Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0296139**
Facility Type	**Industrial**	APS ID	**1136824**
Major / Minor	**Minor**	Authorization ID	**1526403**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Firepoint Energy Inc.**	Facility Name	**Firepoint Energy Tunnelton**
Applicant Address	671 Hogue Drive	Facility Address	671 Hogue Drive
	Saltsburg, PA 15681-8115		Saltsburg, PA 15681-8115
Applicant Contact	Bill Smith	Facility Contact	Bill Smith
Applicant Phone	(570) 728-5333	Facility Phone	
Client ID	392641	Site ID	879954
SIC Code	2911	Municipality	Conemaugh Township
SIC Description	Manufacturing - Petroleum Refining	County	Indiana
Date Application Received	April 18, 2025	EPA Waived?	No,
Date Application Accepted		If No, Reason	Receipt of Natural Gas Well Wastewater/ TMDL

Purpose of Application: This is an application for a new Industrial Waste permit for a CWT Plant that plans to take in natural gas well wastewater.

Summary of Review

The facility plans to receive natural gas well wastewater from outside entities and to use reverse osmosis processes and other extraction equipment to withdraw lithium, manganese, magnesium, aluminum, iron oxides, boron, and other valuable minerals. Water will be processed through a clarifier, reverse osmosis, lithium extraction, and water will then flow through the normal polishing ponds before discharge. Additional chemicals are not foreseen to be needed for water processing or ancillary processes.

Act 14 Notifications were submitted and received. The facility also notified the public via newspaper through the Indiana Gazette and proof of publication is present.

There are no open violations in WMS for the subject Client ID (392641) as of 8/13/25.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		Dustin Hargenrater Dustin Hargenrater / Project Manager	August 13, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	September 2, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.432
Latitude	40º 27' 10.35"	Longitude	-79º 22' 45.31"
Quad Name	Saltsburg	Quad Code	40079D4
Wastewater Description:	IW Process Effluent with ELG, Stormwater		

Receiving Waters	Conemaugh River (WWF)	Stream Code	43832
NHD Com ID	123722195	RMI	0.6100
Drainage Area	1,360	Yield (cfs/mi^2)	0.0912
Q_{7-10} Flow (cfs)	124	Q_{7-10} Basis	USGS - StreamStats
Elevation (ft)	860	Slope (ft/ft)	---
Watershed No.	18-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	DEWATERING, FLOW REGIME MODIFICATION, METALS		
Source(s) of Impairment	ACID MINE DRAINAGE, DAM OR IMPOUNDMENT, IMPACTS FROM HYDROSTRUCTURE FLOW REGULATION/MODIFICATION		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	7.176	USGS Stream Gauge Data – Below Conemaugh River Reservoir
Temperature (°F)	25	Default - WWF
Hardness (mg/L)	148	USGS Stream Gauge Data – Below Conemaugh River Reservoir
Other:		

Nearest Downstream Public Water Supply Intake		Saltsburg Municipal Waterworks	
PWS Waters	Conemaugh River	Flow at Intake (cfs)	124
PWS RMI	0.5	Distance from Outfall (mi)	5.54

Changes Since Last Permit Issuance: None – This is a new permit; planning approval is not required for IW facilities.

Other Comments: This outfall is subject to ELG Limitations from 40 CFR Chapter I, Subchapter N, Part 437, Subpart B – Oils Treatment and Recovery. This ELG covers various Centralized Waste Treatment point sources and specifically for the subpart B Oils Treatment and Recovery for facilities that take in oil and gas wastewater.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	0
Latitude	40º 27' 11.43"	Longitude	-79º 22' 36.57"
Quad Name	Saltsburg	Quad Code	40079D4
Wastewater Description:	Stormwater		

Receiving Waters	Conemaugh River (WWF)	Stream Code	43832
NHD Com ID	123722195	RMI	0.7400
Drainage Area	1,360	Yield (cfs/mi^2)	0.0912
Q_{7-10} Flow (cfs)	124	Q_{7-10} Basis	USGS - StreamStats
Elevation (ft)	860	Slope (ft/ft)	
Watershed No.	18-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	DEWATERING, FLOW REGIME MODIFICATION, METALS		
Source(s) of Impairment	ACID MINE DRAINAGE, DAM OR IMPOUNDMENT, IMPACTS FROM HYDROSTRUCTURE FLOW REGULATION/MODIFICATION		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	7.176	USGS Stream Gauge Data – Below Conemaugh River Reservoir
Temperature (°F)	25	Default - WWF
Hardness (mg/L)	148	USGS Stream Gauge Data – Below Conemaugh River Reservoir
Other:		

Nearest Downstream Public Water Supply Intake		Saltsbug Municipal Waterworks	
PWS Waters	Conemaugh River	Flow at Intake (cfs)	124
PWS RMI	0.5	Distance from Outfall (mi)	5.54

Other Comments: This outfall will be subject to the monitoring requirements found in PAG-03 Appendix F as they are considered the minimum standards for discharges in this industry.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	0
Latitude	40º 27' 10.35"	Longitude	-79º 22' 45.31"
Quad Name	Saltsburg	Quad Code	40079D4
Wastewater Description:	Stormwater		

Receiving Waters	Conemaugh River (WWF)	Stream Code	43832
NHD Com ID	123722195	RMI	0.6100
Drainage Area	1,360	Yield (cfs/mi^2)	0.0912
Q_{7-10} Flow (cfs)	124	Q_{7-10} Basis	USGS - StreamStats
Elevation (ft)	860	Slope (ft/ft)	
Watershed No.	18-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	DEWATERING, FLOW REGIME MODIFICATION, METALS		
Source(s) of Impairment	ACID MINE DRAINAGE, DAM OR IMPOUNDMENT, IMPACTS FROM HYDROSTRUCTURE FLOW REGULATION/MODIFICATION		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	7.176	USGS Stream Gauge Data – Below Conemaugh River Reservoir
Temperature (°F)	25	Default - WWF
Hardness (mg/L)	148	USGS Stream Gauge Data – Below Conemaugh River Reservoir
Other:		

Nearest Downstream Public Water Supply Intake		Saltsbug Municipal Waterworks	
PWS Waters	Conemaugh River	Flow at Intake (cfs)	124
PWS RMI	0.5	Distance from Outfall (mi)	5.54

Other Comments: This outfall will be subject to the monitoring requirements found in PAG-03 Appendix F as they are considered the minimum standards for discharges in this industry.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	0
Latitude	40º 27' 9.95"	Longitude	-79º 22' 56.07"
Quad Name	Saltsburg	Quad Code	40079D4
Wastewater Description:	Stormwater		
Receiving Waters	Conemaugh River (WWF)	Stream Code	43832
NHD Com ID	123722195	RMI	0.4500
Drainage Area	1,360	Yield (cfs/mi^2)	0.0912
Q_{7-10} Flow (cfs)	124	Q_{7-10} Basis	USGS - StreamStats
Elevation (ft)	860	Slope (ft/ft)	
Watershed No.	18-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	DEWATERING, FLOW REGIME MODIFICATION, METALS		
Source(s) of Impairment	ACID MINE DRAINAGE, DAM OR IMPOUNDMENT, IMPACTS FROM HYDROSTRUCTURE FLOW REGULATION/MODIFICATION		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	7.176	USGS Stream Gauge Data – Below Conemaugh River Reservoir
Temperature (°F)	25	Default - WWF
Hardness (mg/L)	148	USGS Stream Gauge Data – Below Conemaugh River Reservoir
Other:		

Nearest Downstream Public Water Supply Intake	Saltsbug Municipal Waterworks		
PWS Waters	Conemaugh River	Flow at Intake (cfs)	124
PWS RMI	0.5	Distance from Outfall (mi)	5.54

Other Comments: This outfall will be subject to the monitoring requirements found in PAG-03 Appendix F as they are considered the minimum standards for discharges in this industry.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	006	Design Flow (MGD)	0
Latitude	40º 27' 19.77"	Longitude	-7º 22' 14.72"
Quad Name	Saltsburg	Quad Code	40079D4
Wastewater Description:	Stormwater		

Receiving Waters	Conemaugh River (WWF)	Stream Code	43832
NHD Com ID	123714648	RMI	0.2100
Drainage Area	1,360	Yield (cfs/mi^2)	0.0912
Q_{7-10} Flow (cfs)	124	Q_{7-10} Basis	USGS - StreamStats
Elevation (ft)	860	Slope (ft/ft)	
Watershed No.	18-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	

Assessment Status	Impaired		
Cause(s) of Impairment	DEWATERING, FLOW REGIME MODIFICATION, METALS, POLYCHLORINATED BIPHENYLS (PCBS)		
Source(s) of Impairment	ACID MINE DRAINAGE, DAM OR IMPOUNDMENT, IMPACTS FROM HYDROSTRUCTURE FLOW REGULATION/MODIFICATION, SOURCE UNKNOWN		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL

Background/Ambient Data		Data Source
pH (SU)	7.176	USGS Stream Gauge Data – Below Conemaugh River Reservoir
Temperature (°F)	25	Default - WWF
Hardness (mg/L)	148	USGS Stream Gauge Data – Below Conemaugh River Reservoir
Other:		

Nearest Downstream Public Water Supply Intake		Saltsbug Municipal Waterworks	
PWS Waters	Conemaugh River	Flow at Intake (cfs)	124
PWS RMI	0.5	Distance from Outfall (mi)	5.54

Other Comments: This outfall will be subject to the monitoring requirements found in PAG-03 Appendix F as they are considered the minimum standards for discharges in this industry.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .432
Latitude 40º 27' 13.00" **Longitude** -79º 22' 50.00"
Wastewater Description: IW Process Effluent with ELG, Stormwater

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis, BPT, and NSPS where applicable:

§437.21 Effluent Limitations attainable by the application of the best practicable control technology currently available (BPT)		
Regulated Parameter	Maximum Daily (mg/l)	Maximum Monthly Average (mg/l)
Oil and Grease	127	38.0
pH	9.0	6.0
Total Suspended Solids	74.1	30.6
Total Arsenic	2.95	1.33
Total Cadmium	0.0172	0.0102
Total Chromium	0.746	0.323
Total Cobalt	56.4	18.8
Total Copper	0.5	0.242
Total Lead	0.35	0.16
Total Mercury	0.0172	0.00647
Total Tin	0.335	0.165
Total Zinc	8.26	4.50
Bis(2-ethylexyl) Phthalate	0.215	0.101
Butylbenzyl Phathalate	0.188	0.0887
Carbazole	0.598	0.276
n-Decane	0.948	0.437
Fluoranthene	0.0537	0.0268
n-Octadecane	0.589	0.302

40 CFR Chapter 437 Subpart B provides the above BPT limitations for CWT facilities that take in oil and gas wastewater. Since this is a new facility, it will be subject to the New Source Performance Standards found in 40 CFR Chapter 437 Subpart B. The New Source Performance Standards are defined in 40 CFR § 437.24 as “Except as provided in 437.20(b), any new source subject to this subpart must achieve the following performance standards: Standards for oil and grease, pH, TSS, arsenic, cadmium, chromium, cobalt, copper, lead, mercury, tin, zinc, butylbenzyl phthalate, carbazole, n-decane, bis(2-ethylexyl) phthalate, fluoranthene, and n-octadecane are the same as the corresponding limitation specified in 40 CFR § 437.21”

Based on the SOP for Establishing Effluent Limitations for Individual Industrial Permits, in general, if the maximum concentration of Oil and Grease in the discharge is reported to be 4 mg/l or greater, establish a monitor only requirement. If the maximum concentration of Oil and Grease in the discharge is 8 mg/l or greater, establish an effluent limitation for Oil and Grease of 15 mg/l as an average monthly limit and 30 mg/l as an IMAX limit. If the federal ELG addresses Oil and Grease, apply the more stringent requirements. Since the federal ELG addresses Oil and Grease the more stringent treatment requirements of 25 PA Code § 95.2(2) will be implemented as a Technology-Based Effluent Limitation.

Flow Monitoring is required pursuant to 25 PA Code § 92a.61(d)(1) and will be implemented on a 1/daily frequency and the permittee will be required to submit Average Monthly and Max Daily Reporting data.

TDS

The rivers and streams of Pennsylvania have limited assimilative capacity for TDS. Increasingly, TDS has become a statewide pollutant of concern and a threat to DEP’s mission to prevent violations of water quality standards. Existing treatment practices for controlling pollutants in high-TDS wastewaters normally do not effectively remove TDS and its primary component solids, including sulfate and chloride. Instead, control of TDS and the associated adverse effects relies primarily on dilution of the wastewater by the receiving stream. Based on experience with the challenge in controlling sources of TDS and recognizing that the emergence of the Marcellus Shale natural gas development play has increased that challenge, dilution can no longer be considered as the primary means to control TDS.

DEP has recognized the increased challenge and developed proactive measures: 25 Pa. Code § 95.10 was promulgated and became effective on August 21, 2010. The regulation establishes treatment requirements for new and expanding discharge loadings of TDS and related pollutants. The regulation exempts existing mass loadings of TDS from the treatment requirements, while new or expanding mass loadings of TDS are subject to the treatment requirements specified in the regulation.

Permits to discharge treated wastewater to surface waters are issued under the authority of both the Pennsylvania Clean Streams Law and the Federal Water Pollution Control Act through the National Pollutant Discharge Elimination System (NPDES). This policy and procedure implements the treatment requirements of § 95.10 as they relate to the Pennsylvania Clean Streams Law. The provisions and requirements of § 95.10 do not supplant or affect other requirements applicable to point sources contained in 25 Pa. Code or Federal regulations.

This facility should not be a significant source of TDS based on the expected concentrations reported on the application, but this is not certain until it is built and operated. As a discharge treating natural gas wastewater, it is not eligible for Unaffected classification in any case. Effluent limits should be established based on the provisions of § 95.10(b)(3)(iii). The CWT will receive raw natural gas wastewater and consequently requires a radiation protection Action Plan. However, no radiological monitoring of the effluent should be required for facilities that will remove essentially all solids associated with radiological properties. Permit conditions for other possible pollutants of concern associated with hydro fracturing additives may be considered, but a treatment process designed to achieve the treatment requirements of § 95.10(b)(3)(iii) is likely to effectively remove all pollutants of concern. In any case, if the facility is built and operates as anticipated, the effluent limits can be reevaluated for the next permit cycle. The same rationale would apply to any expansion of the facility which will use treatment technology designed to achieve the provisions of § 95.10(b)(3)(iii).

The following TDS limits are applied for facilities classified as “Non-Exempt (Natural Gas)”:

Parameter	Average Monthly Limit (mg/l)	Maximum Daily Limit (mg/l)
Total Dissolved Solids	500	1,000
Chloride	250	500
Total Barium	10	20
Total Strontium	10	20

Water Quality-Based Limitations

Toxics Management Spreadsheet

This discharge was modeled using the Departments Toxics Management Spreadsheet. The TMS takes into consideration design flow, hardness, and pH at the facility as well as the in-stream yield, hardness, and pH. It takes this data and uses the concentration data for parameters in pollutant groups 1-7 to create a mass balance equation to create Water Quality Based Effluent Limitations. Since the facility is not currently in operation, they were required to do research and come up with the expected concentrations at the facility based on what similar facilities of this nature produce. All values inputted into the TMS are the expected value with the exception of the ELG concentrations above. If the facility expected higher values than the ELG limitations, that value was used. If the facility expected values below the ELG limitations, then the Maximum Daily limitation for that parameter was used. This was modeled this way to ensure the ELG limitations above were protecting water quality-based needs within the receiving stream. A Public Water Supply is 5.54 miles down stream at the Saltsburg Municipal Waterworks with an intake of 602,000 GPD. The TDS Maximum Daily Limits were input into the model to ensure the limitations found in the Policy and Procedure for NPDES Permitting of Discharges of Total Dissolved Solids were protecting the existing use of the receiving stream and to ensure the limits would be stringent enough where they would not affect the public water supply.

The following parameters were determined to have a need for a Water Quality Based Limitation through the Toxics Management Spreadsheet:

Parameter	Average Monthly Limit (mg/l)	Maximum Daily Limit (mg/l)
Total Aluminum	Report	Report
Total Arsenic	1.4	2.19
Total Cadmium	Report	Report
Total Cobalt	1.29	2.01
Total Copper	0.26	0.41
Total Lead	Report	Report
Total Manganese (µg/l)	Report	Report
Total Mercury (µg/l)	7.02	11.0
Total Zinc	2.18	3.4

Bis(2-Ethylexyl) Phthalate	0.24	0.38
Butyl Benzyl Phthalate	0.014	0.022

The following parameters received more stringent limits through the TMS than the TBEL ELG Limitations above:

Parameter	More Stringent Limitations (ELG limit > TMS Limit)
Total Arsenic	MDL more stringent than ELG Limit **(2.95 mg/l > 2.19 mg/l)**
Total Cobalt	AML and MDL more stringent than ELG Limit **(18.8 mg/l > 1.29 mg/l) (56.4 mg/l > 2.01 mg/l)**
Total Copper	MDL more stringent than ELG Limit **(0.5 mg/l > 0.41 mg/l)**
Total Mercury	MDL more stringent than ELG Limit **(17.2 µg/l > 11.0 µg/l)**
Total Zinc	AML and MDL more stringent than ELG Limit **(4.5 mg/l > 3.4 mg/l) (8.26 mg/l > 2.18 mg/l)**

Since the WQBELs calculated by the TMS above are more stringent than the TBELs set forth in the ELG the more stringent limits will be applied based on the SOP for Establishing Effluent Limitations for Individual Industrial Permits.

Kiskiminetas-Conemaugh River TMDL

There is a TMDL for metals in the Kiskiminetas-Conemaugh River Basin. The TMDL focuses on Acid Mine Drainage metals which are primarily recognized as Total Iron, Total Aluminum, and Total Manganese. Since this is a new facility, the site did not receive WLAs in the TMDL. Since the facility has not received a WLA in the TMDL the facility will be required to meet the most stringent criteria for Total Iron, Total Aluminum, and Total Manganese to promote the no net addition of loads to the TMDL waters.

The specific water quality criterion for aluminum is expressed as an acute or maximum daily in 25 Pa. Code Chapter 93. Discharges of aluminum may only be authorized to the extent that they will not cause or contribute to any violation of the water quality standards. Therefore, the water quality criterion for aluminum (0.75 mg/L) is imposed as a maximum daily effluent limit (MDL). Whenever the most stringent criterion is selected for the MDL, the Department should also impose an average monthly limit (AML) and instantaneous maximum limit (IMAX) if applicable. The imposition of an AML that is more stringent than the MDL is typically not appropriate because the water quality concerns have already been fully addressed by setting the MDL equal to the most stringent applicable criterion. Therefore, where the MDL is set at the value of the most stringent applicable criterion, the AML should be set equal to the MDL.

The specific water quality criterion for iron is expressed as a 30-day average of 1.5 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of aquatic life and is associated with chronic exposure. There are no other criteria for total iron. Since the duration of the total iron criterion coincides with the 30-day duration of the AML, the 30-day average criterion for total iron is set equal to the AML. In addition, because the total iron criterion is associated with chronic exposure, the MDL (representing acute exposure) and the IMAX may be made less stringent according to established procedures described in Section III.C.3.h on Page 13 of the Water Quality Toxics Management Strategy (Doc. # 361-0100-003). These procedures state that a MDL and IMAX may be set at 2 times and 2.5 times the AML, respectively, or there is the option to use multipliers from EPA's Technical Support Document for Water Quality-based Toxics Control, if data are available to support the use of alternative multipliers.

The specific water quality criterion for manganese is expressed as an acute or maximum daily of 1.0 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of human health and is associated with chronic exposure associated with a potable water supply (PWS). Since no duration is given in Chapter 93 for the manganese criterion, a duration of 30 days is used based on the water quality criteria duration for Threshold Human Health (THH) criteria given in Section III.C.3.a., Table 1 on Page 10 of DEP's Water Quality Toxics Management Strategy. The 30-day duration for THH criteria coincides with the 30-day duration of an AML, which is why the manganese criterion is set equal to the AML for a "permitting at criteria" scenario. Because the manganese criterion is interpreted as having chronic exposure, the manganese MDL and IMAX may be made less stringent according to procedures established in Section III.C.2.h. of the Water Quality Toxics Management Strategy (AML multipliers of 2.0 and 2.5 for the MDL and IMAX respectively).

The most stringent criteria for the parameters is as follows:

Parameter	Average Monthly Limit (mg/l)	Maximum Daily Limit (mg/l)	Average Monthly Load (lbs/day)	Maximum Daily Load (lbs/day)
Total Iron	1.5	3.0	5.4	10.81
Total Aluminum	0.75	0.75	2.7	2.7
Total Manganese	1.0	2.0	3.6	7.2

Maximum daily limits are calculated using a multiplier of 2 times the average monthly limit for conventional pollutants.

Per- and Polyfluoroalkyl Substances (PFAS)

In February 2024, DEP implemented a new monitoring initiative for PFAS consistent with an EPA memorandum that provides guidance to states for addressing PFAS discharges. PFAS are a family of thousands of synthetic organic chemicals that contain a chain of strong carbon-fluorine bonds. Many PFAS are highly stable, water- and oil-resistant, and exhibit other properties that make them useful in a variety of consumer products and industrial processes. PFAS are resistant to biodegradation, photooxidation, direct photolysis, and hydrolysis and do not readily degrade naturally; thus, many PFAS accumulate over time. According to the United States Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR), the environmental persistence and mobility of some PFAS, combined with decades of widespread use, have resulted in their presence in surface water, groundwater, drinking water, rainwater, soil, sediment, ice caps, outdoor and indoor air, plants, animal tissue, and human blood serum across the globe. ATSDR also reported that exposure to certain PFAS can lead to adverse human health impacts Due to their durability, toxicity, persistence, and pervasiveness, PFAS have emerged as potentially significant pollutants of concern.

In accordance with Section II.I of DEP's "Standard Operating Procedure (SOP) for Clean Water Program – Establishing Effluent Limitations for Individual Industrial Permits" [SOP No. BCW-PMT-032] and under the authority of 25 Pa. Code § 92a.61(b), DEP has determined that monitoring for a subset of common/well-studied PFAS including Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorobutanesulfonic acid (PFBS), and Hexafluoropropylene oxide dimer acid (HFPO-DA) is necessary to help understand the extent of environmental contamination by PFAS in the Commonwealth and the extent to which point source dischargers are contributors. SOP BCW-PMT-032 directs permit writers to consider special monitoring requirements for PFOA, PFOS, PFBS, and HFPO-DA in the following instances:

a. If sampling that is completed as part of the permit renewal application reveals a detection of PFOA, PFOS, HFPO-DA or PFBS (any of these compounds), the application manager will establish a quarterly monitoring requirement for PFOA, PFOS, HFPO-DA and PFBS (all of these compounds) in the permit.

b. If sampling that is completed as part of the permit renewal application demonstrates non-detect values at or below the Target QLs for PFOA, PFOS, HFPO-DA and PFBS (all of these compounds in a minimum of 3 samples), the application manager will establish an annual monitoring requirement for PFOA, PFOS, HFPO-DA and PFBS in the permit.

c. In all cases the application manager will include a condition in the permit that the permittee may cease monitoring for PFOA, PFOS, HFPO-DA and PFBS when the permittee reports non-detect values at or below the Target QL for four consecutive monitoring periods for each PFAS parameter that is analyzed. Use the following language: The permittee may discontinue monitoring for PFOA, PFOS, HFPO-DA, and PFBS if the results in 4 consecutive monitoring periods indicate non-detects at or below Quantitation Limits of 4.0 ng/L for PFOA, 3.7 ng/L for PFOS, 3.5 ng/L for PFBS and 6.4 ng/L for HFPO-DA. When monitoring is discontinued, permittees should enter a No Discharge Indicator (NODI) Code of "GG" on DMRs.

The Firepoint Energy Tunnelton Facility submitted expected sampling results for the wastewaters at the facility. Within these expected results they did expect a detection of PFOA in the discharge. There was no reasonable explanation of why they expected a detection of PFOA. According to the SOP for Establishing Effluent Limits in Individual Waste Permits if sampling that is completed as part of the permit renewal application reveals a detection of PFOA, PFOS, HFPO-DA, and PFBS, the application manager will establish a quarterly monitoring requirement for PFOA, PFOS, HFPO-DA, and PFBS.

As stated in Section II.I.c of the SOP, if non-detect values at or below DEP's Target QLs are reported for four consecutive monitoring periods (i.e., four consecutive annual results in Component InterTech's case), then the monitoring may be discontinued.

Best Professional Judgment (BPJ) Limitations

Comments: No BPJ Limitations are being proposed for the permit.

Anti-Backsliding

No Anti-Backsliding considerations are applicable as this is a new permit.

Development of Effluent Limitations

Outfall No. 002 **Design Flow (MGD)** 0
Latitude 40º 27' 15.00" **Longitude** -79º 22' 35.00"
Wastewater Description: Stormwater

Technology-Based Limitations

PAG-03 Appendix F monitoring requirements for Chemicals and Allied Products:

Pollutant	Monitoring Requirements (1), (2)		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
Total Nitrogen (mg/L) (3)	1 / 6 Months	Calculation	XXX
Total Phosphorous (mg/L)	1 / 6 Months	Grab	XXX
pH (S.U.)	1 / 6 Months	Grab	9.0
Chemical Oxygen Demand (COD) (mg/L)	1 / 6 Months	Grab	120
Total Suspended Solids (TSS) (mg/L)	1 / 6 Months	Grab	100
Nitrate + Nitrite-Nitrogen (mg/L)	1 / 6 Months	Grab	3.0
Total Lead (mg/L)	1 / 6 Months	Grab	XXX
Total Zinc (mg/L)	1 / 6 Months	Grab	XXX
Total Iron (mg/L)	1 / 6 Months	Grab	XXX
Total Aluminum (mg/L)	1 / 6 Months	Grab	XXX

Footnotes:
(1) In accordance with Part C V.C, the permittee shall conduct additional monitoring if specified by DEP in the letter authorizing permit coverage or other correspondence.
(2) This is the minimum number of sampling events required. Permittees may optionally perform additional sampling.
(3) Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO2+NO3-N), where TKN and NO2+NO3-N are measured in the same sampl

Based on the SOP for Establishing Effluent Limitations for Individual Industrial Permits, where a general permit exists for the industrial sector, the effluent limits and monitoring requirements should generally be considered minimum standards for discharges from that industry, unless the application manager can document that the requirements of the General Permit are not applicable to a specific individual permit.

Development of Effluent Limitations

Outfall No. 003 **Design Flow (MGD)** 0
Latitude 40º 27' 13.00" **Longitude** -79º 22' 42.00"
Wastewater Description: Stormwater

Technology-Based Limitations

PAG-03 Appendix F monitoring requirements for Chemicals and Allied Products:

Pollutant	Monitoring Requirements (1), (2)		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
Total Nitrogen (mg/L) (3)	1 / 6 Months	Calculation	XXX
Total Phosphorous (mg/L)	1 / 6 Months	Grab	XXX
pH (S.U.)	1 / 6 Months	Grab	9.0
Chemical Oxygen Demand (COD) (mg/L)	1 / 6 Months	Grab	120
Total Suspended Solids (TSS) (mg/L)	1 / 6 Months	Grab	100
Nitrate + Nitrite-Nitrogen (mg/L)	1 / 6 Months	Grab	3.0
Total Lead (mg/L)	1 / 6 Months	Grab	XXX
Total Zinc (mg/L)	1 / 6 Months	Grab	XXX
Total Iron (mg/L)	1 / 6 Months	Grab	XXX
Total Aluminum (mg/L)	1 / 6 Months	Grab	XXX

Footnotes:
(1) In accordance with Part C V.C, the permittee shall conduct additional monitoring if specified by DEP in the letter authorizing permit coverage or other correspondence.
(2) This is the minimum number of sampling events required. Permittees may optionally perform additional sampling.
(3) Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO2+NO3-N), where TKN and NO2+NO3-N are measured in the same sampl

Based on the SOP for Establishing Effluent Limitations for Individual Industrial Permits, where a general permit exists for the industrial sector, the effluent limits and monitoring requirements should generally be considered minimum standards for discharges from that industry, unless the application manager can document that the requirements of the General Permit are not applicable to a specific individual permit.

Development of Effluent Limitations

Outfall No. 004 **Design Flow (MGD)** 0
Latitude 40º 27' 12.00" **Longitude** -79º 22' 53.00"
Wastewater Description: Stormwater

Technology-Based Limitations

PAG-03 Appendix F monitoring requirements for Chemicals and Allied Products:

Pollutant	Monitoring Requirements (1), (2)		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
Total Nitrogen (mg/L) (3)	1 / 6 Months	Calculation	XXX
Total Phosphorous (mg/L)	1 / 6 Months	Grab	XXX
pH (S.U.)	1 / 6 Months	Grab	9.0
Chemical Oxygen Demand (COD) (mg/L)	1 / 6 Months	Grab	120
Total Suspended Solids (TSS) (mg/L)	1 / 6 Months	Grab	100
Nitrate + Nitrite-Nitrogen (mg/L)	1 / 6 Months	Grab	3.0
Total Lead (mg/L)	1 / 6 Months	Grab	XXX
Total Zinc (mg/L)	1 / 6 Months	Grab	XXX
Total Iron (mg/L)	1 / 6 Months	Grab	XXX
Total Aluminum (mg/L)	1 / 6 Months	Grab	XXX

Footnotes:
(1) In accordance with Part C V.C, the permittee shall conduct additional monitoring if specified by DEP in the letter authorizing permit coverage or other correspondence.
(2) This is the minimum number of sampling events required. Permittees may optionally perform additional sampling.
(3) Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO2+NO3-N), where TKN and NO2+NO3-N are measured in the same sampl

Based on the SOP for Establishing Effluent Limitations for Individual Industrial Permits, where a general permit exists for the industrial sector, the effluent limits and monitoring requirements should generally be considered minimum standards for discharges from that industry, unless the application manager can document that the requirements of the General Permit are not applicable to a specific individual permit.

Development of Effluent Limitations

Outfall No. 006 **Design Flow (MGD)** 0
Latitude 40º 27' 21.00" **Longitude** -79º 22' 24.00"
Wastewater Description: Stormwater

Technology-Based Limitations

PAG-03 Appendix F monitoring requirements for Chemicals and Allied Products:

Pollutant	Monitoring Requirements (1), (2)		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
Total Nitrogen (mg/L) (3)	1 / 6 Months	Calculation	XXX
Total Phosphorous (mg/L)	1 / 6 Months	Grab	XXX
pH (S.U.)	1 / 6 Months	Grab	9.0
Chemical Oxygen Demand (COD) (mg/L)	1 / 6 Months	Grab	120
Total Suspended Solids (TSS) (mg/L)	1 / 6 Months	Grab	100
Nitrate + Nitrite-Nitrogen (mg/L)	1 / 6 Months	Grab	3.0
Total Lead (mg/L)	1 / 6 Months	Grab	XXX
Total Zinc (mg/L)	1 / 6 Months	Grab	XXX
Total Iron (mg/L)	1 / 6 Months	Grab	XXX
Total Aluminum (mg/L)	1 / 6 Months	Grab	XXX

Footnotes:
(1) In accordance with Part C V.C, the permittee shall conduct additional monitoring if specified by DEP in the letter authorizing permit coverage or other correspondence.
(2) This is the minimum number of sampling events required. Permittees may optionally perform additional sampling.
(3) Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO2+NO3-N), where TKN and NO2+NO3-N are measured in the same sampl

Based on the SOP for Establishing Effluent Limitations for Individual Industrial Permits, where a general permit exists for the industrial sector, the effluent limits and monitoring requirements should generally be considered minimum standards for discharges from that industry, unless the application manager can document that the requirements of the General Permit are not applicable to a specific individual permit.

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TSS	XXX	XXX	XXX	30.6	74.1	XXX	1/week	24-Hr Composite
Total Dissolved Solids	1801.4	3602.8	XXX	500.0	1000.0	XXX	1/week	24-Hr Composite
Oil and Grease	XXX	XXX	XXX	15.0	XXX	30.0	1/day	Grab
Total Aluminum	XXX	2.7	XXX	0.75	0.75	XXX	1/week	24-Hr Composite
Total Arsenic	XXX	XXX	XXX	1.33	2.19	XXX	1/week	24-Hr Composite
Total Barium	36.0	72.0	XXX	10.0	20.0	XXX	1/week	24-Hr Composite
Total Cadmium	XXX	XXX	XXX	0.0102	0.0172	XXX	1/week	24-Hr Composite
Total Chromium	XXX	XXX	XXX	0.323	0.746	XXX	1/week	24-Hr Composite
Total Cobalt	XXX	XXX	XXX	1.29	2.01	XXX	1/week	24-Hr Composite
Total Copper	XXX	XXX	XXX	0.242	0.5	XXX	1/week	24-Hr Composite
Total Iron	5.4	10.81	XXX	1.5	3.0	XXX	1/week	24-Hr Composite

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	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Total Lead	XXX	XXX	XXX	0.16	0.35	XXX	1/week	24-Hr Composite
Total Manganese	3.6	7.2	XXX	1.0	2.0	XXX	1/week	24-Hr Composite
Total Mercury (ug/L)	XXX	XXX	XXX	6.47	11.0	XXX	1/week	24-Hr Composite
Total Strontium	36.0	72.0	XXX	10.0	20.0	XXX	1/week	24-Hr Composite
Total Tin	XXX	XXX	XXX	0.165	0.335	XXX	1/week	24-Hr Composite
Total Zinc	XXX	XXX	XXX	2.18	3.4	XXX	1/week	24-Hr Composite
Butyl Benzyl Phthalate	XXX	XXX	XXX	0.014	0.022	XXX	1/week	24-Hr Composite
Chloride	900.7	1801.4	XXX	250.0	500.0	XXX	1/week	24-Hr Composite
Bis(2-Ethyl-hexyl)Phthalate	XXX	XXX	XXX	0.101	0.215	XXX	1/week	24-Hr Composite
Fluoranthene	XXX	XXX	XXX	0.0268	0.0537	XXX	1/week	24-Hr Composite
Carbazole	XXX	XXX	XXX	0.276	0.598	XXX	1/week	24-Hr Composite
n-Decane	XXX	XXX	XXX	0.437	0.948	XXX	1/week	24-Hr Composite
n-Octadecane	XXX	XXX	XXX	0.302	0.589	XXX	1/week	24-Hr Composite
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report	XXX	1/quarter	Grab

Compliance Sampling Location: Outfall 001, after treatment.

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	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Calculation
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 002.

Other Comments: The proposed monitoring is derived from the PAG-03 Appendix F which is considered the minimum standards for facilities of this nature.

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	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Calculation
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 003

Other Comments: The proposed monitoring is derived from the PAG-03 Appendix F which is considered the minimum standards for facilities of this nature.

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 004, 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	1/6 months	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Calculation
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 004

Other Comments: The proposed monitoring is derived from the PAG-03 Appendix F which is considered the minimum standards for facilities of this nature.

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 006, 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	1/6 months	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Calculation
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Aluminum	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 006

Other Comments: The proposed monitoring is derived from the PAG-03 Appendix F which is considered the minimum standards for facilities of this nature.

Attachment 1
Toxics Management Spreadsheet Modeling

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Firepoint Energy Tunnelton** NPDES Permit No.: **PA0296139** Outfall No.:

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

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
0.432	10	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		1000									
	Chloride (PWS)	mg/L		500									
	Bromide	mg/L		5.35									
	Sulfate (PWS)	mg/L		977									
	Fluoride (PWS)	mg/L		0.341									
Group 2	Total Aluminum	mg/L		1.5									
	Total Antimony	µg/L	<	0.0004									
	Total Arsenic	mg/L		2.95									
	Total Barium	mg/L		20									
	Total Beryllium	µg/L	<	0.4									
	Total Boron	µg/L		0.416									
	Total Cadmium	mg/L		0.0172									
	Total Chromium (III)	mg/L		0.746									
	Hexavalent Chromium	µg/L	<	10									
	Total Cobalt	mg/L		56.4									
	Total Copper	mg/L		0.5									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	10									
	Dissolved Iron	µg/L		0.089									
	Total Iron	mg/L		3									
	Total Lead	mg/L		0.35									
	Total Manganese	µg/L		14300									
	Total Mercury	µg/L		17.2									
	Total Nickel	µg/L		23									
	Total Phenols (Phenolics) (PWS)	µg/L	<	5									
	Total Selenium	µg/L		9									
	Total Silver	µg/L		0.001									
	Total Thallium	µg/L		0.1									
	Total Zinc	mg/L		8.26									
	Total Molybdenum	µg/L		21									
	Acrolein	µg/L	<	3									
	Acrylamide	µg/L	<	0.07									
	Acrylonitrile	µg/L	<	0.06									
	Benzene	µg/L	<	1									
	Bromoform	µg/L	<	7									

Group 3	Carbon Tetrachloride	µg/L	<	0.4									
	Chlorobenzene	µg/L		100									
	Chlorodibromomethane	µg/L	<	0.8									
	Chloroethane	µg/L	<	1									
	2-Chloroethyl Vinyl Ether	µg/L	<	3500									
	Chloroform	µg/L	<	5.7									
	Dichlorobromomethane	µg/L	<	0.95									
	1,1-Dichloroethane	µg/L	<	1									
	1,2-Dichloroethane	µg/L	<	9.9									
	1,1-Dichloroethylene	µg/L	<	33									
	1,2-Dichloropropane	µg/L	<	0.9									
	1,3-Dichloropropylene	µg/L	<	0.27									
	1,4-Dioxane	µg/L	<	1									
	Ethylbenzene	µg/L	<	1									
	Methyl Bromide	µg/L	<	100									
	Methyl Chloride	µg/L	<	5500									
	Methylene Chloride	µg/L	<	20									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.2									
	Tetrachloroethylene	µg/L	<	10									
	Toluene	µg/L	<	1									
	1,2-trans-Dichloroethylene	µg/L	<	100									
	1,1,1-Trichloroethane	µg/L	<	610									
	1,1,2-Trichloroethane	µg/L	<	0.55									
	Trichloroethylene	µg/L	<	0.6									
	Vinyl Chloride	µg/L	<	0.02									
Group 4	2-Chlorophenol	µg/L	<	30									
	2,4-Dichlorophenol	µg/L	<	10									
	2,4-Dimethylphenol	µg/L	<	100									
	4,6-Dinitro-o-Cresol	µg/L	<	2									
	2,4-Dinitrophenol	µg/L	<	10									
	2-Nitrophenol	µg/L	<	1600									
	4-Nitrophenol	µg/L	<	470									
	p-Chloro-m-Cresol	µg/L	<	160									
	Pentachlorophenol	µg/L	<	0.03									
	Phenol	µg/L	<	4000									
	2,4,6-Trichlorophenol	µg/L	<	1.5									
Group 5	Acenaphthene	µg/L	<	17									
	Acenaphthylene	µg/L	<	1									
	Anthracene	µg/L	<	300									
	Benzidine	µg/L	<	0.0001									
	Benzo(a)Anthracene	µg/L	<	0.001									
	Benzo(a)Pyrene	µg/L	<	0.0001									
	3,4-Benzofluoranthene	µg/L	<	0.001									
	Benzo(ghi)Perylene	µg/L	<	1									
	Benzo(k)Fluoranthene	µg/L	<	0.01									
	Bis(2-Chloroethoxy)Methane	µg/L	<	1									
	Bis(2-Chloroethyl)Ether	µg/L	<	0.03									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	200									
	Bis(2-Ethylhexyl)Phthalate	mg/L		0.215									
	4-Bromophenyl Phenyl Ether	µg/L	<	54									
	Butyl Benzyl Phthalate	mg/L	<	0.188									
	2-Chloronaphthalene	µg/L	<	800									
	4-Chlorophenyl Phenyl Ether	µg/L	<	1									
	Chrysene	µg/L	<	0.12									
	Dibenzo(a,h)Anthrancene	µg/L	<	0.0001									
	1,2-Dichlorobenzene	µg/L	<	160									
	1,3-Dichlorobenzene	µg/L	<	7									
	1,4-Dichlorobenzene	µg/L	<	150									
	3,3-Dichlorobenzidine	µg/L	<	0.05									
	Diethyl Phthalate	µg/L	<	600									
	Dimethyl Phthalate	µg/L	<	500									
	Di-n-Butyl Phthalate	µg/L	<	20									
	2,4-Dinitrotoluene	µg/L	<	0.05									

	2,6-Dinitrotoluene	µg/L	<	0.05									
	Di-n-Octyl Phthalate	µg/L	<	1									
	1,2-Diphenylhydrazine	µg/L	<	0.03									
	Fluoranthene	mg/L		0.0537									
	Fluorene	µg/L	<	50									
	Hexachlorobenzene	µg/L	<	0.00008									
	Hexachlorobutadiene	µg/L	<	0.01									
	Hexachlorocyclopentadiene	µg/L	<	1									
	Hexachloroethane	µg/L	<	0.01									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.001									
	Isophorone	µg/L	<	34									
	Naphthalene	µg/L	<	43									
	Nitrobenzene	µg/L	<	10									
	n-Nitrosodimethylamine	µg/L	<	0.0007									
	n-Nitrosodi-n-Propylamine	µg/L	<	0.005									
	n-Nitrosodiphenylamine	µg/L	<	3.3									
	Phenanthrene	µg/L	<	1									
	Pyrene	µg/L	<	20									
	1,2,4-Trichlorobenzene	µg/L	<	0.07									
Group 6	Aldrin	µg/L	<	0.0000008									
	alpha-BHC	µg/L	<	0.0004									
	beta-BHC	µg/L	<	0.008									
	gamma-BHC	µg/L	<	0.95									
	delta BHC	µg/L	<	1									
	Chlordane	µg/L	<	0.0003									
	4,4-DDT	µg/L	<	0.00003									
	4,4-DDE	µg/L	<	0.00002									
	4,4-DDD	µg/L	<	0.0001									
	Dieldrin	µg/L	<	0.000001									
	alpha-Endosulfan	µg/L	<	0.056									
	beta-Endosulfan	µg/L	<	0.056									
	Endosulfan Sulfate	µg/L	<	20									
	Endrin	µg/L	<	0.03									
	Endrin Aldehyde	µg/L	<	1									
	Heptachlor	µg/L	<	0.000006									
	Heptachlor Epoxide	µg/L	<	0.00003									
	PCB-1016	µg/L	<	1									
	PCB-1221	µg/L	<	1									
	PCB-1232	µg/L	<	1									
	PCB-1242	µg/L	<	1									
	PCB-1248	µg/L	<	1									
	PCB-1254	µg/L	<	1									
	PCB-1260	µg/L	<	1									
	PCBs, Total	µg/L	<	0.000064									
	Toxaphene	µg/L	<	0.0002									
	2,3,7,8-TCDD	ng/L	<	5E-09									
Group 7	Gross Alpha	pCi/L		1									
	Total Beta	pCi/L	<	1									
	Radium 226/228	pCi/L	<	1									
	Total Strontium	mg/L		20									
	Total Uranium	µg/L	<	1									
	Osmotic Pressure	mOs/kg	<	50									

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Firepoint Energy Tunnelton , NPDES Permit No. PA0296139

Instructions | Discharge | Stream

Receiving Surface Water Name: **Conemaugh 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	043832	6.105	860	1360			Yes
End of Reach 1	043832	0.5	827	1370		0.602	Yes

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

Location	RMI	LFY (cfs/mi^2)*	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	6.105	0.0912										148	7.176		
End of Reach 1	0.5	0.0905										148	7.176		

Q_h

Location	RMI	LFY (cfs/mi^2)	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	6.105														
End of Reach 1	0.5														

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Firepoint Energy Tunnelton , NPDES Permit No. PA0296139

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.108 Analysis Hardness (mg/l): 141.47 Analysis pH: 7.17

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	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	15,850	
Total Antimony	0	0		0	1,100	1,100	23,246	
Total Arsenic	0	0		0	340	340	7,185	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	443,792	
Total Boron	0	0		0	8,100	8,100	171,177	
Total Cadmium	0	0		0	2.821	3.04	64.1	Chem Translator of 0.929 applied
Total Chromium (III)	0	0		0	756.987	2,396	50,625	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	344	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	2,008	
Total Copper	0	0		0	18.635	19.4	410	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	94.020	127	2,683	Chem Translator of 0.74 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	34.8	Chem Translator of 0.85 applied
Total Nickel	0	0		0	627.952	629	13,297	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	5.842	6.87	145	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	1,374	
Total Zinc	0	0		0	157.222	161	3,397	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	63.4	

Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	650	650	13,736	
Benzene	0	0		0	640	640	13,525	
Bromoform	0	0		0	1,800	1,800	38,039	
Carbon Tetrachloride	0	0		0	2,800	2,800	59,172	
Chlorobenzene	0	0		0	1,200	1,200	25,360	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	380,393	
Chloroform	0	0		0	1,900	1,900	40,153	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	316,994	
1,1-Dichloroethylene	0	0		0	7,500	7,500	158,497	
1,2-Dichloropropane	0	0		0	11,000	11,000	232,463	
1,3-Dichloropropylene	0	0		0	310	310	6,551	
Ethylbenzene	0	0		0	2,900	2,900	61,286	
Methyl Bromide	0	0		0	550	550	11,623	
Methyl Chloride	0	0		0	28,000	28,000	591,723	
Methylene Chloride	0	0		0	12,000	12,000	253,596	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	21,133	
Tetrachloroethylene	0	0		0	700	700	14,793	
Toluene	0	0		0	1,700	1,700	35,926	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	143,704	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	63,399	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	71,852	
Trichloroethylene	0	0		0	2,300	2,300	48,606	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	11,834	
2,4-Dichlorophenol	0	0		0	1,700	1,700	35,926	
2,4-Dimethylphenol	0	0		0	660	660	13,948	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	1,691	
2,4-Dinitrophenol	0	0		0	660	660	13,948	
2-Nitrophenol	0	0		0	8,000	8,000	169,064	
4-Nitrophenol	0	0		0	2,300	2,300	48,606	
p-Chloro-m-Cresol	0	0		0	160	160	3,381	
Pentachlorophenol	0	0		0	10.306	10.3	218	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	9,721	
Acenaphthene	0	0		0	83	83.0	1,754	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	6,340	
Benzo(a)Anthracene	0	0		0	0.5	0.5	10.6	
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	633,989	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	95,098	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	5,706	

Butyl Benzyl Phthalate	0	0		0	140	140	2,959	
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	17,329	
1,3-Dichlorobenzene	0	0		0	350	350	7,397	
1,4-Dichlorobenzene	0	0		0	730	730	15,427	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	84,532	
Dimethyl Phthalate	0	0		0	2,500	2,500	52,832	
Di-n-Butyl Phthalate	0	0		0	110	110	2,325	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	33,813	
2,6-Dinitrotoluene	0	0		0	990	990	20,922	
1,2-Diphenylhydrazine	0	0		0	15	15.0	317	
Fluoranthene	0	0		0	200	200	4,227	
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	211	
Hexachlorocyclopentadiene	0	0		0	5	5.0	106	
Hexachloroethane	0	0		0	60	60.0	1,268	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	211,330	
Naphthalene	0	0		0	140	140	2,959	
Nitrobenzene	0	0		0	4,000	4,000	84,532	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	359,260	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	6,340	
Phenanthrene	0	0		0	5	5.0	106	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	2,747	
Aldrin	0	0		0	3	3.0	63.4	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	0.95	0.95	20.1	
Chlordane	0	0		0	2.4	2.4	50.7	
4,4-DDT	0	0		0	1.1	1.1	23.2	
4,4-DDE	0	0		0	1.1	1.1	23.2	
4,4-DDD	0	0		0	1.1	1.1	23.2	
Dieldrin	0	0		0	0.24	0.24	5.07	
alpha-Endosulfan	0	0		0	0.22	0.22	4.65	
beta-Endosulfan	0	0		0	0.22	0.22	4.65	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.086	0.086	1.82	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.52	0.52	11.0	
Heptachlor Epoxide	0	0		0	0.5	0.5	10.6	
PCBs, Total	0	0		0	N/A	N/A	N/A	
Toxaphene	0	0		0	0.73	0.73	15.4	

2,3,7,8-TCDD	0	0		0	N/A	N/A	N/A	
Total Strontium	0	0		0	N/A	N/A	N/A	
Osmotic Pressure	0	0		0	50	50.0	1,057	

☑ ***CFC*** CCT (min): 720 PMF: 0.752 Analysis Hardness (mg/l): 147.02 Analysis pH: 7.17

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	
Fluoride (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	30,907	
Total Arsenic	0	0		0	150	150	21,073	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	575,989	
Total Boron	0	0		0	1,600	1,600	224,776	
Total Cadmium	0	0		0	0.321	0.36	50.6	Chem Translator of 0.893 applied
Total Chromium (III)	0	0		0	101.620	118	16,600	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	1,460	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	2,669	
Total Copper	0	0		0	12.449	13.0	1,822	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	279,888	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	3.819	5.2	730	Chem Translator of 0.735 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	127	Chem Translator of 0.85 applied
Total Nickel	0	0		0	72.053	72.3	10,153	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	701	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	1,826	
Total Zinc	0	0		0	163.759	166	23,332	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	421	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	130	130	18,263	
Benzene	0	0		0	130	130	18,263	
Bromoform	0	0		0	370	370	51,980	
Carbon Tetrachloride	0	0		0	560	560	78,672	
Chlorobenzene	0	0		0	240	240	33,716	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	491,698	
Chloroform	0	0		0	390	390	54,789	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	435,504	
1,1-Dichloroethylene	0	0		0	1,500	1,500	210,728	

1,2-Dichloropropane	0	0		0	2,200	2,200	309,068	
1,3-Dichloropropylene	0	0		0	61	61.0	8,570	
Ethylbenzene	0	0		0	580	580	81,481	
Methyl Bromide	0	0		0	110	110	15,453	
Methyl Chloride	0	0		0	5,500	5,500	772,669	
Methylene Chloride	0	0		0	2,400	2,400	337,165	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	29,502	
Tetrachloroethylene	0	0		0	140	140	19,668	
Toluene	0	0		0	330	330	46,360	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	196,679	
1,1,1-Trichloroethane	0	0		0	610	610	85,696	
1,1,2-Trichloroethane	0	0		0	680	680	95,530	
Trichloroethylene	0	0		0	450	450	63,218	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	15,453	
2,4-Dichlorophenol	0	0		0	340	340	47,765	
2,4-Dimethylphenol	0	0		0	130	130	18,263	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	2,248	
2,4-Dinitrophenol	0	0		0	130	130	18,263	
2-Nitrophenol	0	0		0	1,600	1,600	224,776	
4-Nitrophenol	0	0		0	470	470	66,028	
p-Chloro-m-Cresol	0	0		0	500	500	70,243	
Pentachlorophenol	0	0		0	7.906	7.91	1,111	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	12,784	
Acenaphthene	0	0		0	17	17.0	2,388	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	8,289	
Benzo(a)Anthracene	0	0		0	0.1	0.1	14.0	
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	842,911	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	127,842	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	7,586	
Butyl Benzyl Phthalate	0	0		0	35	35.0	4,917	
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	22,478	
1,3-Dichlorobenzene	0	0		0	69	69.0	9,693	
1,4-Dichlorobenzene	0	0		0	150	150	21,073	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	112,388	

Dimethyl Phthalate	0	0		0	500	500	70,243	
Di-n-Butyl Phthalate	0	0		0	21	21.0	2,950	
2,4-Dinitrotoluene	0	0		0	320	320	44,955	
2,6-Dinitrotoluene	0	0		0	200	200	28,097	
1,2-Diphenylhydrazine	0	0		0	3	3.0	421	
Fluoranthene	0	0		0	40	40.0	5,619	
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	281	
Hexachlorocyclopentadiene	0	0		0	1	1.0	140	
Hexachloroethane	0	0		0	12	12.0	1,686	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	295,019	
Naphthalene	0	0		0	43	43.0	6,041	
Nitrobenzene	0	0		0	810	810	113,793	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	477,650	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	8,289	
Phenanthrene	0	0		0	1	1.0	140	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	3,653	
Aldrin	0	0		0	0.1	0.1	14.0	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0043	0.004	0.6	
4,4-DDT	0	0		0	0.001	0.001	0.14	
4,4-DDE	0	0		0	0.001	0.001	0.14	
4,4-DDD	0	0		0	0.001	0.001	0.14	
Dieldrin	0	0		0	0.056	0.056	7.87	
alpha-Endosulfan	0	0		0	0.056	0.056	7.87	
beta-Endosulfan	0	0		0	0.056	0.056	7.87	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	5.06	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.53	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.53	
PCBs, Total	0	0		0	0.014	0.014	1.97	
Toxaphene	0	0		0	0.0002	0.0002	0.028	
2,3,7,8-TCDD	0	0		0	N/A	N/A	N/A	
Total Strontium	0	0		0	N/A	N/A	N/A	
Osmotic Pressure	0	0		0	N/A	N/A	N/A	

☑ ***THH*** CCT (min): 720 THH PMF: 0.752 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 0.8324

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	78,309,961	WQC applied at RMI 0.5 with a design stream flow of 124.937 cfs
Chloride (PWS)	0	0		0	250,000	250,000	39,154,981	WQC applied at RMI 0.5 with a design stream flow of 124.937 cfs
Sulfate (PWS)	0	0		0	250,000	250,000	39,154,981	WQC applied at RMI 0.5 with a design stream flow of 124.937 cfs
Fluoride (PWS)	0	0		0	2,000	2,000	313,240	WQC applied at RMI 0.5 with a design stream flow of 124.937 cfs
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	787	
Total Arsenic	0	0		0	10	10.0	1,405	
Total Barium	0	0		0	2,400	2,400	337,165	
Total Boron	0	0		0	3,100	3,100	435,504	
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	42,146	
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	140,485	
Total Mercury	0	0		0	0.050	0.05	7.02	
Total Nickel	0	0		0	610	610	85,696	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	783	WQC applied at RMI 0.5 with a design stream flow of 124.937 cfs
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	33.7	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	421	
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	14,049	
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	801	
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	4,636	
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	9,553	
Methyl Bromide	0	0		0	100	100.0	14,049	
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	8,008	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	14,049	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	1,404,852	
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	4,215	
2,4-Dichlorophenol	0	0		0	10	10.0	1,405	
2,4-Dimethylphenol	0	0		0	100	100.0	14,049	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	281	
2,4-Dinitrophenol	0	0		0	10	10.0	1,405	
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	561,941	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	9,834	
Anthracene	0	0		0	300	300	42,146	
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	28,097	
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	14.0	
2-Chloronaphthalene	0	0		0	800	800	112,388	
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	140,485	
1,3-Dichlorobenzene	0	0		0	7	7.0	983	
1,4-Dichlorobenzene	0	0		0	300	300	42,146	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	84,291	
Dimethyl Phthalate	0	0		0	2,000	2,000	280,970	
Di-n-Butyl Phthalate	0	0		0	20	20.0	2,810	
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	2,810	
Fluorene	0	0		0	50	50.0	7,024	
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	562	
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	4,776	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	1,405	
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	2,810	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	9.83	
Aldrin	0	0		0	N/A	N/A	N/A	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	4.2	4.2	590	
Chlordane	0	0		0	N/A	N/A	N/A	
4,4-DDT	0	0		0	N/A	N/A	N/A	
4,4-DDE	0	0		0	N/A	N/A	N/A	
4,4-DDD	0	0		0	N/A	N/A	N/A	
Dieldrin	0	0		0	N/A	N/A	N/A	
alpha-Endosulfan	0	0		0	20	20.0	2,810	
beta-Endosulfan	0	0		0	20	20.0	2,810	
Endosulfan Sulfate	0	0		0	20	20.0	2,810	
Endrin	0	0		0	0.03	0.03	4.21	
Endrin Aldehyde	0	0		0	1	1.0	140	
Heptachlor	0	0		0	N/A	N/A	N/A	
Heptachlor Epoxide	0	0		0	N/A	N/A	N/A	
PCBs, Total	0	0		0	N/A	N/A	N/A	
Toxaphene	0	0		0	N/A	N/A	N/A	
2,3,7,8-TCDD	0	0		0	N/A	N/A	N/A	
Total Strontium	0	0		0	4,000	4,000	561,941	
Osmotic Pressure	0	0		0	N/A	N/A	N/A	

☑ ***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	

Fluoride (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	52.7	
Acrylonitrile	0	0		0	0.06	0.06	45.1	
Benzene	0	0		0	0.58	0.58	436	
Bromoform	0	0		0	7	7.0	5,265	
Carbon Tetrachloride	0	0		0	0.4	0.4	301	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	602	
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	715	
1,2-Dichloroethane	0	0		0	9.9	9.9	7,447	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	677	
1,3-Dichloropropylene	0	0		0	0.27	0.27	203	
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	15,044	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	150	
Tetrachloroethylene	0	0		0	10	10.0	7,522	
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	414	
Trichloroethylene	0	0		0	0.6	0.6	451	
Vinyl Chloride	0	0		0	0.02	0.02	15.0	
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	22.6	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	1,128	
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	0.075	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.75	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.075	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.75	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	7.52	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	22.6	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	241	
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	90.3	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.075	
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	37.6	
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	37.6	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	37.6	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	22.6	
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	0.06	
Hexachlorobutadiene	0	0		0	0.01	0.01	7.52	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	

Hexachloroethane	0	0		0	0.1	0.1	75.2	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.75	
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	0.53	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	3.76	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	2,482	
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	
Aldrin	0	0		0	0.0000008	8.00E-07	0.0006	
alpha-BHC	0	0		0	0.0004	0.0004	0.3	
beta-BHC	0	0		0	0.008	0.008	6.02	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0003	0.0003	0.23	
4,4-DDT	0	0		0	0.00003	0.00003	0.023	
4,4-DDE	0	0		0	0.00002	0.00002	0.015	
4,4-DDD	0	0		0	0.0001	0.0001	0.075	
Dieldrin	0	0		0	0.000001	0.000001	0.0008	
alpha-Endosulfan	0	0		0	N/A	N/A	N/A	
beta-Endosulfan	0	0		0	N/A	N/A	N/A	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	N/A	N/A	N/A	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.000006	0.000006	0.005	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.023	
PCBs, Total	0	0		0	0.000064	0.00006	0.048	
Toxaphene	0	0		0	0.0007	0.0007	0.53	
2,3,7,8-TCDD	0	0		0	5E-09	5.00E-09	0.000004	
Total Strontium	0	0		0	N/A	N/A	N/A	
Osmotic Pressure	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	Report	Report	Report	Report	Report	mg/L	10.2	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Arsenic	5.06	7.9	1.4	2.19	3.51	mg/L	1.4	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Cadmium	Report	Report	Report	Report	Report	mg/L	0.041	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Cobalt	4.64	7.23	1.29	2.01	3.22	mg/L	1.29	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Copper	0.95	1.48	0.26	0.41	0.66	mg/L	0.26	AFC	Discharge Conc ≥ 50% WQBEL (RP)

Total Lead	Report	Report	Report	Report	Report	mg/L	0.73	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Manganese	Report	Report	Report	Report	Report	µg/L	140,485	THH	Discharge Conc > 10% WQBEL (no RP)
Total Mercury	0.025	0.039	7.02	11.0	17.6	µg/L	7.02	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	7.85	12.2	2.18	3.4	5.44	mg/L	2.18	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Bis(2-Ethylhexyl)Phthalate	0.87	1.35	0.24	0.38	0.6	mg/L	0.24	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Butyl Benzyl Phthalate	0.051	0.079	0.014	0.022	0.035	mg/L	0.014	THH	Discharge Conc ≥ 50% WQBEL (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)	78,310	mg/L	Discharge Conc ≤ 10% WQBEL
Chloride (PWS)	39,155	mg/L	Discharge Conc ≤ 10% WQBEL
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	39,155	mg/L	Discharge Conc ≤ 10% WQBEL
Fluoride (PWS)	313	mg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Barium	284	mg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	109,718	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	16.6	mg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	221	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	42,146	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	280	mg/L	Discharge Conc ≤ 10% WQBEL
Total Nickel	8,523	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)	783	µg/L	Discharge Conc < TQL
Total Selenium	701	µg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	93.1	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	33.7	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	40.6	µg/L	Discharge Conc ≤ 25% WQBEL
Acrylamide	52.7	µg/L	Discharge Conc < TQL
Acrylonitrile	45.1	µg/L	Discharge Conc < TQL
Benzene	436	µg/L	Discharge Conc ≤ 25% WQBEL
Bromoform	5,265	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	301	µg/L	Discharge Conc < TQL
Chlorobenzene	14,049	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	602	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	243,817	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroform	801	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	715	µg/L	Discharge Conc ≤ 25% WQBEL

1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	7,447	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethylene	4,636	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-Dichloropropane	677	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichloropropylene	203	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	9,553	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	7,450	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	379,270	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	15,044	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	150	µg/L	Discharge Conc < TQL
Tetrachloroethylene	7,522	µg/L	Discharge Conc ≤ 25% WQBEL
Toluene	8,008	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	14,049	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	40,636	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2-Trichloroethane	414	µg/L	Discharge Conc ≤ 25% WQBEL
Trichloroethylene	451	µg/L	Discharge Conc ≤ 25% WQBEL
Vinyl Chloride	15.0	µg/L	Discharge Conc < TQL
2-Chlorophenol	4,215	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dichlorophenol	1,405	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	8,940	µg/L	Discharge Conc ≤ 25% WQBEL
4,6-Dinitro-o-Cresol	281	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	1,405	µg/L	Discharge Conc < TQL
2-Nitrophenol	108,363	µg/L	Discharge Conc ≤ 25% WQBEL
4-Nitrophenol	31,154	µg/L	Discharge Conc ≤ 25% WQBEL
p-Chloro-m-Cresol	2,167	µg/L	Discharge Conc ≤ 25% WQBEL
Pentachlorophenol	22.6	µg/L	Discharge Conc < TQL
Phenol	561,941	µg/L	Discharge Conc ≤ 25% WQBEL
2,4,6-Trichlorophenol	1,128	µg/L	Discharge Conc < TQL
Acenaphthene	1,124	µg/L	Discharge Conc ≤ 25% WQBEL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	42,146	µg/L	Discharge Conc ≤ 25% WQBEL
Benzidine	0.075	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.75	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.075	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.75	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	7.52	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	22.6	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	28,097	µg/L	Discharge Conc ≤ 25% WQBEL
4-Bromophenyl Phenyl Ether	3,657	µg/L	Discharge Conc ≤ 25% WQBEL
2-Chloronaphthalene	112,388	µg/L	Discharge Conc ≤ 25% WQBEL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	90.3	µg/L	Discharge Conc < TQL

Dibenzo(a,h)Anthrancene	0.075	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	11,107	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	983	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	9,888	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	37.6	µg/L	Discharge Conc < TQL
Diethyl Phthalate	54,181	µg/L	Discharge Conc ≤ 25% WQBEL
Dimethyl Phthalate	33,863	µg/L	Discharge Conc ≤ 25% WQBEL
Di-n-Butyl Phthalate	1,490	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	37.6	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	37.6	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	22.6	µg/L	Discharge Conc < TQL
Fluoranthene	2.71	mg/L	Discharge Conc ≤ 25% WQBEL
Fluorene	7,024	µg/L	Discharge Conc ≤ 25% WQBEL
Hexachlorobenzene	0.06	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	7.52	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	67.7	µg/L	Discharge Conc < TQL
Hexachloroethane	75.2	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.75	µg/L	Discharge Conc < TQL
Isophorone	4,776	µg/L	Discharge Conc ≤ 25% WQBEL
Naphthalene	1,896	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	1,405	µg/L	Discharge Conc ≤ 25% WQBEL
n-Nitrosodimethylamine	0.53	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	3.76	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	2,482	µg/L	Discharge Conc < TQL
Phenanthrene	67.7	µg/L	Discharge Conc < TQL
Pyrene	2,810	µg/L	Discharge Conc ≤ 25% WQBEL
1,2,4-Trichlorobenzene	9.83	µg/L	Discharge Conc < TQL
Aldrin	0.0006	µg/L	Discharge Conc < TQL
alpha-BHC	0.3	µg/L	Discharge Conc < TQL
beta-BHC	6.02	µg/L	Discharge Conc < TQL
gamma-BHC	12.9	µg/L	Discharge Conc ≤ 25% WQBEL
delta BHC	N/A	N/A	No WQS
Chlordane	0.23	µg/L	Discharge Conc < TQL
4,4-DDT	0.023	µg/L	Discharge Conc < TQL
4,4-DDE	0.015	µg/L	Discharge Conc < TQL
4,4-DDD	0.075	µg/L	Discharge Conc < TQL
Dieldrin	0.0008	µg/L	Discharge Conc < TQL
alpha-Endosulfan	2.98	µg/L	Discharge Conc ≤ 25% WQBEL
beta-Endosulfan	2.98	µg/L	Discharge Conc ≤ 25% WQBEL
Endosulfan Sulfate	2,810	µg/L	Discharge Conc ≤ 25% WQBEL
Endrin	1.16	µg/L	Discharge Conc < TQL
Endrin Aldehyde	140	µg/L	Discharge Conc ≤ 25% WQBEL
Heptachlor	0.005	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.023	µg/L	Discharge Conc < TQL

PCB-1016	N/A	N/A	No WQS
PCB-1221	N/A	N/A	No WQS
PCB-1232	N/A	N/A	No WQS
PCB-1242	N/A	N/A	No WQS
PCB-1248	N/A	N/A	No WQS
PCB-1254	N/A	N/A	No WQS
PCB-1260	N/A	N/A	No WQS
PCBs, Total	0.048	µg/L	Discharge Conc < TQL
Toxaphene	0.028	µg/L	Discharge Conc < TQL
2,3,7,8-TCDD	0.004	ng/L	Discharge Conc < TQL
Gross Alpha	N/A	N/A	No WQS
Total Beta	N/A	N/A	No WQS
Radium 226/228	N/A	N/A	No WQS
Total Strontium	562	mg/L	Discharge Conc ≤ 10% WQBEL
Total Uranium	N/A	N/A	No WQS
Osmotic Pressure	677	mOs/kg	Discharge Conc ≤ 10% WQBEL