/L	<	0.5									
Group 4	2-Chlorophenol	µg/L	<	5									
	2,4-Dichlorophenol	µg/L	<	5									
	2,4-Dimethylphenol	µg/L	<	5									
	4,6-Dinitro-o-Cresol	µg/L	<	10									
	2,4-Dinitrophenol	µg/L	<	10									
	2-Nitrophenol	µg/L	<	10									
	4-Nitrophenol	µg/L	<	5									
	p-Chloro-m-Cresol	µg/L	<	5									
	Pentachlorophenol	µg/L	<	10									
	Phenol	µg/L	<	2.5									
	2,4,6-Trichlorophenol	µg/L	<	5									
Group 5	Acenaphthene	µg/L	<	2.5									
	Acenaphthylene	µg/L	<	2.5									
	Anthracene	µg/L	<	2.5									
	Benzidine	µg/L	<	50									
	Benzo(a)Anthracene	µg/L	<	2.5									
	Benzo(a)Pyrene	µg/L	<	2.5									
	3,4-Benzofluoranthene	µg/L	<	2.5									
	Benzo(ghi)Perylene	µg/L	<	2.5									
	Benzo(k)Fluoranthene	µg/L	<	2.5									
	Bis(2-Chloroethoxy)Methane	µg/L	<	5									
	Bis(2-Chloroethyl)Ether	µg/L	<	5									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	5									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	5									
	4-Bromophenyl Phenyl Ether	µg/L	<	5									
	Butyl Benzyl Phthalate	µg/L	<	5									
	2-Chloronaphthalene	µg/L	<	5									
	4-Chlorophenyl Phenyl Ether	µg/L	<	5									
	Chrysene	µg/L	<	2.5									
	Dibenzo(a,h)Anthrancene	µg/L	<	2.5									
	1,2-Dichlorobenzene	µg/L	<	0.5									
	1,3-Dichlorobenzene	µg/L	<	0.5									
	1,4-Dichlorobenzene	µg/L	<	0.5									
	3,3-Dichlorobenzidine	µg/L	<	5									
	Diethyl Phthalate	µg/L	<	5									
	Dimethyl Phthalate	µg/L	<	2.5									
	Di-n-Butyl Phthalate	µg/L	<	6.2									
	2,4-Dinitrotoluene	µg/L	<	5									
	2,6-Dinitrotoluene	µg/L	<	5									
	Di-n-Octyl Phthalate	µg/L	<	5									
	1,2-Diphenylhydrazine	µg/L	<	5									
	Fluoranthene	µg/L	<	2.5									

	Fluorene	µg/L	<	2.5									
	Hexachlorobenzene	µg/L	<	5									
	Hexachlorobutadiene	µg/L	<	0.5									
	Hexachlorocyclopentadiene	µg/L	<	5									
	Hexachloroethane	µg/L	<	2.5									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	2.5									
	Isophorone	µg/L	<	5									
	Naphthalene	µg/L	<	0.5									
	Nitrobenzene	µg/L	<	5									
	n-Nitrosodimethylamine	µg/L	<	5									
	n-Nitrosodi-n-Propylamine	µg/L	<	5									
	n-Nitrosodiphenylamine	µg/L	<	5									
	Phenanthrene	µg/L	<	5									
	Pyrene	µg/L	<	2.5									
	1,2,4-Trichlorobenzene	µg/L	<	0.5									
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

King Road, NPDES Permit No. PA0051934, Outfall 002

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Schuylkill River (WWF, MF)**

No. Reaches to Model: **1**

- (•) Statewide Criteria
- ( ) Great Lakes Criteria
- ( ) ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	000833	43.4	92.8	1190			Yes
End of Reach 1	000833	41.3	85.5	1200			Yes

$Q_{7\text{-}10}$

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	43.4	0.1										100	7		
End of Reach 1	41.3	0.1													

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	43.4														
End of Reach 1	41.3														

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Model Results

King Road, NPDES Permit No. PA0051934, Outfall 002

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | All | Inputs | Results | Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.097 Analysis Hardness (mg/l): 109.3 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	4,038	
Total Antimony	0	0		0	1,100	1,100	5,923	
Total Arsenic	0	0		0	340	340	1,831	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	113,069	
Total Boron	0	0		0	8,100	8,100	43,612	
Total Cadmium	0	0		0	2.195	2.33	12.6	Chem Translator of 0.94 applied
Total Chromium (III)	0	0		0	612.746	1,939	10,440	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	87.7	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	512	
Total Copper	0	0		0	14.612	15.2	82.0	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	71.128	91.4	492	Chem Translator of 0.778 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	8.87	Chem Translator of 0.85 applied
Total Nickel	0	0		0	504.768	506	2,723	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	3.748	4.41	23.7	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	350	
Total Zinc	0	0		0	126.337	129	696	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	16.2	
Acrylamide	0	0		0	N/A	N/A	N/A	

Acrylonitrile	0	0		0	650	650	3,500	
Benzene	0	0		0	640	640	3,446	
Bromoform	0	0		0	1,800	1,800	9,692	
Carbon Tetrachloride	0	0		0	2,800	2,800	15,076	
Chlorobenzene	0	0		0	1,200	1,200	6,461	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	96,916	
Chloroform	0	0		0	1,900	1,900	10,230	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	80,763	
1,1-Dichloroethylene	0	0		0	7,500	7,500	40,382	
1,2-Dichloropropane	0	0		0	11,000	11,000	59,226	
1,3-Dichloropropylene	0	0		0	310	310	1,669	
Ethylbenzene	0	0		0	2,900	2,900	15,614	
Methyl Bromide	0	0		0	550	550	2,961	
Methyl Chloride	0	0		0	28,000	28,000	150,758	
Methylene Chloride	0	0		0	12,000	12,000	64,611	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	5,384	
Tetrachloroethylene	0	0		0	700	700	3,769	
Toluene	0	0		0	1,700	1,700	9,153	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	36,613	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	16,153	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	18,306	
Trichloroethylene	0	0		0	2,300	2,300	12,384	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	3,015	
2,4-Dichlorophenol	0	0		0	1,700	1,700	9,153	
2,4-Dimethylphenol	0	0		0	660	660	3,554	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	431	
2,4-Dinitrophenol	0	0		0	660	660	3,554	
2-Nitrophenol	0	0		0	8,000	8,000	43,074	
4-Nitrophenol	0	0		0	2,300	2,300	12,384	
p-Chloro-m-Cresol	0	0		0	160	160	861	
Pentachlorophenol	0	0		0	8.723	8.72	47.0	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	2,477	
Acenaphthene	0	0		0	83	83.0	447	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	1,615	
Benzo(a)Anthracene	0	0		0	0.5	0.5	2.69	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	30,000	30,000	161,527	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	24,229	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	1,454	

Butyl Benzyl Phthalate	0	0		0	140	140	754	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	4,415	
1,3-Dichlorobenzene	0	0		0	350	350	1,884	
1,4-Dichlorobenzene	0	0		0	730	730	3,930	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	21,537	
Dimethyl Phthalate	0	0		0	2,500	2,500	13,461	
Di-n-Butyl Phthalate	0	0		0	110	110	592	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	8,615	
2,6-Dinitrotoluene	0	0		0	990	990	5,330	
1,2-Diphenylhydrazine	0	0		0	15	15.0	80.8	
Fluoranthene	0	0		0	200	200	1,077	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	10	10.0	53.8	
Hexachlorocyclopentadiene	0	0		0	5	5.0	26.9	
Hexachloroethane	0	0		0	60	60.0	323	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	53,842	
Naphthalene	0	0		0	140	140	754	
Nitrobenzene	0	0		0	4,000	4,000	21,537	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	91,532	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	1,615	
Phenanthrene	0	0		0	5	5.0	26.9	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	700	

☑ ***CFC*** CCT (min): 720 PMF: 0.671 Analysis Hardness (mg/l): 101.6 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	6,902	
Total Arsenic	0	0		0	150	150	4,706	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	128,637	
Total Boron	0	0		0	1,600	1,600	50,200	
Total Cadmium	0	0		0	0.249	0.27	8.59	Chem Translator of 0.908 applied
Total Chromium (III)	0	0		0	75.080	87.3	2,739	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	326	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	596	

Total Copper	0	0		0	9.078	9.46	297	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	69,373	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.560	3.25	102	Chem Translator of 0.789 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	28.4	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.707	52.9	1,659	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	157	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	408	
Total Zinc	0	0		0	119.732	121	3,810	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	94.1	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	130	130	4,079	
Benzene	0	0		0	130	130	4,079	
Bromoform	0	0		0	370	370	11,609	
Carbon Tetrachloride	0	0		0	560	560	17,570	
Chlorobenzene	0	0		0	240	240	7,530	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	109,812	
Chloroform	0	0		0	390	390	12,236	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	97,262	
1,1-Dichloroethylene	0	0		0	1,500	1,500	47,062	
1,2-Dichloropropane	0	0		0	2,200	2,200	69,025	
1,3-Dichloropropylene	0	0		0	61	61.0	1,914	
Ethylbenzene	0	0		0	580	580	18,197	
Methyl Bromide	0	0		0	110	110	3,451	
Methyl Chloride	0	0		0	5,500	5,500	172,561	
Methylene Chloride	0	0		0	2,400	2,400	75,300	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	6,589	
Tetrachloroethylene	0	0		0	140	140	4,392	
Toluene	0	0		0	330	330	10,354	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	43,925	
1,1,1-Trichloroethane	0	0		0	610	610	19,139	
1,1,2-Trichloroethane	0	0		0	680	680	21,335	
Trichloroethylene	0	0		0	450	450	14,119	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	3,451	
2,4-Dichlorophenol	0	0		0	340	340	10,667	
2,4-Dimethylphenol	0	0		0	130	130	4,079	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	502	
2,4-Dinitrophenol	0	0		0	130	130	4,079	
2-Nitrophenol	0	0		0	1,600	1,600	50,200	
4-Nitrophenol	0	0		0	470	470	14,746	

p-Chloro-m-Cresol	0	0		0	500	500	15,687	
Pentachlorophenol	0	0		0	6.693	6.69	210	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	2,855	
Acenaphthene	0	0		0	17	17.0	533	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	1,851	
Benzo(a)Anthracene	0	0		0	0.1	0.1	3.14	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	6,000	6,000	188,249	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	28,551	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	1,694	
Butyl Benzyl Phthalate	0	0		0	35	35.0	1,098	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	160	160	5,020	
1,3-Dichlorobenzene	0	0		0	69	69.0	2,165	
1,4-Dichlorobenzene	0	0		0	150	150	4,706	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	25,100	
Dimethyl Phthalate	0	0		0	500	500	15,687	
Di-n-Butyl Phthalate	0	0		0	21	21.0	659	
2,4-Dinitrotoluene	0	0		0	320	320	10,040	
2,6-Dinitrotoluene	0	0		0	200	200	6,275	
1,2-Diphenylhydrazine	0	0		0	3	3.0	94.1	
Fluoranthene	0	0		0	40	40.0	1,255	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	2	2.0	62.7	
Hexachlorocyclopentadiene	0	0		0	1	1.0	31.4	
Hexachloroethane	0	0		0	12	12.0	376	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	65,887	
Naphthalene	0	0		0	43	43.0	1,349	
Nitrobenzene	0	0		0	810	810	25,414	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	106,674	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	1,851	
Phenanthrene	0	0		0	1	1.0	31.4	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	816	

☑ ***THH*** CCT (min): 720 PMF: 0.671 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	176	
Total Arsenic	0	0		0	10	10.0	314	
Total Barium	0	0		0	2,400	2,400	75,300	
Total Boron	0	0		0	3,100	3,100	97,262	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	300	300	9,412	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	31,375	
Total Mercury	0	0		0	0.050	0.05	1.57	
Total Nickel	0	0		0	610	610	19,139	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	7.53	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	94.1	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	
Bromoform	0	0		0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0		0	N/A	N/A	N/A	
Chlorobenzene	0	0		0	100	100.0	3,137	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	179	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	N/A	N/A	N/A	
1,1-Dichloroethylene	0	0		0	33	33.0	1,035	
1,2-Dichloropropane	0	0		0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0		0	N/A	N/A	N/A	
Ethylbenzene	0	0		0	68	68.0	2,133	
Methyl Bromide	0	0		0	100	100.0	3,137	
Methyl Chloride	0	0		0	N/A	N/A	N/A	

Methylene Chloride	0	0		0	N/A	N/A	N/A	
1,1,2,2-Tetrachloroethane	0	0		0	N/A	N/A	N/A	
Tetrachloroethylene	0	0		0	N/A	N/A	N/A	
Toluene	0	0		0	57	57.0	1,788	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	3,137	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	313,748	
1,1,2-Trichloroethane	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0		0	N/A	N/A	N/A	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	30	30.0	941	
2,4-Dichlorophenol	0	0		0	10	10.0	314	
2,4-Dimethylphenol	0	0		0	100	100.0	3,137	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	62.7	
2,4-Dinitrophenol	0	0		0	10	10.0	314	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	N/A	N/A	N/A	
Phenol	0	0		0	4,000	4,000	125,499	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	2,196	
Anthracene	0	0		0	300	300	9,412	
Benzidine	0	0		0	N/A	N/A	N/A	
Benzo(a)Anthracene	0	0		0	N/A	N/A	N/A	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroisopropyl)Ether	0	0		0	200	200	6,275	
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	0.1	0.1	3.14	
2-Chloronaphthalene	0	0		0	800	800	25,100	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	31,375	
1,3-Dichlorobenzene	0	0		0	7	7.0	220	
1,4-Dichlorobenzene	0	0		0	300	300	9,412	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	18,825	
Dimethyl Phthalate	0	0		0	2,000	2,000	62,750	
Di-n-Butyl Phthalate	0	0		0	20	20.0	627	
2,4-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
1,2-Diphenylhydrazine	0	0		0	N/A	N/A	N/A	
Fluoranthene	0	0		0	20	20.0	627	

Fluorene	0	0		0	50	50.0	1,569	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0		0	4	4.0	125	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	34	34.0	1,067	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	314	
n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	20	20.0	627	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	2.2	

☑ ***CRL*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylamide	0	0		0	0.07	0.07	13.0	

Acrylonitrile	0	0		0	0.06	0.06	11.1	
Benzene	0	0		0	0.58	0.58	107	
Bromoform	0	0		0	7	7.0	1,296	
Carbon Tetrachloride	0	0		0	0.4	0.4	74.0	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	148	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	N/A	N/A	N/A	
Dichlorobromomethane	0	0		0	0.95	0.95	176	
1,2-Dichloroethane	0	0		0	9.9	9.9	1,833	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	167	
1,3-Dichloropropylene	0	0		0	0.27	0.27	50.0	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Methyl Bromide	0	0		0	N/A	N/A	N/A	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	20	20.0	3,702	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	37.0	
Tetrachloroethylene	0	0		0	10	10.0	1,851	
Toluene	0	0		0	N/A	N/A	N/A	
1,2-trans-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,1,1-Trichloroethane	0	0		0	N/A	N/A	N/A	
1,1,2-Trichloroethane	0	0		0	0.55	0.55	102	
Trichloroethylene	0	0		0	0.6	0.6	111	
Vinyl Chloride	0	0		0	0.02	0.02	3.7	
2-Chlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0		0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0		0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0		0	N/A	N/A	N/A	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	0.030	0.03	5.55	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	278	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.0001	0.0001	0.019	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.19	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.019	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.19	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	1.85	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	5.55	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	59.2	

4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.12	0.12	22.2	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.019	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.05	0.05	9.26	
Diethyl Phthalate	0	0		0	N/A	N/A	N/A	
Dimethyl Phthalate	0	0		0	N/A	N/A	N/A	
Di-n-Butyl Phthalate	0	0		0	N/A	N/A	N/A	
2,4-Dinitrotoluene	0	0		0	0.05	0.05	9.26	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	9.26	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	5.55	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00008	0.00008	0.015	
Hexachlorobutadiene	0	0		0	0.01	0.01	1.85	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	18.5	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.19	
Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.0007	0.0007	0.13	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.93	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	611	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Copper	Report	Report	Report	Report	Report	µg/L	44.1	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	446	AFC	Discharge Conc > 10% WQBEL (no RP)
Phenanthrene	Report	Report	Report	Report	Report	µg/L	17.3	AFC	Discharge Conc > 25% WQBEL (no RP)

☑ ***Other Pollutants without Limits or Monitoring***

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the

discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	2,588	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	176	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	314	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	72,472	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	27,954	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	8.06	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	2,739	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	56.2	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	328	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	9,412	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	69,373	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	102	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	31,375	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	1.57	µg/L	Discharge Conc < TQL
Total Nickel	1,659	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	157	µg/L	Discharge Conc < TQL
Total Silver	15.2	µg/L	Discharge Conc < TQL
Total Thallium	7.53	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	10.4	µg/L	Discharge Conc < TQL
Acrylamide	13.0	µg/L	Discharge Conc ≤ 25% WQBEL
Acrylonitrile	11.1	µg/L	Discharge Conc < TQL
Benzene	107	µg/L	Discharge Conc < TQL
Bromoform	1,296	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	74.0	µg/L	Discharge Conc < TQL
Chlorobenzene	3,137	µg/L	Discharge Conc < TQL
Chlorodibromomethane	148	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	62,119	µg/L	Discharge Conc < TQL
Chloroform	179	µg/L	Discharge Conc < TQL
Dichlorobromomethane	176	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	1,833	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	1,035	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	167	µg/L	Discharge Conc < TQL

1,3-Dichloropropylene	50.0	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	2,133	µg/L	Discharge Conc < TQL
Methyl Bromide	1,898	µg/L	Discharge Conc < TQL
Methyl Chloride	96,630	µg/L	Discharge Conc < TQL
Methylene Chloride	3,702	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	37.0	µg/L	Discharge Conc < TQL
Tetrachloroethylene	1,851	µg/L	Discharge Conc < TQL
Toluene	1,788	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	3,137	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	10,353	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	102	µg/L	Discharge Conc < TQL
Trichloroethylene	111	µg/L	Discharge Conc < TQL
Vinyl Chloride	3.7	µg/L	Discharge Conc < TQL
2-Chlorophenol	941	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	314	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	2,278	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	62.7	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	314	µg/L	Discharge Conc < TQL
2-Nitrophenol	27,609	µg/L	Discharge Conc < TQL
4-Nitrophenol	7,937	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	552	µg/L	Discharge Conc < TQL
Pentachlorophenol	5.55	µg/L	Discharge Conc < TQL
Phenol	125,499	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	278	µg/L	Discharge Conc < TQL
Acenaphthene	286	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	9,412	µg/L	Discharge Conc < TQL
Benzidine	0.019	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.19	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.019	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.19	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	1.85	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	5.55	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	6,275	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	59.2	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	932	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	3.14	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	25,100	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	22.2	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.019	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	2,830	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	220	µg/L	Discharge Conc < TQL

1,4-Dichlorobenzene	2,519	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	9.26	µg/L	Discharge Conc < TQL
Diethyl Phthalate	13,804	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	8,628	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	380	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	9.26	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	9.26	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	5.55	µg/L	Discharge Conc < TQL
Fluoranthene	627	µg/L	Discharge Conc < TQL
Fluorene	1,569	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.015	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	1.85	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	17.3	µg/L	Discharge Conc < TQL
Hexachloroethane	18.5	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.19	µg/L	Discharge Conc < TQL
Isophorone	1,067	µg/L	Discharge Conc < TQL
Naphthalene	483	µg/L	Discharge Conc < TQL
Nitrobenzene	314	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.13	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.93	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	611	µg/L	Discharge Conc < TQL
Pyrene	627	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	2.2	µg/L	Discharge Conc < TQL

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
03F	833	SCHUYLKILL RIVER

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
43.400	King rd	16.53	16	16.53	16	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
43.400	King rd	1.88	8	1.88	8	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
43.40	King rd	20	20	8	8	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
03F	833	SCHUYLKILL RIVER

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
43.400	1.700	20.108	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
195.222	1.142	171.015	0.546
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.39	0.235	0.17	0.706
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.173	1.680	Tsivoglou	5
Reach Travel Time (days)			
0.235			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.024	2.38	0.17	8.18
0.047	2.36	0.17	8.18
0.071	2.35	0.16	8.19
0.094	2.34	0.16	8.19
0.118	2.32	0.16	8.20
0.141	2.31	0.16	8.21
0.165	2.30	0.15	8.21
0.188	2.29	0.15	8.22
0.212	2.27	0.15	8.22
0.235	2.26	0.15	8.23

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
03F	833	SCHUYLKILL RIVER

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
43.400	King rd	PA0051934	1.700	CBOD5	20		
				NH3-N	8	16	
				Dissolved Oxygen			5

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
03F	833	SCHUYLKILL RIVER	**43.400**	92.80	1190.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
King rd	PA0051934	1.7000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	20.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	8.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
03F	833	SCHUYLKILL RIVER	**41.300**	85.50	1200.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
03F	833	SCHUYLKILL RIVER

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
43.400	119.00	0.00	119.00	2.6299	0.00066	1.142	195.22	171.01	0.55	0.235	20.11	7.00
Q1-10 Flow												
43.400	76.16	0.00	76.16	2.6299	0.00066	NA	NA	NA	0.43	0.300	20.17	7.00
Q30-10 Flow												
43.400	161.84	0.00	161.84	2.6299	0.00066	NA	NA	NA	0.65	0.199	20.08	7.00

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.03
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name: Limerick Township King Rd STP

Permit No.: PA0051934

Test Completion Date: 11/14/2023

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail: **PASS**

Test Completion Date: 5/24/2022

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail: **PASS**

Test Completion Date: 2/15/2021

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail: **PASS**

Test Completion Date: 11/3/2020

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	10	10

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail: **PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Reproduction
TIWC (decimal)	0.03
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name

Limerick Township King Rd STP

Permit No.

PA0051934

Test Completion Date: 11/14/2023

Replicate No.	Control	TIWC
1	33	37
2	29	36
3	27	33
4	15	28
5	27	26
6	26	27
7	25	28
8	27	35
9	32	30
10	27	31
11		
12		
13		
14		
15		
Mean	26.800	31.100
Std Dev.	4.872	3.957
# Replicates	10	10

T-Test Result	6.4588
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	**PASS**

Test Completion Date: 5/24/2022

Replicate No.	Control	TIWC
1	27	19
2	28	17
3	27	27
4	31	27
5	28	30
6	27	21
7	28	27
8	23	28
9	27	26
10	31	29
11		
12		
13		
14		
15		
Mean	27.700	25.100
Std Dev.	2.263	4.458
# Replicates	10	10

T-Test Result	2.8669
Deg. of Freedom	13
Critical T Value	0.8702
Pass or Fail	**PASS**

Test Completion Date: 2/15/2021

Replicate No.	Control	TIWC
1	22	26
2	28	34
3	27	26
4	29	33
5	27	31
6	30	40
7	28	32
8	33	29
9	32	28
10	37	28
11		
12		
13		
14		
15		
Mean	29.300	30.700
Std Dev.	4.057	4.296
# Replicates	10	10

T-Test Result	5.2412
Deg. of Freedom	16
Critical T Value	0.8647
Pass or Fail	**PASS**

Test Completion Date: 11/3/2020

Replicate No.	Control	TIWC
1	41	16
2	34	34
3	30	22
4	30	26
5	34	28
6	31	29
7	35	26
8	32	26
9	33	33
10	31	35
11		
12		
13		
14		
15		
Mean	33.100	27.500
Std Dev.	3.281	5.778
# Replicates	10	10

T-Test Result	1.3469
Deg. of Freedom	14
Critical T Value	0.8681
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	0.03
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name

Limerick Township King Rd STP

Permit No.

PA0051934

Test Completion Date: 9/5/2023

Replicate No.	Control	TIWC
1	1	0.9
2	1	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.975
Std Dev.	0.000	0.050
# Replicates	4	4

T-Test Result	17.8623
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 5/25/2022

Replicate No.	Control	TIWC
1	0.9	1
2	1	1
3	0.8	0.8
4	1	0.8
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.900
Std Dev.	0.096	0.115
# Replicates	4	4

T-Test Result	6.1151
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 2/16/2021

Replicate No.	Control	TIWC
1	1	0.9
2	0.9	0.8
3	0.9	0.9
4	0.7	0.9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.875	0.875
Std Dev.	0.126	0.050
# Replicates	4	4

T-Test Result	7.8183
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 11/3/2020

Replicate No.	Control	TIWC
1	0.8	0.3
2	1	0.6
3	0.9	0.8
4	0.8	0.9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.875	0.650
Std Dev.	0.096	0.265
# Replicates	4	4

T-Test Result	0.9532
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Growth
TIWC (decimal)	0.03
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name

Limerick Township King Rd STP

Permit No.

PA0051934

Test Completion Date: 9/5/2023

Replicate No.	Control	TIWC
1	0.371	0.39
2	0.335	0.402
3	0.327	0.396
4	0.342	0.392
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.344	0.395
Std Dev.	0.019	0.005
# Replicates	4	4

T-Test Result	17.9072
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 5/24/2022

Replicate No.	Control	TIWC
1	0.269	0.326
2	0.275	0.347
3	0.262	0.292
4	0.314	0.277
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.280	0.311
Std Dev.	0.023	0.032
# Replicates	4	4

T-Test Result	5.5382
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 2/16/2021

Replicate No.	Control	TIWC
1	0.303	0.345
2	0.245	0.359
3	0.268	0.402
4	0.186	0.304
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.251	0.353
Std Dev.	0.049	0.040
# Replicates	4	4

T-Test Result	6.0177
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 11/3/2020

Replicate No.	Control	TIWC
1	0.252	0.143
2	0.254	0.272
3	0.201	0.337
4	0.31	0.329
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.254	0.270
Std Dev.	0.045	0.090
# Replicates	4	4

T-Test Result	1.6636
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

WET Summary and Evaluation

Facility Name	Limerick Township King Rd STP
Permit No.	PA0051934
Design Flow (MGD)	1.7
Q_{7-10} Flow (cfs)	301
PMF_a	0.041
PMF_c	0.284

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	11/14/23		2/15/21	11/3/20
Ceriodaphnia	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	11/14/23	5/24/22	2/15/21	11/3/20
Ceriodaphnia	Reproduction	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/5/23	5/25/22	2/16/21	11/3/20
Pimephales	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/5/23		2/16/21	11/3/20
Pimephales	Growth	PASS	PASS	PASS	PASS

Reasonable Potential? NO

Permit Recommendations

Test Type	**Chronic**
TIWC	**3** % Effluent
Dilution Series	**1, 3, 30, 60, 100** % Effluent
Permit Limit	**None**
Permit Limit Species	