pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southeast Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0027154**
Facility Type	**Municipal**	APS ID	**1047322**
Major / Minor	**Major**	Authorization ID	**1368762**

Applicant and Facility Information

Applicant Name	**Phoenixville Borough**	Facility Name	**Phoenixville Borough STP**
Applicant Address	351 Bridge Street	Facility Address	17 South Second Avenue
	Phoenixville, PA 19460		Phoenixville, PA 19460
Applicant Contact	E. Jean Krack	Facility Contact	E. Jean Krack
Applicant Phone	(610) 933-8801	Facility Phone	(610) 933-8801
Client ID	66854	Site ID	446333
Ch 94 Load Status	Not Overloaded	Municipality	Phoenixville Borough
Connection Status	No Limitations	County	Chester
Date Application Received	September 9, 2021	EPA Waived?	No
Date Application Accepted		If No, Reason	Major Facility

Purpose of Application: Permit Renewal.

Summary of Review

Applicant requests renewal of an NPDES permit to discharge treated sewage effluent from Phoenixville Borough STP.

This is a major permit with average annual flow of 4.0 mgd. The facility is serving Phoenixville Borough and Schuylkill Twp.

The sewage treatment plant consists of: influent splitter box, bar screen, grit chamber, three primary clarifiers, two trickling filters (dormant), three aeration tanks, four final clarifiers, UV disinfection, anaerobic sludge digesters, sludge storage and sludge dewatering via belt filter and/or centrifuge. The facility is producing Class B Biosolids which is used in land application.

The Borough is planning to upgrade the treatment plant with Hydrothermal Carbonization technology to convert organic waste into BioCoal and BioSolution.

There are no industrial users discharging into the plant.

According to the application Soda Ash (for pH alkalinity) and Polymer (for sludge dewatering) are used as the wastewater treatment chemicals.

Based on the review of the edmr data the discharge is in compliance with the permit limitations.

The effluent limits derived for this permit are based on the Schuylkill River Reallocation Study as outlined in the letter from the PADEP to Ms. Evelyn McKnight of the EPA Region III dated May 1, 2002, published in the PA Bulletin on January 18, 2003, and approved by the EPA on February 7, 2003 (Oaks WWTP, PA0026964). As part of the study, the four (4) sewage treatment plants located between the Black Rock Dam and the Norristown Dam on the Schuylkill River were modeled concurrently by the DEP stream model WQM 6.3. WQM models the stream for both compliance with the dissolved oxygen

Approve	Deny	Signatures	Date
X		*Sara Abraham* Sara Reji Abraham, E.I.T. / Project Manager	January 11, 2022
X		*Pravin Patel* Pravin C. Patel, P.E. / Environmental Engineer Manager	01/11/2022

Summary of Review

criteria and for ammonia toxicity. The facilities included in the model were Phoenixville (PA0027154), MCSA (PA0026964), Valley Forge Sewer Authority (PA0043974), and Upper Merion Trout Run (PA0026131).

The recommended effluent limitations for the draft permit are similar to the effluent limitations in the existing permit. A new monitoring requirement for the E-coli is included according to the latest revised DEP SOP for Establishing Effluent Limitations for Individual Sewage Permits.

Influent monitoring requirements for CBOD5, TSS and BOD5 are included in the draft permit to check compliance with the 85% removal requirement and Chapter 94 requirement. This requirement is consistent with other similar dischargers in the area.

On April 7, 2007, the U.S. Environmental Protection Agency (EPA), Region III, established a Total Maximum Daily Load (TMDL) for Polychlorinated Biphenyl (PCB) for the Schuylkill River, which was listed on Pennsylvania's 1996 303(d) list of impaired streams as impaired due to the presence of elevated PCB concentrations found in fish tissue. The water quality criterion used in the TMDL is 44 pg/l. According to the requirement of the existing permit, the Borough submitted a PCB PMP on February 28, 2018 and a revised PMP on August 25, 2020. Annual PCB monitoring and a Part C condition requiring the submission of PMP annual report and PCB data are incorporated into the permit similar to the existing permit.

Stormwater monitoring requirements are included for Outfall 002 similar to the existing permit requirements.

The condition requiring continuing implementation of the High Flow Maintenance Plan is included in the draft permit similar to the current permit.

DRBC Docket No. D-1967-080 CP-4 was approved for this facility on June 14, 2017.

Sludge use and disposal description and location(s): The Borough has a contract with Synagro for the land application of sludge at various locations.

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.

Act 14 Notification:

Chester County - August 31, 2021

Permit Conditions:

A. No Stormwater
B. Acquire Necessary Property Rights
C. Proper Sludge Disposal
D. Chlorine Optimization
E. Operator Notification
F. Operations and Maintenance Plan
G. High Flow Management Plan
H. Fecal Coliform Reporting
I. Solids Management
J. WET Condition
K. Stormwater Outfalls Requirement
L. PCB PMP Requirement

Summary of Review

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	4.0
Latitude	40º 7' 49.38"	Longitude	-75º 30' 2.00"
Quad Name	Phoenixville	Quad Code	1741
Wastewater Description:	Treated Sewage Effluent		
Receiving Waters	Schuylkill River (WWF, MF)	Stream Code	00833
NHD Com ID	25989578	RMI	35.07
Drainage Area	1280 mi^2	Yield (cfs/mi^2)	0.22
Q_{7-10} Flow (cfs)	285	Q_{7-10} Basis	Previous fact sheet, USGS StreamStat 3.0
Elevation (ft)	76.5	Slope (ft/ft)	
Watershed No.	3-D	Chapter 93 Class.	WWF, MF
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated biphenyls (pcbs)		
Source(s) of Impairment	source unknown		
TMDL Status	Final	Name	Schuylkill River PCB TMDL
Nearest Downstream Public Water Supply Intake	Aqua Pennsylvania		
PWS Waters	Schuylkill RIver		
		Distance from Outfall (mi)	0.75

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	0
Latitude	40º 7' 52.07"	Longitude	-75º 30' 7.40"
Quad Name	Phoenixville	Quad Code	1741
Wastewater Description:	Stormwater		
Receiving Waters	Schuylkill River (WWF, MF)	Stream Code	00833
NHD Com ID	25989578	RMI	35.07
Watershed No.	3-D	Chapter 93 Class.	WWF, MF
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated biphenyls (pcbs)		
Source(s) of Impairment	source unknown		
TMDL Status	Final	Name	Schuylkill River PCB TMDL

Treatment Facility Summary

Treatment Facility Name: Phoenixville Borough STP

WQM Permit No.	Issuance Date
1504409	03/16/2005

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Ultraviolet	4

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
4	8340	Not Overloaded	Centrifugation	Land Application

Compliance History

DMR Data for Outfall 001 (from August 1, 2020 to July 31, 2021)

Parameter	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20
Flow (MGD) Average Monthly	1.437	1.537	1.54	1.556	2.249	2.441	1.972	2.656	1.988	1.754	1.553	1.964
Flow (MGD) Daily Maximum	1.878	1.924	2.414	2.155	4.86	5.371	3.046	5.627	5.477	3.617	2.025	7.787
pH (S.U.) Instantaneous Minimum	6.5	6.5	6.5	6.4	6.4	6.2	6.3	6.2	6.8	6.7	6.7	6.6
pH (S.U.) Instantaneous Maximum	7.4	7.4	7.4	7.4	7.1	7.1	6.8	7.1	7.3	7.3	7.2	7.3
DO (mg/L) Instantaneous Minimum	6.0	6.3	6.9	7.2	6.2	6.5	7.5	7.3	7.7	6.5	6.7	6.3
DO (mg/L) Average Monthly	6.3	6.9	7.2	7.5	7.9	8.3	8.1	8.2	8.2	7.1	6.9	6.7
CBOD5 (lbs/day) Average Monthly	49	41	67	83	154	96	58	123	78	53	41	86
CBOD5 (lbs/day) Weekly Average	62	57	80	107	366	130	83	294	57	79	51	283
CBOD5 (mg/L) Average Monthly	4.0	3.0	5.0	6.0	7	4.0	3	4.0	4	3.0	3.0	4.0
CBOD5 (mg/L) Weekly Average	5.0	4.0	6.0	7.0	14	5.0	4	7.0	4	4.0	3.0	7.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	3259	3438	3688	3372	3683	3896	3832	3870	3661	3452	3523	3399
BOD5 (mg/L) Raw Sewage Influent Average Monthly	273	268	293	259	207.9	203	240.4	182	212	234	266.2	214
TSS (lbs/day) Average Monthly	197	193	159	205	202	359	117	355	514	112	172	433

TSS (lbs/day) Raw Sewage Influent Average Monthly	3914	4007	4058	3851	3170	4641	4005	4075	5044	4194	4164	4424
TSS (lbs/day) Weekly Average	497	528	192	252	332	470	133	801	72	165	333	1436
TSS (mg/L) Average Monthly	16	15	13	16	10	13	7	17	4	7.0	13	14
TSS (mg/L) Raw Sewage Influent Average Monthly	331	316	321	296	187	220	254	202	265	293	316	270
TSS (mg/L) Weekly Average	39	39	16	18	17	15	8	37	14	9.0	26	27
Total Dissolved Solids (lbs/day) Average Monthly	6465	5091	5425	4797	8658	21364	9501	22487	8651	6734	5894	5374
Total Dissolved Solids (mg/L) Average Monthly	506	426	452	410	426	800	374	1107	540	526	474	358
Fecal Coliform (CFU/100 ml) Geometric Mean	34	22	26	28	11	8	6	9	3	7.0	7	9.0
Fecal Coliform (CFU/100 ml) Maximum	60	82	60	75	60	177	60	490	9	26.6	10.3	60
UV Transmittance (%) Minimum	59.4	50.3	51.2	53.4	57.1	66.8	68.3	54.2	68.8	60.2	66.3	63
Nitrate-Nitrite (lbs/day) Average Monthly	264	252	203	77	380	275	381	351	475	264	267	299
Nitrate-Nitrite (mg/L) Average Monthly	20.7	21.1	16.9	6.62	18.7	10.3	15	17.6	24.7	20.6	21.5	19.9
Total Nitrogen (lbs/day) Average Monthly	289	263	217	154	451	644	16.3	375	484	287	279	311
Total Nitrogen (mg/L) Average Monthly	22.6	22	18.1	13.2	22.2	24.1	1.29	18.8	25.2	22.4	22.4	20.7
Ammonia (lbs/day) Average Monthly	< 2.0	< 6	< 7	< 18	< 80	33	< 21	< 58	< 3	< 7.0	< 1	< 56
Ammonia (mg/L) Average Monthly	< 0.13	< 0.45	< 0.59	< 1.5	< 3.54	1.62	< 1.15	< 1.8	< 2	< 0.42	< 0.1	< 1.12
TKN (lbs/day) Average Monthly	25	11	14	78	70	369	33	24	10	23	11	12

TKN (mg/L) Average Monthly	1.98	0.93	1.16	6.63	3.43	13.8	1.29	1.23	0.52	1.82	0.88	0.83
Total Phosphorus (mg/L) Average Monthly	0.72	0.23	1.04	1.86	0.63	2.57	0.34	0.71	1.88	3.63	1.82	0.96
PCBs (Dry Weather) (pg/L) Daily Maximum								935				
Chronic WET - Ceriodaphnia Survival (TUc) Daily Maximum								50				
Chronic WET - Ceriodaphnia Reproduction (TUc) Daily Maximum								50				
Chronic WET - Pimephales Survival (TUc) Daily Maximum								50				
Chronic WET - Pimephales Growth (TUc) Daily Maximum								50				

DMR Data for Outfall 002 (from August 1, 2020 to July 31, 2021)

Parameter	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20
pH (S.U.) Other Stormwater Daily Maximum								7.2				
CBOD5 (mg/L) Other Stormwater Daily Maximum								4.4				
COD (mg/L) Other Stormwater Daily Maximum								51.6				
TSS (mg/L) Other Stormwater Daily Maximum								122				

Fecal Coliform (CFU/100 ml) Other Stormwater Daily Maximum								1700				
TKN (mg/L) Other Stormwater Daily Maximum								1.02				
Total Phosphorus (mg/L) Other Stormwater Daily Maximum								0.47				
Dissolved Iron (mg/L) Other Stormwater Daily Maximum								< 0.100				

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 4
Latitude 40º 7' 45.39" **Longitude** -75º 30' 3.94"
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)

*Facility uses UV disinfection system. Chlorine is not used as a backup. TRC limit is not needed in the permit.

Water Quality-Based Limitations

The following limitations are recommended for the draft permit:

Parameters	Monthly Ave. Conc (mg/l)	Weekly Ave Conc. (mg/l)	Inst. Max. (mg/l)	Basis
$CBOD_5$ (5/1 to10/31)	20	30	40	Existing *
$CBOD_5$ (11/1 to 4/30)	25	40	50	Existing *
Dissolved Oxygen	5.0		Inst. Min.	Existing*
Total Suspended Solids	30	45	60	Existing, DRBC
TDS	Report			Existing, DRBC docket
NH_3 –N (05/01 to 10/31)	8		16	Existing*
NH_3 –N (11/1 to 4/30)	12		24	Existing*
Nitrate-Nitrite as N	Report			Existing
TKN	Report			Existing
Total N	Report			Existing
Total P	Report			Existing
UV Transmittance (%)			Report (Daily Min.)	Existing
Fecal Coliform	200 (Geo. Mean)		1000	Ch.92a/DRBC

E. Coli			Report	Chap. 92a**
pH	6.0 to 9.0 std. units at all times			Ch. 93

* The effluent limits derived for this permit are based on the Schuylkill River Reallocation Study as outlined in the letter from the PADEP to Ms. Evelyn McKnight of the EPA Region III dated May 1, 2002, published in the PA Bulletin on January 18, 2003, and approved by the EPA on February 7, 2003 (Oaks WWTP, PA0026964). As part of the study, the four (4) sewage treatment plants located between the Black Rock Dam and the Norristown Dam on the Schuylkill River were modeled concurrently by the DEP stream model WQM 6.3. WQM models the stream for both compliance with the dissolved oxygen criteria and for ammonia toxicity. The facilities included in the model were Phoenixville (PA0027154), MCSA (PA0026964), Valley Forge Sewer Authority (PA0043974), and Upper Merion Trout Run (PA0026131). The final of several model runs was used as the basis for reallocating the effluent limits for the four facilities. Since there has been no change to the design flow of the Phoenixville Borough STP since the reallocation study was completed, no further WQM modeling is required and there are no proposed changes to the water-quality based limits. The winter seasonal multipliers for $CBOD_5$ and NH_3N are carried over from the existing permit.

** E. Coli monitoring is a new requirement for the Sewage dischargers based on the latest revised SOP for Establishing Effluent limitations for Individual Sewage Permits.

A “Reasonable Potential Analysis” determined the following parameters were candidates for limitations/monitoring:

Parameter	Monthly Ave. Conc. (mg/l)	Maximum Daily Conc. (mg/l)	Inst. Max. (mg/l)	Recommendation/Basis
Total Aluminum	1,786	2,787	4,466	TMS v.1.3 *
Total Cadmium	Report	Report	Report	TMS v.1.3
Total Copper	Report	Report	Report	TMS v.1.3

* Three results are available and only one result is above the most stringent criterion. Therefore, monitoring is recommended to get more data to reevaluate at the next permit renewal.

See the below attached Toxics Management Spreadsheet (TMS) Report:
Valley Forge Sewer Authority (PA0043974) discharge point is used as the End of Reach 1 for the model.

Discharge Information

Instructions | Discharge | Stream

Facility: **Phoenixville Borough STP** NPDES Permit No.: **PA0027154** Outfall No.: **001**

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
4	177	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	Strea m CV	Fate Coeff	FOS	Criteri a Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		1107									
	Chloride (PWS)	mg/L		101									
	Bromide	mg/L	<	0.2									
	Sulfate (PWS)	mg/L		59.9									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		903									
	Total Antimony	µg/L		1.1									
	Total Arsenic	µg/L	<	1									
	Total Barium	µg/L		30									
	Total Beryllium	µg/L	<	0.4									
	Total Boron	µg/L		230									
	Total Cadmium	µg/L	<	1									
	Total Chromium (III)	µg/L	<	1									
	Hexavalent Chromium	µg/L	<	0.1									
	Total Cobalt	µg/L	<	1									
	Total Copper	µg/L		20									
	Free Cyanide	µg/L		11									
	Total Cyanide	µg/L		10									
	Dissolved Iron	µg/L		24									
	Total Iron	µg/L		398									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		440									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		3									
	Total Phenols (Phenolics) (PWS)	µg/L	<	4.95									
	Total Selenium	µg/L	<	2									
	Total Silver	µg/L	<	0.05									
	Total Thallium	µg/L	<	0.0004									
	Total Zinc	µg/L		0.17									
	Total Molybdenum	µg/L		2									
	Acrolein	µg/L	<	1									
	Acrylamide	µg/L	<										
	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									
	Chlorodibromomethane	µg/L	<	0.5									
	Chloroethane	µg/L	<	0.5									
	2-Chloroethyl Vinyl Ether	µg/L	<	0.5									

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Group 3	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	<	0.2										
	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	<	0.99										
	2,4-Dichlorophenol	µg/L	<	0.99										
	2,4-Dimethylphenol	µg/L	<	0.99										
	4,6-Dinitro-o-Cresol	µg/L	<	0.99										
	2,4-Dinitrophenol	µg/L	<	2.97										
	2-Nitrophenol	µg/L	<	0.99										
	4-Nitrophenol	µg/L	<	0.99										
	p-Chloro-m-Cresol	µg/L	<	0.99										
	Pentachlorophenol	µg/L	<	0.99										
	Phenol	µg/L	<	4.95										
	2,4,6-Trichlorophenol	µg/L	<	0.99										
Group 5	Acenaphthene	µg/L	<	0.99										
	Acenaphthylene	µg/L	<	0.99										
	Anthracene	µg/L	<	0.99										
	Benzidine	µg/L	<	4.95										
	Benzo(a)Anthracene	µg/L	<	0.99										
	Benzo(a)Pyrene	µg/L	<	0.99										
	3,4-Benzofluoranthene	µg/L	<	0.99										
	Benzo(ghi)Perylene	µg/L	<	0.99										
	Benzo(k)Fluoranthene	µg/L	<	0.99										
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.99										
	Bis(2-Chloroethyl)Ether	µg/L	<	0.99										
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.99										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	2.97										
	4-Bromophenyl Phenyl Ether	µg/L	<	0.99										
	Butyl Benzyl Phthalate	µg/L	<	0.99										
	2-Chloronaphthalene	µg/L	<	0.99										
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.99										
	Chrysene	µg/L	<	0.99										
	Dibenzo(a,h)Anthrancene	µg/L	<	0.99										
	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	<	0.138										
	Diethyl Phthalate	µg/L	<	0.99										
	Dimethyl Phthalate	µg/L	<	0.99										
	Di-n-Butyl Phthalate	µg/L	<	2.97										
	2,4-Dinitrotoluene	µg/L	<	0.99										
	2,6-Dinitrotoluene	µg/L	<	0.99										
	Di-n-Octyl Phthalate	µg/L	<	0.99										
	1,2-Diphenylhydrazine	µg/L	<	0.99										
	Fluoranthene	µg/L	<	0.99										
	Fluorene	µg/L	<	0.99										
	Hexachlorobenzene	µg/L	<	0.99										
	Hexachlorobutadiene	µg/L	<	0.0812										
	Hexachlorocyclopentadiene	µg/L	<	0.99										
	Hexachloroethane	µg/L	<	0.0683										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.99										

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	Isophorone	µg/L	<	0.99										
	Naphthalene	µg/L	<	0.0634										
	Nitrobenzene	µg/L	<	0.99										
	n-Nitrosodimethylamine	µg/L	<	0.99										
	n-Nitrosodi-n-Propylamine	µg/L	<	0.99										
	n-Nitrosodiphenylamine	µg/L	<	0.99										
	Phenanthrene	µg/L	<	0.99										
	Pyrene	µg/L	<	0.99										
	1,2,4-Trichlorobenzene	µg/L	<	0.0921										
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												

Stream / Surface Water Information

Phoenixville Borough STP, NPDES Permit No. PA0027154, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Schuylkill River**

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	000833	35.07	76.5	1280			Yes
End of Reach 1	000833	32	69.4	1690			Yes

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

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	35.07	0.1	285									132	7		
End of Reach 1	32	0.1	343									132	7		

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	35.07														
End of Reach 1	32														

Model Results

Phoenixville Borough STP, NPDES Permit No. PA0027154, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.059 Analysis Hardness (mg/l): 144.11 Analysis pH: 7.00

Pollutants	Stream Conc	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	2,787	
Total Antimony	0	0		0	1,100	1,100	4,088	
Total Arsenic	0	0		0	340	340	1,264	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	78,041	
Total Boron	0	0		0	8,100	8,100	30,102	
Total Cadmium	0	0		0	2.872	3.09	11.5	Chem Translator of 0.929 applied
Total Chromium (III)	0	0		0	768.533	2,432	9,038	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	60.5	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	353	
Total Copper	0	0		0	18.962	19.8	73.4	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	81.8	
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	95.909	130	483	Chem Translator of 0.738 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	6.12	Chem Translator of 0.85 applied
Total Nickel	0	0		0	637.848	639	2,375	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	6.031	7.09	26.4	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	242	
Total Zinc	0	0		0	159.703	163	607	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	11.1	
Acrylonitrile	0	0		0	650	650	2,416	
Benzene	0	0		0	640	640	2,378	

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Bromoform	0	0		0	1,800	1,800	6,689	
Carbon Tetrachloride	0	0		0	2,800	2,800	10,406	
Chlorobenzene	0	0		0	1,200	1,200	4,460	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	66,893	
Chloroform	0	0		0	1,900	1,900	7,061	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	55,744	
1,1-Dichloroethylene	0	0		0	7,500	7,500	27,872	
1,2-Dichloropropane	0	0		0	11,000	11,000	40,879	
1,3-Dichloropropylene	0	0		0	310	310	1,152	
Ethylbenzene	0	0		0	2,900	2,900	10,777	
Methyl Bromide	0	0		0	550	550	2,044	
Methyl Chloride	0	0		0	28,000	28,000	104,055	
Methylene Chloride	0	0		0	12,000	12,000	44,595	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	3,716	
Tetrachloroethylene	0	0		0	700	700	2,601	
Toluene	0	0		0	1,700	1,700	6,318	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	25,271	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	11,149	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	12,635	
Trichloroethylene	0	0		0	2,300	2,300	8,547	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	2,081	
2,4-Dichlorophenol	0	0		0	1,700	1,700	6,318	
2,4-Dimethylphenol	0	0		0	660	660	2,453	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	297	
2,4-Dinitrophenol	0	0		0	660	660	2,453	
2-Nitrophenol	0	0		0	8,000	8,000	29,730	
4-Nitrophenol	0	0		0	2,300	2,300	8,547	
p-Chloro-m-Cresol	0	0		0	160	160	595	
Pentachlorophenol	0	0		0	8.723	8.72	32.4	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	1,709	
Acenaphthene	0	0		0	83	83.0	308	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	1,115	
Benzo(a)Anthracene	0	0		0	0.5	0.5	1.86	
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	111,488	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	16,723	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	1,003	
Butyl Benzyl Phthalate	0	0		0	140	140	520	
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	3,047	
1,3-Dichlorobenzene	0	0		0	350	350	1,301	
1,4-Dichlorobenzene	0	0		0	730	730	2,713	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	14,865	
Dimethyl Phthalate	0	0		0	2,500	2,500	9,291	
Di-n-Butyl Phthalate	0	0		0	110	110	409	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	5,946	
2,6-Dinitrotoluene	0	0		0	990	990	3,679	
1,2-Diphenylhydrazine	0	0		0	15	15.0	55.7	
Fluoranthene	0	0		0	200	200	743	
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	37.2	
Hexachlorocyclopentadiene	0	0		0	5	5.0	18.6	
Hexachloroethane	0	0		0	60	60.0	223	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	37,163	
Naphthalene	0	0		0	140	140	520	
Nitrobenzene	0	0		0	4,000	4,000	14,865	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	63,176	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	1,115	
Phenanthrene	0	0		0	5	5.0	18.6	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	483	

☑ *CFC* CCT (min): 720 PMF: 0.409 Analysis Hardness (mg/l): 134.27 Analysis pH: 7.00

Pollutants	Stream Conc	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	4,360	
Total Arsenic	0	0		0	150	150	2,973	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	81,257	
Total Boron	0	0		0	1,600	1,600	31,710	
Total Cadmium	0	0		0	0.302	0.34	6.67	Chem Translator of 0.897 applied
Total Chromium (III)	0	0		0	94.345	110	2,174	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	206	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	377	
Total Copper	0	0		0	11.520	12.0	238	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	103	
Dissolved Iron	0	0		0	N/A	N/A	N/A	

Total Iron	0	0		0	1,500	1,500	70,585	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	3.463	4.63	91.8	Chem Translator of 0.748 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	18.0	Chem Translator of 0.85 applied
Total Nickel	0	0		0	66.731	66.9	1,327	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	98.9	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	258	
Total Zinc	0	0		0	151.646	154	3,048	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	59.5	
Acrylonitrile	0	0		0	130	130	2,576	
Benzene	0	0		0	130	130	2,576	
Bromoform	0	0		0	370	370	7,333	
Carbon Tetrachloride	0	0		0	560	560	11,099	
Chlorobenzene	0	0		0	240	240	4,757	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	69,366	
Chloroform	0	0		0	390	390	7,729	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	61,438	
1,1-Dichloroethylene	0	0		0	1,500	1,500	29,728	
1,2-Dichloropropane	0	0		0	2,200	2,200	43,601	
1,3-Dichloropropylene	0	0		0	61	61.0	1,209	
Ethylbenzene	0	0		0	580	580	11,495	
Methyl Bromide	0	0		0	110	110	2,180	
Methyl Chloride	0	0		0	5,500	5,500	109,003	
Methylene Chloride	0	0		0	2,400	2,400	47,565	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	4,162	
Tetrachloroethylene	0	0		0	140	140	2,775	
Toluene	0	0		0	330	330	6,540	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	27,746	
1,1,1-Trichloroethane	0	0		0	610	610	12,089	
1,1,2-Trichloroethane	0	0		0	680	680	13,477	
Trichloroethylene	0	0		0	450	450	8,918	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	2,180	
2,4-Dichlorophenol	0	0		0	340	340	6,738	
2,4-Dimethylphenol	0	0		0	130	130	2,576	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	317	
2,4-Dinitrophenol	0	0		0	130	130	2,576	
2-Nitrophenol	0	0		0	1,600	1,600	31,710	
4-Nitrophenol	0	0		0	470	470	9,315	
p-Chloro-m-Cresol	0	0		0	500	500	9,909	
Pentachlorophenol	0	0		0	6.693	6.69	133	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	1,804	
Acenaphthene	0	0		0	17	17.0	337	
Anthracene	0	0		0	N/A	N/A	N/A	

Benzidine	0	0		0	59	59.0	1,169	
Benzo(a)Anthracene	0	0		0	0.1	0.1	1.98	
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	118,913	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	18,035	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	1,070	
Butyl Benzyl Phthalate	0	0		0	35	35.0	694	
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	3,171	
1,3-Dichlorobenzene	0	0		0	69	69.0	1,367	
1,4-Dichlorobenzene	0	0		0	150	150	2,973	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	15,855	
Dimethyl Phthalate	0	0		0	500	500	9,909	
Di-n-Butyl Phthalate	0	0		0	21	21.0	416	
2,4-Dinitrotoluene	0	0		0	320	320	6,342	
2,6-Dinitrotoluene	0	0		0	200	200	3,964	
1,2-Diphenylhydrazine	0	0		0	3	3.0	59.5	
Fluoranthene	0	0		0	40	40.0	793	
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	39.6	
Hexachlorocyclopentadiene	0	0		0	1	1.0	19.8	
Hexachloroethane	0	0		0	12	12.0	238	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	41,619	
Naphthalene	0	0		0	43	43.0	852	
Nitrobenzene	0	0		0	810	810	16,053	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	67,384	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	1,169	
Phenanthrene	0	0		0	1	1.0	19.8	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	515	

☑ ***THH*** CCT (min): 720 PMF: 0.409 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc	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	111	

Total Arsenic	0	0		0	10	10.0	198	
Total Barium	0	0		0	2,400	2,400	47,565	
Total Boron	0	0		0	3,100	3,100	61,438	
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	
Free Cyanide	0	0		0	4	4.0	79.3	
Dissolved Iron	0	0		0	300	300	5,946	
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	19,819	
Total Mercury	0	0		0	0.050	0.05	0.99	
Total Nickel	0	0		0	610	610	12,089	
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	4.76	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	59.5	
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	1,982	
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	N/A	N/A	N/A	
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	654	
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	1,348	
Methyl Bromide	0	0		0	100	100.0	1,982	
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	1,130	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	1,982	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	198,188	
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	595	
2,4-Dichlorophenol	0	0		0	10	10.0	198	
2,4-Dimethylphenol	0	0		0	100	100.0	1,982	

4,6-Dinitro-o-Cresol	0	0		0	2	2.0	39.6	
2,4-Dinitrophenol	0	0		0	10	10.0	198	
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	79,275	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	1,387	
Anthracene	0	0		0	300	300	5,946	
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	3,964	
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	1.98	
2-Chloronaphthalene	0	0		0	800	800	15,855	
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	19,819	
1,3-Dichlorobenzene	0	0		0	7	7.0	139	
1,4-Dichlorobenzene	0	0		0	300	300	5,946	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	11,891	
Dimethyl Phthalate	0	0		0	2,000	2,000	39,638	
Di-n-Butyl Phthalate	0	0		0	20	20.0	396	
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	396	
Fluorene	0	0		0	50	50.0	991	
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	79.3	
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	674	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	198	
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	396	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	1.39	

☑ ***CRL*** CCT (min): 720 PMF: 0.613 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc	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	
Free Cyanide	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	
Acrylonitrile	0	0		0	0.06	0.06	6.24	
Benzene	0	0		0	0.58	0.58	60.3	
Bromoform	0	0		0	7	7.0	728	
Carbon Tetrachloride	0	0		0	0.4	0.4	41.6	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	83.2	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	593	
Dichlorobromomethane	0	0		0	0.95	0.95	98.8	
1,2-Dichloroethane	0	0		0	9.9	9.9	1,029	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	93.6	
1,3-Dichloropropylene	0	0		0	0.27	0.27	28.1	
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	2,079	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	20.8	

Tetrachloroethylene	0	0		0	10	10.0	1,040	
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	57.2	
Trichloroethylene	0	0		0	0.6	0.6	62.4	
Vinyl Chloride	0	0		0	0.02	0.02	2.08	
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	3.12	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	156	
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	0.01	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.1	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.01	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.1	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	1.04	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	3.12	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	33.3	
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	12.5	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.01	
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	5.2	
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	5.2	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	5.2	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	3.12	
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	0.008	
Hexachlorobutadiene	0	0		0	0.01	0.01	1.04	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	10.4	

Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.1	
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	0.073	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.52	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	343	
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 Aluminum	59.6	93.0	1,786	2,787	4,466	µg/L	1,786	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Cadmium	Report	Report	Report	Report	Report	µg/L	6.67	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	Report	Report	Report	Report	Report	µg/L	47.0	AFC	Discharge Conc > 10% 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 Antimony	111	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	47,565	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	19,294	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	2,174	µg/l	Discharge Conc < TQL
Hexavalent Chromium	38.8	µg/L	Discharge Conc < TQL
Total Cobalt	226	µg/L	Discharge Conc < TQL
Free Cyanide	52.4	µg/L	Discharge Conc ≤ 25% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	5,946	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	70,585	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	91.8	µg/L	Discharge Conc < TQL
Total Manganese	19,819	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.99	µg/L	Discharge Conc < TQL

Total Nickel	1,327	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	98.9	µg/L	Discharge Conc < TQL
Total Silver	16.9	µg/L	Discharge Conc < TQL
Total Thallium	4.76	µg/L	Discharge Conc < TQL
Total Zinc	389	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	7.15	µg/L	Discharge Conc < TQL
Acrylonitrile	6.24	µg/L	Discharge Conc < TQL
Benzene	60.3	µg/L	Discharge Conc < TQL
Bromoform	728	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	41.6	µg/L	Discharge Conc < TQL
Chlorobenzene	1,982	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	83.2	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	42,875	µg/L	Discharge Conc < TQL
Chloroform	593	µg/L	Discharge Conc < TQL
Dichlorobromomethane	98.8	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	1,029	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	654	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	93.6	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	28.1	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	1,348	µg/L	Discharge Conc < TQL
Methyl Bromide	1,310	µg/L	Discharge Conc < TQL
Methyl Chloride	66,695	µg/L	Discharge Conc < TQL
Methylene Chloride	2,079	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	20.8	µg/L	Discharge Conc < TQL
Tetrachloroethylene	1,040	µg/L	Discharge Conc < TQL
Toluene	1,130	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	1,982	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	7,146	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	57.2	µg/L	Discharge Conc < TQL
Trichloroethylene	62.4	µg/L	Discharge Conc < TQL
Vinyl Chloride	2.08	µg/L	Discharge Conc < TQL
2-Chlorophenol	595	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	198	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	1,572	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	39.6	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	198	µg/L	Discharge Conc < TQL
2-Nitrophenol	19,056	µg/L	Discharge Conc < TQL
4-Nitrophenol	5,479	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	381	µg/L	Discharge Conc < TQL
Pentachlorophenol	3.12	µg/L	Discharge Conc < TQL
Phenol	79,275	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	156	µg/L	Discharge Conc < TQL
Acenaphthene	198	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS

Anthracene	5,946	µg/L	Discharge Conc < TQL
Benzidine	0.01	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.1	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.01	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.1	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	1.04	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	3.12	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	3,964	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	33.3	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	643	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	1.98	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	15,855	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	12.5	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.01	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	1,953	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	139	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	1,739	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	5.2	µg/L	Discharge Conc < TQL
Diethyl Phthalate	9,528	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	5,955	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	262	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	5.2	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	5.2	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	3.12	µg/L	Discharge Conc < TQL
Fluoranthene	396	µg/L	Discharge Conc < TQL
Fluorene	991	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.008	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	1.04	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	11.9	µg/L	Discharge Conc < TQL
Hexachloroethane	10.4	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.1	µg/L	Discharge Conc < TQL
Isophorone	674	µg/L	Discharge Conc < TQL
Naphthalene	333	µg/L	Discharge Conc < TQL
Nitrobenzene	198	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.073	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.52	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	343	µg/L	Discharge Conc < TQL
Phenanthrene	11.9	µg/L	Discharge Conc < TQL
Pyrene	396	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	1.39	µg/L	Discharge Conc < TQL

Best Professional Judgment (BPJ) Limitations

N/A

Anti-Backsliding

N/A

Development of Effluent Limitations

Outfall No.	002	**Design Flow (MGD)**	0
Latitude	40º 7' 47.00"	**Longitude**	-75º 30' 10.00"

Wastewater Description: Stormwater

The following existing stormwater parameters are recommended to continue pH, CBOD5, COD, TSS, Fecal Coliform, TKN, TP, and Dissolved Iron. Benchmark values for TSS (100 mg/l) and COD (120 mg/l) are also included in Part C of the draft permit. These are consistent with the Benchmark values established in the PAG03 General Permit for discharges of stormwater associated with industrial activity.

Whole Effluent Toxicity (WET)

For Outfall 001, ☐ **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: **annually**

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

WET Summary and Evaluation

Facility Name	Phoenixville Borough STP
Permit No.	PA0027154
Design Flow (MGD)	4
Q_{7-10} Flow (cfs)	285
PMF_a	0.059
PMF_c	0.409

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	11/6/18	12/10/19	10/12/20	7/27/21
Ceriodaphnia	Survival	Pass	Pass	Pass	Pass

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	11/6/2018	12/10/19	10/12/20	7/27/21
Ceriodaphnia	Reproduction	Pass	Pass	Pass	Pass

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	11/6/18	12/10/19	10/13/20	7/27/21
Pimephales	Survival	Pass	Pass	Pass	Pass

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	11/6/18	12/10/19	10/13/20	7/27/21
Pimephales	Growth	Pass	Pass	Pass	Pass

Reasonable Potential? NO

Permit Recommendations

Test Type	**Chronic**
TIWC	**5** % Effluent
Dilution Series	**2, 5, 30, 60, 100** % Effluent
Permit Limit	**None**
Permit Limit Species	

Based on the four submitted reports, WET test Type, TIWC and Dilution series are evaluated. There is no reasonable potential, and no WET limits are needed. Using the PMFa and PMFc from the TMS, the recommended dilution series for the draft permit is 100%, 60%, 30%, 5% and 2% and the TIWC is 5%. WET testing condition is also included in Part C of the permit according to DEP WET SOP.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	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 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	Report	XXX	XXX	1/day	Grab
CBOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
CBOD5 Nov 1 - Apr 30	834	1334	XXX	25	40	50	2/week	24-Hr Composite
CBOD5 May 1 - Oct 31	667	1000	XXX	20.0	30.0	40	2/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TSS	1000	1500	XXX	30	45	60	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Dissolved Solids	Report	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab

Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Nitrate-Nitrite	Report	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/month	Calculation
Ammonia Nov 1 - Apr 30	400	XXX	XXX	12	XXX	24	2/week	24-Hr Composite
Ammonia May 1 - Oct 31	267	XXX	XXX	8	XXX	16	2/week	24-Hr Composite
TKN	Report	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Aluminum, Total	Report	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Cadmium, Total	Report	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Copper, Total	Report	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
PCBs (Dry 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

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