Pennsylvania Department of Environmental Protection

Northwest Regional Office
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application Type	**Renewal**	Application No.	**PA0029122**
Facility Type	**Municipal**	APS ID	**1118427**
Major / Minor	**Major**	Authorization ID	**1493361**

Applicant and Facility Information

Applicant Name	**Saxonburg Area Authority**	Facility Name	**Saxonburg Area Authority STP**
Applicant Address	420 W Main Street	Facility Address	161 Renfrew Road
	Saxonburg, PA 16056-9517		Renfrew, PA 16053-9729
Applicant Contact	Paul Cornetti	Facility Contact	Paul Cornetti
Applicant Phone	(724) 352-1400	Facility Phone	(724) 352-1400
Client ID	34547	Site ID	657024
Ch 94 Load Status	Not Overloaded	Municipality	Saxonburg Borough
Connection Status	No Limitations	County	Butler
Date Application Received	July 15, 2024	EPA Waived?	No
Date Application Accepted	July 15, 2024	If No, Reason	Major Facility
Purpose of Application	NPDES Permit Renewal.		

Summary of Review

Saxonburg Area Authority (Saxonburg) has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on January 23, 2020 and became effective on February 1, 2020. The permit expired on January 31, 2025 but the terms and conditions of the permit have been extended since that time.

Based on the review, it is recommended that the permit be drafted.

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		*Jinsu Kim* Jinsu Kim / Environmental Engineering Specialist	September 11, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	September 23, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	2.052
Latitude	40º 48' 24.0"	Longitude	-79º 57' 24.0"
Quad Name		Quad Code	
Wastewater Description:	Sewage Effluent		
Receiving Waters	Connoquenessing Creek (WWF)	Stream Code	34025
NHD Com ID	126217651	RMI	39.26
Drainage Area	136	Yield (cfs/mi^2)	0.06
Q_{7-10} Flow (cfs)	8.65	Q_{7-10} Basis	See below
Elevation (ft)	982	Slope (ft/ft)	0.001167
Watershed No.	20-C	Chapter 93 Class.	WWF
Existing Use	none	Existing Use Qualifier	none
Exceptions to Use	none	Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	ORGANIC ENRICHMENT		
Source(s) of Impairment	AGRICULTURE		
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	Beaver Falls Municipal Authority - Eastvale Plant		
PWS Waters	Beaver River	Flow at Intake (cfs)	561
PWS RMI	3.5	Distance from Outfall (mi)	46

Drainage Area
The discharge is to Connoquenessing Creek at RM 39.26. A drainage area upstream of the discharge point is estimated to be 136 sq.mi. according to USGS StreamStats available at https://streamstats.usgs.gov/ss/.

Streamflow
USGS StreamStats produced a Q7-10 flow of 3.56 cfs at the point of discharge. However, based on the fact sheet developed for the last permit renewal, a minimum release from PA American Water at the Boydstown-Oneida and Thorn Run Reservoirs was factored in calculating the Q7-10 flow. The calculation is as follows:

Drainage Area where the minimum flow release is monitored = 27.73 mi^2

Drainage Area at Saxonburg's discharge point = 136 mi^2

Stream yield rate used to estimate the Q_{7-10} flow from unregulated drainage areas = 0.047 cfsm - this is the last 20 years of recorded data rather than using the period of record for the gage. The more recent gage data is a better representation of the present flow conditions.

(136 - 27.73) mi^2 x 0.047 cfsm = 5.09 cfs

(3.56 + 5.09) cfs = 8.65 cfs

Connoquenessing Creek
DEP's latest integrated water quality report issued in 2024 shows that Connoquenessing Creek is impaired for organic enrichment as a result of agricultural activities. A Total Maximum Daily Load (TMDL) has not been developed to address this impairment; therefore no TMDL has been taken into consideration. However, all permit requirements will be developed to ensure that the discharge will not additionally contribute to this impairment.

Public Water Intake
The fact sheet developed for the last permit renewal shows that the nearest downstream public water supply intake is Beaver Falls Municipal Authority located on Beaver River approximately 46 miles from the discharge point. Given the distance, the discharge is not expected to affect the water supply intake.

Treatment Facility Summary

Treatment Facility Name: Saxonburg Area Authority STP

WQM Permit No.	Issuance Date
1005401	07/5/2005

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Oxidation Ditch	Ultraviolet	2.052

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
2.052	4094	Not Overloaded	Dewatering	Landfill

Saxonburg operates a municipal wastewater treatment facility serving Saxonburg Borough (21.05%), Jefferson Township (14.77%), Clinton Township (8.09%), Penn Township (24.9%), Middlesex Township (27.68%) and Richland Township (3.51%). All sewers are 100% separated. The facility is utilizing an oxidation ditch activated sludge treatment process consisting of influent pump station, screening, oxidation ditch, clarifiers (2), UV disinfection chambers (2), and cascade to the stream discharge. Sludge is handled by aerated holding tanks (2) and centrifuge. Any solids generated from this facility will be sent to Seneca Landfill for final treatment/disposal.

Polymer is added to centrifuge and aluminum sulfate is added for phosphorous control.

Compliance History

Summary of DMRs:	A summary of past 12-month DMR is presented on the next page.
Summary of Inspections:	08/11/2025: DEP conducted a routine inspection. No significant violations were noted at the time of inspection. 09/30/2024: DEP conducted a routine inspection. No significant violations were noted at the time of inspection.
Other Comments:	Since the last permit reissuance, the facility had a number of permit violations. These violations are shown on page 6 of this fact sheet. DEP's database shows that there is no open violation associated with this facility.

Effluent Data

DMR Data for Outfall 001 (from August 1, 2024 to July 31, 2025)

Parameter	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24
Flow (MGD) Average Monthly	0.873	0.979	1.031	1.026	0.871	1.274	0.750	0.798	0.653	0.565	0.591	0.822
Flow (MGD) Weekly Average	1.059	1.209	1.676	1.430	1.039	1.764	0.989	0.907	0.814	0.614	0.642	1.242
pH (S.U.) Instantaneous Minimum	6.9	6.6	6.7	6.6	6.7	6.7	6.7	6.7	6.8	6.8	7.0	6.8
pH (S.U.) Instantaneous Maximum	7.5	7.3	6.9	6.8	6.9	6.9	6.8	6.9	6.9	7.1	7.2	7.3
DO (mg/L) Instantaneous Minimum	4.7	4.8	5.0	5.1	5.2	5.1	5.5	5.1	5.2	5.1	5.3	4.7
CBOD5 (lbs/day) Average Monthly	17.2	21.8	31.8	25.7	22.6	37.5	31.1	18.4	11.9	12.5	15.6	33.9
CBOD5 (lbs/day) Weekly Average	27.1	33.4	62.5	30.0	35.0	52.3	42.3	21.1	15.3	18.3	16.5	85.0
CBOD5 (mg/L) Average Monthly	2.3	2.8	3.2	3.7	3.2	4.6	5.2	2.8	2.3	2.6	3.3	4.2
CBOD5 (mg/L) Weekly Average	3.0	3.2	3.4	4.7	5.2	7.8	7.9	3.2	2.8	4.0	3.4	6.1
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	1759	1753	1688	1515	1372	1350	1541	1527	1260	1204	1297	970
BOD5 (mg/L) Raw Sewage Influent Average Monthly	235	231	204	219	197	162	254	236	243	257	272	174
TSS (lbs/day) Average Monthly	19.0	32.6	52.1	40.0	29.8	43.6	38.0	31.0	14.0	11.3	10.6	24.5
TSS (lbs/day) Raw Sewage Influent Average Monthly	2312	1850	1756	1562	1307	1239	1721	1681	1352	1524	1608	1153
TSS (lbs/day) Weekly Average	31.7	38.9	98.7	48.7	40.0	48.5	53.2	4.7	24.0	12.8	12.0	69.9
TSS (mg/L) Average Monthly	2.5	4.4	5.3	5.7	4.2	5.3	6.4	4.7	2.6	2.4	2.2	2.7
TSS (mg/L) Raw Sewage Influent Average Monthly	308	246	219	232	186	151	287	260	262	324	337	212

Parameter	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24	AUG-24
TSS (mg/L) Weekly Average	3.4	5.1	5.6	7.1	5.3	7.1	9.9	5.6	3.3	2.7	2.6	5.1
Fecal Coliform (No./100 ml) Average Monthly	3.3	1.3	8.2	2.6	1.4	1.8	1.6	3.7	1.2	1.5	2.6	> 7.2
Fecal Coliform (No./100 ml) Instantaneous Maximum	31.8	3.0	579.4	38.8	3.1	4.1	6.3	29.2	2.0	7.4	248.1	> 2419.0
UV Intensity (µw/cm²) Average Monthly	6642	7067	7171	7745	7268	11004	10935	6545	5620	5926	6300	6147
Total Nitrogen (mg/L) Average Monthly	11	14	17	14	9	13	10	15	15	13	11	10
Ammonia (lbs/day) Average Monthly	2.4	2.0	6.8	4.0	1.5	12.8	1.0	1.6	0.3	0.3	0.3	6.1
Ammonia (mg/L) Average Monthly	0.2	0.2	0.4	0.6	0.2	1.4	0.1	0.2	0.1	0.1	0.1	0.5
Total Phosphorus (lbs/day) Average Monthly	8.9	12.1	5.8	7.0	6.6	7.6	10.1	6.5	6.4	5.9	4.3	6.9
Total Phosphorus (mg/L) Average Monthly	1.1	1.6	0.7	1.1	1.0	0.9	1.7	0.9	1.2	1.3	0.9	1.1

Compliance History

Date	Description	Parameter	Results	Limits	Units	SBC
6/17/2020	Violation of permit condition	Total Phosphorus	2.05	2	mg/L	Average Monthly
1/22/2021	Sample type not in accordance with permit					
2/19/2021	Sample type not in accordance with permit					
2/21/2023	Violation of permit condition	Total Suspended Solids	1168.9	512.9	lbs/day	Average Monthly
2/21/2023	Violation of permit condition	Total Suspended Solids	311.5	45	mg/L	Weekly Average
2/21/2023	Violation of permit condition	Total Suspended Solids	5059.6	769.3	lbs/day	Weekly Average
2/21/2023	Violation of permit condition	Total Suspended Solids	73.7	30	mg/L	Average Monthly
7/26/2023	Violation of permit condition	Total Phosphorus	2.6	2	mg/L	Average Monthly
8/24/2023	Violation of permit condition	Total Phosphorus	2.1	2	mg/L	Average Monthly
12/21/2023	Violation of permit condition	Total Phosphorus	2.1	2	mg/L	Average Monthly
12/21/2023	Violation of permit condition	Total Suspended Solids	222.1	45	mg/L	Weekly Average
12/21/2023	Violation of permit condition	Total Suspended Solids	2273.8	769.3	lbs/day	Weekly Average
12/21/2023	Violation of permit condition	Total Suspended Solids	540.7	512.9	lbs/day	Average Monthly
12/21/2023	Violation of permit condition	Total Suspended Solids	55.9	30	mg/L	Average Monthly
2/22/2024	Violation of permit condition	Total Suspended Solids	1226.6	769.3	lbs/day	Weekly Average
2/22/2024	Violation of permit condition	Total Suspended Solids	36	30	mg/L	Average Monthly
2/22/2024	Violation of permit condition	Total Suspended Solids	88	45	mg/L	Weekly Average
5/22/2024	Violation of permit condition	Carbonaceous Biochemical Oxygen Demand (CBOD5)	> 1111.5	683.8	lbs/day	Weekly Average
5/22/2024	Violation of permit condition	Carbonaceous Biochemical Oxygen Demand (CBOD5)	> 21.3	40	mg/L	Weekly Average
5/22/2024	Violation of permit condition	Carbonaceous Biochemical Oxygen Demand (CBOD5)	> 255.9	427.4	lbs/day	Average Monthly
5/22/2024	Violation of permit condition	Carbonaceous Biochemical Oxygen Demand (CBOD5)	> 8.3	25	mg/L	Average Monthly
5/22/2024	Violation of permit condition	Fecal Coliform	> 2419.6	10000	No./100 ml	Instantaneous Maximum
5/22/2024	Violation of permit condition	Fecal Coliform	> 6.6	2000	No./100 ml	Average Monthly
5/22/2024	Violation of permit condition	Total Phosphorus	60.8	34.1	lbs/day	Average Monthly
5/22/2024	Violation of permit condition	Total Suspended Solids	12676.6	769.3	lbs/day	Weekly Average
5/22/2024	Violation of permit condition	Total Suspended Solids	253.9	45	mg/L	Weekly Average
5/22/2024	Violation of permit condition	Total Suspended Solids	2590.3	512.9	lbs/day	Average Monthly
5/22/2024	Violation of permit condition	Total Suspended Solids	57.3	30	mg/L	Average Monthly
9/17/2024	Violation of permit condition	Fecal Coliform	> 2419.0	1000	No./100 ml	Instantaneous Maximum
9/17/2024	Violation of permit condition	Fecal Coliform	> 7.2	200	No./100 ml	Average Monthly

Existing Effluent Limits and Monitoring Requirements

A table below summarizes effluent limits and monitoring requirements specified in the existing permit.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	4/week	Grab
Dissolved Oxygen	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	4/week	Grab
Ultraviolet light intensity (µw/cm²)	XXX	XXX	XXX	Report	XXX	XXX	4/week	Measured
Carbonaceous Biochemical Oxygen Demand (CBOD5) Nov 1 - Apr 30	427.4	683.8	XXX	25.0	40.0	50	2/week	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) May 1 - Oct 31	256.4	427.4	XXX	15.0	25.0	30	2/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Suspended Solids	512.9	769.3	XXX	30.0	45.0	60	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200	XXX	1000	2/week	Grab
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	230.8	XXX	XXX	13.5	XXX	27	2/week	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	76.9	XXX	XXX	4.5	XXX	9	2/week	24-Hr Composite
Total Phosphorus	34.1	XXX	XXX	2.0	XXX	4	2/week	24-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 2.052
Latitude 40º 48' 24.00" **Longitude** -79º 57' 24.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: The facility utilizes UV disinfection; therefore, TRC effluent standard is not applicable.

Water Quality-Based Limitations

CBOD5, NH3-N and Dissolved Oxygen (DO)
WQM 7.0 version 1.0b is a water quality model designed to assist DEP to determine appropriate permit requirements for CBOD5, NH3-N and DO. DEP's technical guidance no. 391-2000-007 describes the technical methods contained in the model for conducting wasteload allocation analyses and for determining recommended limits for point source discharges. DEP recently updated this model (ver. 1.1) to include new ammonia criteria that has been approved by US EPA as part of the 2017 Triennial Review. The model output indicates that all existing effluent limits are still appropriate and protective of water quality.

Toxics
Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP's Toxics Management Spreadsheet (TMD) to develop appropriate permit requirements for toxic pollutants of concern. TMS output shows that a routine monitoring for Total Copper and Total Zinc is needed. It is recommended that semi-monthly monitoring requirements will be included for Total Copper and Total Zinc. This approach is consistent with DEP's SOP no. DEP's SOP no. BPNPSM-PMT-033.

Best Professional Judgment (BPJ) Limitations

Total Phosphorus
The existing effluent limits will remain unchanged in the permit based on the Stream Enrichment Risk Analysis (SERA) study on the Connoquenessing Creek. Because the receiving stream is impaired for nutrients, effluent limit of 2.0 mg/L is appropriate as per 25 Pa Code 96.5. This approach is consistent with DEP's SOP no. BPNPSM-PMT-033.

Dissolved Oxygen
A minimum of 4.0 mg/L for DO is an existing effluent limit and will remain unchanged in the permit to ensure adequate operation and maintenance. This approach is recommended by DEP's SOP no. BPNPSM-PMT-033.

Additional Considerations

Flow Monitoring
The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii).

Per-and Polyfluoroalkyl (PFAS) Monitoring
DEP has begun to implement PFAS monitoring requirements to major sewage facilities and industrial waste facilities to obtain ample datasets from these facilities. DEP's SOP no. BCW-PMT-033 recommends quarterly monitoring requirement to be included in the permit if sample results provided in the application reveals a detection of PFAS-related compounds including PFOA, PFOS, HFPO-DA and PFBS. The application shows the following effluent sample results for PFAS-related compounds:

ANALYSIS RESULTS TABLE
POLLUTANT GROUP 1 (PAGE 2 of 2)

Please read instructions carefully before completing this form

APPLICANT NAME	Saxonburg Area Authority

☒ **Outfall Number: 001** (Show location of sampling point on Process Flow Diagram)
☐ Treatment Facility Influent Sampling Results (Show location of sampling point on Process Flow Diagram)
☐ Background Sampling Results (Specify Location: _____)
☐ New Discharge (Basis for Information: _____)

POLLUTANT GROUP 1 PARAMETERS	CONCENTRATION / MASS PRESENT						No. Analyses	No. "Non-Detect" Results	QL Used	Method Used
	Min/Max Daily Value		Max Avg Monthly Value		Long-Term Avg Value					
	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)	Conc	Mass (lbs/day)				
Perfluorooctanoic acid (PFOA) (µg/L)	0.00607	0.0536	0.0052	0.0437	0.0052	0.0437	3	0	0.00198	EPA 1633
Perfluorooctanesulfonic acid (PFOS) (µg/L)	0.0206	0.196	0.0187	0.159	0.0187	0.159	3	0	0.00184	EPA 1633
Perfluorobutanesulfonic acid (PFBS) (µg/L)	0.00501	0.0442	0.0042	0.0351	0.0042	0.0351	3	0	0.00175	EPA 1633
Hexafluoropropylene oxide dimer acid (HFPO-DA) (µg/L)	<0.00198	<0.0181	<0.0019	<0.0159	<0.0019	<0.0159	3	3	0.00198	EPA 1633

Based on this, quarterly sampling requirement will be included in the permit with the following footnote:

The permittee may discontinue monitoring for PFOA, PFOS, HFPO-DA, and PFBS if the results in 4 consecutive monitoring periods indicate non-detect results 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 must enter a No Discharge Indicator (NODI) Code of "GG" on DMRs.

Influent BOD & TSS Monitoring
As a result of negotiation with EPA, the existing influent monitoring reporting requirement for TSS and BOD5 will be maintained in the draft permit. This requirement has been consistently assigned to all municipal wastewater treatment facilities.

E. Coli Monitoring Requirement
DEP's SOP no. BCW-PMT-033 recommends a routine monitoring for E. Coli in all new and reissued sewage permits. As a result, a monthly monitoring requirement for E. Coli will be included in the permit given the facility's design flow is greater than 1.0 MGD.

Ultraviolet Output Monitoring
DEP's SOP no. BPNPSM-PMT-033 recommends a routine monitoring of UV output when the UV system is used for disinfection in lieu of chlorine. Therefore, the existing UV output intensity monitoring requirement will continue to be included in the permit.

Total Dissolved Solids (TDS)
TDS and its associated solids including Bromide, Chloride, and Sulfate have become statewide pollutants of concern. The requirement to monitor these pollutants must be considered under the criteria specified in 25 Pa. Code § 95.10 and the following January 23, 2014 DEP Central Office Directive:

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

-Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for TDS, sulfate, chloride, and bromide. Discharges of 0.1 MGD or less should monitor and report for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.

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

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

The facility reported the maximum effluent TDS concentration of 554 mg/L, Bromide of 0.14 mg/L and 1,4-dixane of <5.0 µg/L. Based on this, no monitoring is recommended for these parameters

Monitoring Frequency and Sample Type
The monitoring frequency for pH, DO and UV output has changed from 4/week to 1/day. During the last permit renewal, it was set to 4/week per the draft permit comment with the understanding that the frequency will be set to 1/day in the next permit renewal. As a result, pH, DO and UV output monitoring frequency will be changed from 4/week to 1/day. This daily monitoring frequency is consistent with DEP's technical guidance no. 362-0400-001.

Mass Loading Limitations
All effluent mass loading limits will be based on the formula: design flow x concentration limit x conversion factor of 8.34.

Antidegradation Requirements
All effluent limitations and monitoring requirements have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected.

Class A Wild Trout Fishery
No Class A Wild Trout Fisheries are also impacted by this discharge.

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:

The dilution series used for the tests was: 100%, 64%, 28%, 14%, and 7%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 28%.d

Summary of Four Most Recent Test Results

(NOTE – Enter results into one table, depending on which data analysis method was used).

NOEC/LC50 Data Analysis

Test Date	*Ceriodaphnia* Results (% Effluent)			*Pimephales* Results (% Effluent)			Pass? *
	NOEC Survival	NOEC Reproduction	LC50	NOEC Survival	NOEC Growth	LC50	
July 2024	100	100		100	100		Yes
June 2023	100	100		100	100		Yes
June 2022	100	64		100	100		Yes
June 2021	100	64		100	100		Yes

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

Is there reasonable potential for an excursion above water quality standards based on the results of these tests? (*NOTE – In general, reasonable potential is determined anytime there is at least one test failure in the previous four tests).*

☐ **YES** ☒ **NO**

Comments: DEP's WET Analysis Spreadsheet is attached to this fact sheet.

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

Acute Partial Mix Factor (PMFa): **0.454** Chronic Partial Mix Factor (PMFc): **1.0**

1. Determine IWC – Acute (IWCa):

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

[(2.052 MGD x 1.547) / ((8.65 cfs x 0.454) + (2.052 MGD x 1.547))] x 100 = **44.7%**

Is IWCa < 1%? ☐ **YES** ☒ **NO** **(YES - Acute Tests Required OR NO - Chronic Tests Required)**

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

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

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

[(2.052 MGD x 1.547) / ((8.65 cfs x 1.0) + (2.052 MGD x 1.547))] x 100 = **26.8% = 27%**

3. Determine Dilution Series

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

Dilution Series = 100%, 64%, 27%, 14%, and 7%.

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

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

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	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5 Nov 1 - Apr 30	427.4	683.8	XXX	25.0	40.0	50	2/week	24-Hr Composite
CBOD5 May 1 - Oct 31	256.4	427.4	XXX	15.0	25.0	30	2/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TSS	512.9	769.3	XXX	30.0	45.0	60	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200	XXX	1000	2/week	Grab
UV Intensity (µw/cm²)	XXX	XXX	XXX	Report	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Ammonia Nov 1 - Apr 30	230.8	XXX	XXX	13.5	XXX	27	2/week	24-Hr Composite
Ammonia May 1 - Oct 31	76.9	XXX	XXX	4.5	XXX	9	2/week	24-Hr Composite

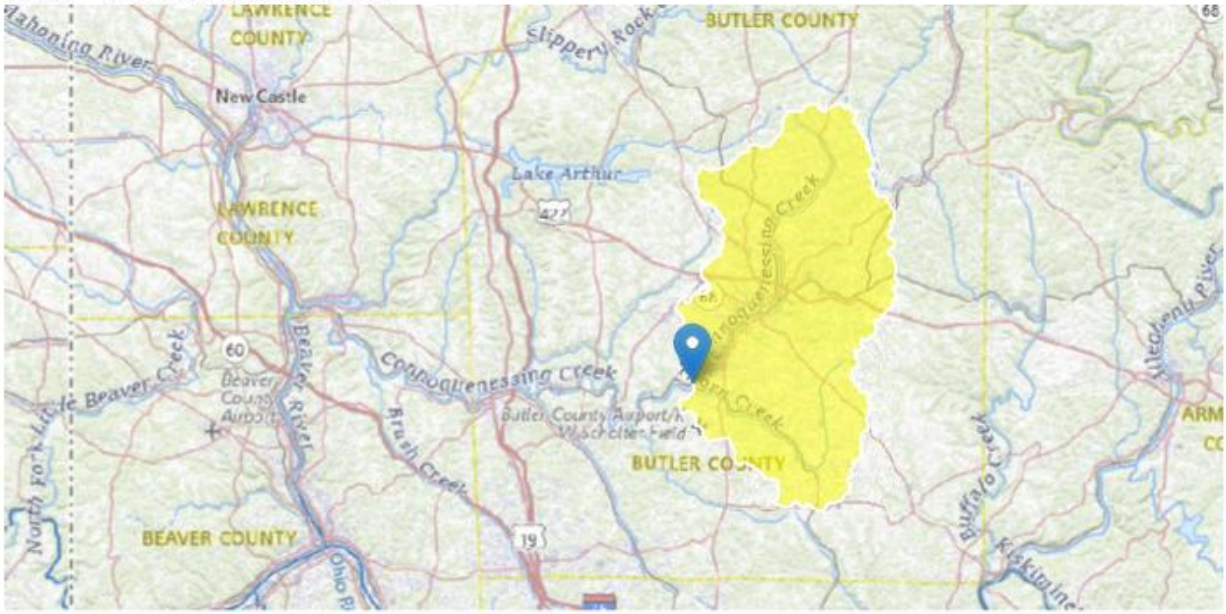
Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	34.1	XXX	XXX	2.0	XXX	4	2/week	24-Hr Composite
E.Coli (No. / 100 mL)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
Total Copper	Report	Report Daily Max	XXX	Report	Report Daily Max	XXX	2/month	24-Hr Composite
Total Zinc	Report	Report Daily Max	XXX	Report	Report Daily Max	XXX	2/month	24-Hr Composite
PFOA (ng/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

StreamStats Report

Region ID: PA
Workspace ID: PA20250909114249327000
Clicked Point (Latitude, Longitude): 40.80679, -79.95672
Time: 2025-09-09 07:43:13 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	136	square miles
ELEV	Mean Basin Elevation	1225	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	136	square miles	2.26	1400
ELEV	Mean Basin Elevation	1225	feet	1050	2580

Low-Flow Statistics Flow Report [Low Flow Region 4]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	7.7	ft^3/s	43	43
30 Day 2 Year Low Flow	11.8	ft^3/s	38	38
7 Day 10 Year Low Flow	3.56	ft^3/s	66	66
30 Day 10 Year Low Flow	5.27	ft^3/s	54	54
90 Day 10 Year Low Flow	8.53	ft^3/s	41	41

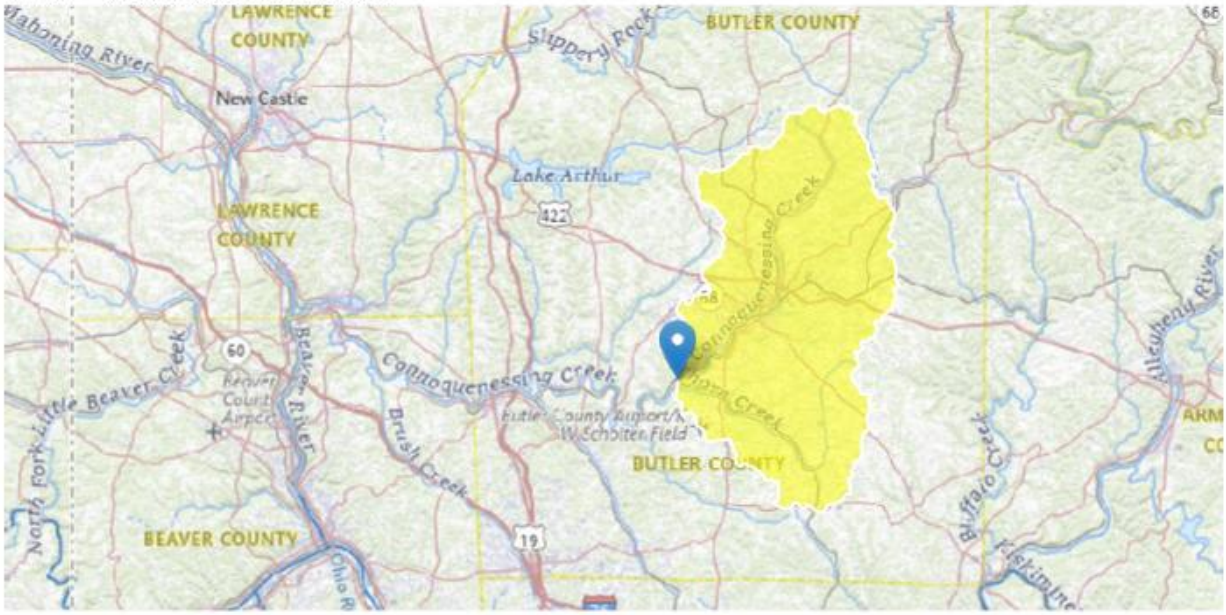
Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.29.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats Report

Region ID: PA
Workspace ID: PA20250909114634316000
Clicked Point (Latitude, Longitude): 40.80933, -79.97021
Time: 2025-09-09 07:46:57 -0400



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Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	138	square miles
ELEV	Mean Basin Elevation	1224	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	138	square miles	2.26	1400
ELEV	Mean Basin Elevation	1224	feet	1050	2580

Low-Flow Statistics Flow Report [Low Flow Region 4]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	7.82	ft^3/s	43	43
30 Day 2 Year Low Flow	12	ft^3/s	38	38
7 Day 10 Year Low Flow	3.62	ft^3/s	66	66
30 Day 10 Year Low Flow	5.36	ft^3/s	54	54
90 Day 10 Year Low Flow	8.67	ft^3/s	41	41

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.29.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20C	34025	CONNOQUENESSING CREEK	**39.260**	969.46	136.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	8.65	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
PA0029122	Saxonburg	2.0520	2.0520	2.0520	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	15.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	4.50	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20C	34025	CONNOQUENESSING CREEK	**38.390**	952.80	138.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.100	0.00	8.71	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

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

Parameter Data

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

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2025

Discharge Information

Instructions | Discharge | Stream

Facility: **Saxonburg Area Authority** NPDES Permit No.: **PA0029122** 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
2.052	127	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		5541									
	Chloride (PWS)	mg/L		219									
	Bromide	mg/L		0.14									
	Sulfate (PWS)	mg/L		39.1									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		50.6									
	Total Antimony	µg/L	<	2									
	Total Arsenic	µg/L	<	2									
	Total Barium	µg/L		78.1									
	Total Beryllium	µg/L	<	1									
	Total Boron	µg/L		24									
	Total Cadmium	µg/L	<	0.2									
	Total Chromium (III)	µg/L		2									
	Hexavalent Chromium	µg/L	<	1									
	Total Cobalt	µg/L		4									
	Total Copper	µg/L		4									
	Free Cyanide	µg/L	<	5									
	Total Cyanide	µg/L	<	5									
	Dissolved Iron	µg/L		110									
	Total Iron	µg/L		20									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		131									
	Total Mercury	µg/L	<	0.1									
	Total Nickel	µg/L		6.2									
	Total Phenols (Phenolics) (PWS)	µg/L		70									
	Total Selenium	µg/L	<	5									
	Total Silver	µg/L		0.4									
	Total Thallium	µg/L	<	2									
	Total Zinc	µg/L		30.2									
	Total Molybdenum	µg/L		3.3									
	Acrolein	µg/L	<	1									
	Acrylamide	µg/L	<	0.1									
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<	0.5									
	Bromoform	µg/L	<	0.5									
	Carbon Tetrachloride	µg/L	<	0.5									

Group 3	Chlorobenzene	µg/L		0.5									
	Chlorodibromomethane	µg/L	<	0.5									
	Chloroethane	µg/L	<	0.5									
	2-Chloroethyl Vinyl Ether	µg/L	<	5									
	Chloroform	µg/L	<	0.5									
	Dichlorobromomethane	µg/L	<	0.5									
	1,1-Dichloroethane	µg/L	<	0.5									
	1,2-Dichloroethane	µg/L	<	0.5									
	1,1-Dichloroethylene	µg/L	<	0.5									
	1,2-Dichloropropane	µg/L	<	0.5									
	1,3-Dichloropropylene	µg/L	<	0.5									
	1,4-Dioxane	µg/L	<	0.263									
	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	<	0.263									
	2,4-Dichlorophenol	µg/L	<	0.263									
	2,4-Dimethylphenol	µg/L	<	0.263									
	4,6-Dinitro-o-Cresol	µg/L	<	2.11									
	2,4-Dinitrophenol	µg/L	<	5.26									
	2-Nitrophenol	µg/L	<	0.263									
	4-Nitrophenol	µg/L	<	0.263									
	p-Chloro-m-Cresol	µg/L	<	0.263									
	Pentachlorophenol	µg/L	<	5.26									
	Phenol	µg/L	<	0.263									
	2,4,6-Trichlorophenol	µg/L	<	0.263									
Group 5	Acenaphthene	µg/L	<	0.263									
	Acenaphthylene	µg/L	<	0.263									
	Anthracene	µg/L	<	0.263									
	Benzidine	µg/L	<	0.263									
	Benzo(a)Anthracene	µg/L	<	0.263									
	Benzo(a)Pyrene	µg/L	<	0.263									
	3,4-Benzofluoranthene	µg/L	<	0.263									
	Benzo(ghi)Perylene	µg/L	<	0.263									
	Benzo(k)Fluoranthene	µg/L	<	0.263									
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.263									
	Bis(2-Chloroethyl)Ether	µg/L	<	0.263									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.263									
	Bis(2-Ethylhexyl)Phthalate	µg/L		0.41									
	4-Bromophenyl Phenyl Ether	µg/L	<	0.263									
	Butyl Benzyl Phthalate	µg/L	<	0.263									
	2-Chloronaphthalene	µg/L	<	0.263									
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.263									
	Chrysene	µg/L	<	0.263									
	Dibenzo(a,h)Anthrancene	µg/L	<	0.263									
	1,2-Dichlorobenzene	µg/L	<	0.263									
	1,3-Dichlorobenzene	µg/L	<	0.263									
	1,4-Dichlorobenzene	µg/L	<	0.263									
	3,3-Dichlorobenzidine	µg/L	<	0.263									
	Diethyl Phthalate	µg/L	<	0.263									
	Dimethyl Phthalate	µg/L	<	0.263									
	Di-n-Butyl Phthalate	µg/L	<	0.263									
	2,4-Dinitrotoluene	µg/L	<	0.263									
	2,6-Dinitrotoluene	µg/L	<	0.263									
	Di-n-Octyl Phthalate	µg/L	<	0.263									

	1,2-Diphenylhydrazine	µg/L	<	0.263									
	Fluoranthene	µg/L	<	0.263									
	Fluorene	µg/L	<	0.263									
	Hexachlorobenzene	µg/L	<	0.263									
	Hexachlorobutadiene	µg/L	<	0.263									
	Hexachlorocyclopentadiene	µg/L	<	0.526									
	Hexachloroethane	µg/L	<	0.263									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.263									
	Isophorone	µg/L	<	0.263									
	Naphthalene	µg/L	<	0.263									
	Nitrobenzene	µg/L	<	0.263									
	n-Nitrosodimethylamine	µg/L	<	0.263									
	n-Nitrosodi-n-Propylamine	µg/L	<	0.263									
	n-Nitrosodiphenylamine	µg/L	<	0.263									
	Phenanthrene	µg/L	<	0.263									
	Pyrene	µg/L	<	0.263									
	1,2,4-Trichlorobenzene	µg/L	<	0.263									
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2025

Stream / Surface Water Information

Saxonburg Area Authority, NPDES Permit No. PA0029122, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Connoquenessing Creek**

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	034025	39.26	969.46	136			Yes
End of Reach 1	034025	38.39	952.8	138			Yes

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

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	39.26	0.1										61	7		
End of Reach 1	38.39	0.1													

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	39.26														
End of Reach 1	38.39														

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2025

Model Results

Saxonburg Area Authority, NPDES Permit No. PA0029122, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.454 Analysis Hardness (mg/l): 83.399 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	2,210	
Total Antimony	0	0		0	1,100	1,100	3,241	
Total Arsenic	0	0		0	340	340	1,002	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	61,876	
Total Boron	0	0		0	8,100	8,100	23,867	
Total Cadmium	0	0		0	1.688	1.77	5.23	Chem Translator of 0.952 applied
Total Chromium (III)	0	0		0	491.052	1,554	4,579	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	48.0	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	280	
Total Copper	0	0		0	11.326	11.8	34.8	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	64.8	
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	52.970	64.8	191	Chem Translator of 0.817 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	4.85	Chem Translator of 0.85 applied
Total Nickel	0	0		0	401.577	402	1,186	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	2.354	2.77	8.16	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	192	
Total Zinc	0	0		0	100.475	103	303	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	8.84	
Acrylamide	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	640	640	1,886	

Bromoform	0	0	0		0	1,800	1,800	5,304	
Carbon Tetrachloride	0	0	0		0	2,800	2,800	8,250	
Chlorobenzene	0	0	0		0	1,200	1,200	3,536	
Chlorodibromomethane	0	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0	0		0	18,000	18,000	53,037	
Chloroform	0	0	0		0	1,900	1,900	5,598	
Dichlorobromomethane	0	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0	0		0	15,000	15,000	44,197	
1,1-Dichloroethylene	0	0	0		0	7,500	7,500	22,099	
1,2-Dichloropropane	0	0	0		0	11,000	11,000	32,411	
1,3-Dichloropropylene	0	0	0		0	310	310	913	
Ethylbenzene	0	0	0		0	2,900	2,900	8,545	
Methyl Bromide	0	0	0		0	550	550	1,621	
Methyl Chloride	0	0	0		0	28,000	28,000	82,502	
Methylene Chloride	0	0	0		0	12,000	12,000	35,358	
1,1,2,2-Tetrachloroethane	0	0	0		0	1,000	1,000	2,946	
Tetrachloroethylene	0	0	0		0	700	700	2,063	
Toluene	0	0	0		0	1,700	1,700	5,009	
1,2-trans-Dichloroethylene	0	0	0		0	6,800	6,800	20,036	
1,1,1-Trichloroethane	0	0	0		0	3,000	3,000	8,839	
1,1,2-Trichloroethane	0	0	0		0	3,400	3,400	10,018	
Trichloroethylene	0	0	0		0	2,300	2,300	6,777	
Vinyl Chloride	0	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0	0		0	560	560	1,650	
2,4-Dichlorophenol	0	0	0		0	1,700	1,700	5,009	
2,4-Dimethylphenol	0	0	0		0	660	660	1,945	
4,6-Dinitro-o-Cresol	0	0	0		0	80	80.0	236	
2,4-Dinitrophenol	0	0	0		0	660	660	1,945	
2-Nitrophenol	0	0	0		0	8,000	8,000	23,572	
4-Nitrophenol	0	0	0		0	2,300	2,300	6,777	
p-Chloro-m-Cresol	0	0	0		0	160	160	471	
Pentachlorophenol	0	0	0		0	8.723	8.72	25.7	
Phenol	0	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0	0		0	460	460	1,355	
Acenaphthene	0	0	0		0	83	83.0	245	
Anthracene	0	0	0		0	N/A	N/A	N/A	
Benzidine	0	0	0		0	300	300	884	
Benzo(a)Anthracene	0	0	0		0	0.5	0.5	1.47	
Benzo(a)Pyrene	0	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0	0		0	30,000	30,000	88,395	
Bis(2-Chloroisopropyl)Ether	0	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0	0		0	4,500	4,500	13,259	
4-Bromophenyl Phenyl Ether	0	0	0		0	270	270	796	
Butyl Benzyl Phthalate	0	0	0		0	140	140	413	
2-Chloronaphthalene	0	0	0		0	N/A	N/A	N/A	
Chrysene	0	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0	0		0	N/A	N/A	N/A	

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1,2-Dichlorobenzene	0	0		0	820	820	2,416	
1,3-Dichlorobenzene	0	0		0	350	350	1,031	
1,4-Dichlorobenzene	0	0		0	730	730	2,151	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	11,786	
Dimethyl Phthalate	0	0		0	2,500	2,500	7,366	
Di-n-Butyl Phthalate	0	0		0	110	110	324	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	4,714	
2,6-Dinitrotoluene	0	0		0	990	990	2,917	
1,2-Diphenylhydrazine	0	0		0	15	15.0	44.2	
Fluoranthene	0	0		0	200	200	589	
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	29.5	
Hexachlorocyclopentadiene	0	0		0	5	5.0	14.7	
Hexachloroethane	0	0		0	60	60.0	177	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	29,465	
Naphthalene	0	0		0	140	140	413	
Nitrobenzene	0	0		0	4,000	4,000	11,786	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	50,090	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	884	
Phenanthrene	0	0		0	5	5.0	14.7	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	383	

☑ ***CFC*** CCT (min): 72.665 PMF: 1 Analysis Hardness (mg/l): 73.49 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	1,163	
Total Arsenic	0	0		0	150	150	793	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	21,665	
Total Boron	0	0		0	1,600	1,600	8,455	
Total Cadmium	0	0		0	0.199	0.22	1.14	Chem Translator of 0.922 applied
Total Chromium (III)	0	0		0	57.590	67.0	354	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	54.9	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	100	
Total Copper	0	0		0	6.883	7.17	37.9	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	27.5	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	7,926	WQC = 30 day average; PMF = 1

Total Lead	0	0		0	1.797	2.15	11.4	Chem Translator of 0.836 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	4.79	Chem Translator of 0.85 applied
Total Nickel	0	0		0	40.076	40.2	212	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	26.4	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	68.7	
Total Zinc	0	0		0	91.002	92.3	488	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	15.9	
Acrylamide	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	130	130	687	
Bromoform	0	0		0	370	370	1,955	
Carbon Tetrachloride	0	0		0	560	560	2,959	
Chlorobenzene	0	0		0	240	240	1,268	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	18,495	
Chloroform	0	0		0	390	390	2,061	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	16,381	
1,1-Dichloroethylene	0	0		0	1,500	1,500	7,926	
1,2-Dichloropropane	0	0		0	2,200	2,200	11,625	
1,3-Dichloropropylene	0	0		0	61	61.0	322	
Ethylbenzene	0	0		0	580	580	3,065	
Methyl Bromide	0	0		0	110	110	581	
Methyl Chloride	0	0		0	5,500	5,500	29,063	
Methylene Chloride	0	0		0	2,400	2,400	12,682	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	1,110	
Tetrachloroethylene	0	0		0	140	140	740	
Toluene	0	0		0	330	330	1,744	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	7,398	
1,1,1-Trichloroethane	0	0		0	610	610	3,223	
1,1,2-Trichloroethane	0	0		0	680	680	3,593	
Trichloroethylene	0	0		0	450	450	2,378	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	581	
2,4-Dichlorophenol	0	0		0	340	340	1,797	
2,4-Dimethylphenol	0	0		0	130	130	687	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	84.5	
2,4-Dinitrophenol	0	0		0	130	130	687	
2-Nitrophenol	0	0		0	1,600	1,600	8,455	
4-Nitrophenol	0	0		0	470	470	2,484	
p-Chloro-m-Cresol	0	0		0	500	500	2,642	
Pentachlorophenol	0	0		0	6.693	6.69	35.4	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	481	
Acenaphthene	0	0		0	17	17.0	89.8	

Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	312	
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.53	
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	31,705	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	4,809	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	285	
Butyl Benzyl Phthalate	0	0		0	35	35.0	185	
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	845	
1,3-Dichlorobenzene	0	0		0	69	69.0	365	
1,4-Dichlorobenzene	0	0		0	150	150	793	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	4,227	
Dimethyl Phthalate	0	0		0	500	500	2,642	
Di-n-Butyl Phthalate	0	0		0	21	21.0	111	
2,4-Dinitrotoluene	0	0		0	320	320	1,691	
2,6-Dinitrotoluene	0	0		0	200	200	1,057	
1,2-Diphenylhydrazine	0	0		0	3	3.0	15.9	
Fluoranthene	0	0		0	40	40.0	211	
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	10.6	
Hexachlorocyclopentadiene	0	0		0	1	1.0	5.28	
Hexachloroethane	0	0		0	12	12.0	63.4	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	11,097	
Naphthalene	0	0		0	43	43.0	227	
Nitrobenzene	0	0		0	810	810	4,280	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	17,966	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	312	
Phenanthrene	0	0		0	1	1.0	5.28	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	137	

☑ ***THH*** CCT (min): 72.665 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	500,000	500,000	N/A	

Chloride (PWS)	0	0	0	[redacted]	0	250,000	250,000	N/A		
Sulfate (PWS)	0	0	0	[redacted]	0	250,000	250,000	N/A		
Total Aluminum	0	0	0	[redacted]	0	N/A	N/A	N/A		
Total Antimony	0	0	0	[redacted]	0	5.6	5.6	29.6		
Total Arsenic	0	0	0	[redacted]	0	10	10.0	52.8		
Total Barium	0	0	0	[redacted]	0	2,400	2,400	12,682		
Total Boron	0	0	0	[redacted]	0	3,100	3,100	16,381		
Total Cadmium	0	0	0	[redacted]	0	N/A	N/A	N/A		
Total Chromium (III)	0	0	0	[redacted]	0	N/A	N/A	N/A		
Hexavalent Chromium	0	0	0	[redacted]	0	N/A	N/A	N/A		
Total Cobalt	0	0	0	[redacted]	0	N/A	N/A	N/A		
Total Copper	0	0	0	[redacted]	0	N/A	N/A	N/A		
Free Cyanide	0	0	0	[redacted]	0	4	4.0	21.1		
Dissolved Iron	0	0	0	[redacted]	0	300	300	1,585		
Total Iron	0	0	0	[redacted]	0	N/A	N/A	N/A		
Total Lead	0	0	0	[redacted]	0	N/A	N/A	N/A		
Total Manganese	0	0	0	[redacted]	0	1,000	1,000	5,284		
Total Mercury	0	0	0	[redacted]	0	0.050	0.05	0.26		
Total Nickel	0	0	0	[redacted]	0	610	610	3,223		
Total Phenols (Phenolics) (PWS)	0	0	0	[redacted]	0	5	5.0	N/A		
Total Selenium	0	0	0	[redacted]	0	N/A	N/A	N/A		
Total Silver	0	0	0	[redacted]	0	N/A	N/A	N/A		
Total Thallium	0	0	0	[redacted]	0	0.24	0.24	1.27		
Total Zinc	0	0	0	[redacted]	0	N/A	N/A	N/A		
Acrolein	0	0	0	[redacted]	0	3	3.0	15.9		
Acrylamide	0	0	0	[redacted]	0	N/A	N/A	N/A		
Benzene	0	0	0	[redacted]	0	N/A	N/A	N/A		
Bromoform	0	0	0	[redacted]	0	N/A	N/A	N/A		
Carbon Tetrachloride	0	0	0	[redacted]	0	N/A	N/A	N/A		
Chlorobenzene	0	0	0	[redacted]	0	100	100.0	528		
Chlorodibromomethane	0	0	0	[redacted]	0	N/A	N/A	N/A		
2-Chloroethyl Vinyl Ether	0	0	0	[redacted]	0	N/A	N/A	N/A		
Chloroform	0	0	0	[redacted]	0	5.7	5.7	30.1		
Dichlorobromomethane	0	0	0	[redacted]	0	N/A	N/A	N/A		
1,2-Dichloroethane	0	0	0	[redacted]	0	N/A	N/A	N/A		
1,1-Dichloroethylene	0	0	0	[redacted]	0	33	33.0	174		
1,2-Dichloropropane	0	0	0	[redacted]	0	N/A	N/A	N/A		
1,3-Dichloropropylene	0	0	0	[redacted]	0	N/A	N/A	N/A		
Ethylbenzene	0	0	0	[redacted]	0	68	68.0	359		
Methyl Bromide	0	0	0	[redacted]	0	100	100.0	528		
Methyl Chloride	0	0	0	[redacted]	0	N/A	N/A	N/A		
Methylene Chloride	0	0	0	[redacted]	0	N/A	N/A	N/A		
1,1,2,2-Tetrachloroethane	0	0	0	[redacted]	0	N/A	N/A	N/A		
Tetrachloroethylene	0	0	0	[redacted]	0	N/A	N/A	N/A		
Toluene	0	0	0	[redacted]	0	57	57.0	301		
1,2-trans-Dichloroethylene	0	0	0	[redacted]	0	100	100.0	528		
1,1,1-Trichloroethane	0	0	0	[redacted]	0	10,000	10,000	52,842		

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1,1,2-Trichloroethane	0	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0	0		0	N/A	N/A	N/A	
Vinyl Chloride	0	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0	0		0	30	30.0	159	
2,4-Dichlorophenol	0	0	0		0	10	10.0	52.8	
2,4-Dimethylphenol	0	0	0		0	100	100.0	528	
4,6-Dinitro-o-Cresol	0	0	0		0	2	2.0	10.6	
2,4-Dinitrophenol	0	0	0		0	10	10.0	52.8	
2-Nitrophenol	0	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0	0		0	N/A	N/A	N/A	
Phenol	0	0	0		0	4,000	4,000	21,137	
2,4,6-Trichlorophenol	0	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0	0		0	70	70.0	370	
Anthracene	0	0	0		0	300	300	1,585	
Benzidine	0	0	0		0	N/A	N/A	N/A	
Benzo(a)Anthracene	0	0	0		0	N/A	N/A	N/A	
Benzo(a)Pyrene	0	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroisopropyl)Ether	0	0	0		0	200	200	1,057	
Bis(2-Ethylhexyl)Phthalate	0	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0	0		0	0.1	0.1	0.53	
2-Chloronaphthalene	0	0	0		0	800	800	4,227	
Chrysene	0	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0	0		0	1,000	1,000	5,284	
1,3-Dichlorobenzene	0	0	0		0	7	7.0	37.0	
1,4-Dichlorobenzene	0	0	0		0	300	300	1,585	
3,3-Dichlorobenzidine	0	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0	0		0	600	600	3,171	
Dimethyl Phthalate	0	0	0		0	2,000	2,000	10,568	
Di-n-Butyl Phthalate	0	0	0		0	20	20.0	106	
2,4-Dinitrotoluene	0	0	0		0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0	0		0	N/A	N/A	N/A	
1,2-Diphenylhydrazine	0	0	0		0	N/A	N/A	N/A	
Fluoranthene	0	0	0		0	20	20.0	106	
Fluorene	0	0	0		0	50	50.0	264	
Hexachlorobenzene	0	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0	0		0	4	4.0	21.1	
Hexachloroethane	0	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0	0		0	N/A	N/A	N/A	
Isophorone	0	0	0		0	34	34.0	180	

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Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	52.8	
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	106	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.37	

CRL CCT (min): 37.474 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
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	
Acrylamide	0	0		0	0.07	0.07	1.67	
Benzene	0	0		0	0.58	0.58	13.9	
Bromoform	0	0		0	7	7.0	167	
Carbon Tetrachloride	0	0		0	0.4	0.4	9.56	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	19.1	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	

Chloroform	0	0	0		0	N/A	N/A	N/A	
Dichlorobromomethane	0	0	0		0	0.95	0.95	22.7	
1,2-Dichloroethane	0	0	0		0	9.9	9.9	237	
1,1-Dichloroethylene	0	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0	0		0	0.9	0.9	21.5	
1,3-Dichloropropylene	0	0	0		0	0.27	0.27	6.46	
Ethylbenzene	0	0	0		0	N/A	N/A	N/A	
Methyl Bromide	0	0	0		0	N/A	N/A	N/A	
Methyl Chloride	0	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0	0		0	20	20.0	478	
1,1,2,2-Tetrachloroethane	0	0	0		0	0.2	0.2	4.78	
Tetrachloroethylene	0	0	0		0	10	10.0	239	
Toluene	0	0	0		0	N/A	N/A	N/A	
1,2-trans-Dichloroethylene	0	0	0		0	N/A	N/A	N/A	
1,1,1-Trichloroethane	0	0	0		0	N/A	N/A	N/A	
1,1,2-Trichloroethane	0	0	0		0	0.55	0.55	13.2	
Trichloroethylene	0	0	0		0	0.6	0.6	14.3	
Vinyl Chloride	0	0	0		0	0.02	0.02	0.48	
2-Chlorophenol	0	0	0		0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0	0		0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0	0		0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0	0		0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0	0		0	N/A	N/A	N/A	
2-Nitrophenol	0	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0	0		0	0.030	0.03	0.72	
Phenol	0	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0	0		0	1.5	1.5	35.9	
Acenaphthene	0	0	0		0	N/A	N/A	N/A	
Anthracene	0	0	0		0	N/A	N/A	N/A	
Benzidine	0	0	0		0	0.0001	0.0001	0.002	
Benzo(a)Anthracene	0	0	0		0	0.001	0.001	0.024	
Benzo(a)Pyrene	0	0	0		0	0.0001	0.0001	0.002	
3,4-Benzofluoranthene	0	0	0		0	0.001	0.001	0.024	
Benzo(k)Fluoranthene	0	0	0		0	0.01	0.01	0.24	
Bis(2-Chloroethyl)Ether	0	0	0		0	0.03	0.03	0.72	
Bis(2-Chloroisopropyl)Ether	0	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0	0		0	0.32	0.32	7.65	
4-Bromophenyl Phenyl Ether	0	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0	0		0	N/A	N/A	N/A	
Chrysene	0	0	0		0	0.12	0.12	2.87	
Dibenzo(a,h)Anthrancene	0	0	0		0	0.0001	0.0001	0.002	
1,2-Dichlorobenzene	0	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0	0		0	N/A	N/A	N/A	

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3,3-Dichlorobenzidine	0	0		0	0.05	0.05	1.2	
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	1.2	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	1.2	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.72	
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	0.002	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.24	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	2.39	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.024	
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	0.017	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.12	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	78.9	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Copper	Report	Report	Report	Report	Report	µg/L	22.3	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	194	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 Aluminum	1,416	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	12,682	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	8,455	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	1.14	µg/L	Discharge Conc < TQL
Total Chromium (III)	354	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	30.8	µg/L	Discharge Conc < TQL
Total Cobalt	100	µg/L	Discharge Conc ≤ 10% WQBEL
Free Cyanide	21.1	µg/L	Discharge Conc ≤ 25% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	1,585	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	7,926	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	11.4	µg/L	Discharge Conc < TQL
Total Manganese	5,284	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.26	µg/L	Discharge Conc < TQL
Total Nickel	212	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	26.4	µg/L	Discharge Conc < TQL
Total Silver	5.23	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	1.27	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	5.67	µg/L	Discharge Conc < TQL
Acrylamide	1.67	µg/L	Discharge Conc < TQL
Benzene	13.9	µg/L	Discharge Conc < TQL
Bromoform	167	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	9.56	µg/L	Discharge Conc < TQL
Chlorobenzene	528	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	19.1	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	18,495	µg/L	Discharge Conc < TQL
Chloroform	30.1	µg/L	Discharge Conc < TQL
Dichlorobromomethane	22.7	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	237	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	174	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	21.5	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	6.46	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	359	µg/L	Discharge Conc ≤ 10% WQBEL

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Methyl Bromide	528	µg/L	Discharge Conc < TQL
Methyl Chloride	29,063	µg/L	Discharge Conc < TQL
Methylene Chloride	478	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	4.78	µg/L	Discharge Conc < TQL
Tetrachloroethylene	239	µg/L	Discharge Conc < TQL
Toluene	301	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	528	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	3,223	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	13.2	µg/L	Discharge Conc < TQL
Trichloroethylene	14.3	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.48	µg/L	Discharge Conc < TQL
2-Chlorophenol	159	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	52.8	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	528	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	10.6	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	52.8	µg/L	Discharge Conc < TQL
2-Nitrophenol	8,455	µg/L	Discharge Conc < TQL
4-Nitrophenol	2,484	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	302	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.72	µg/L	Discharge Conc < TQL
Phenol	21,137	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	35.9	µg/L	Discharge Conc < TQL
Acenaphthene	89.8	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	1,585	µg/L	Discharge Conc < TQL
Benzidine	0.002	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.024	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.002	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.024	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.24	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.72	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	1,057	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	7.65	µg/L	Discharge Conc ≤ 25% WQBEL
4-Bromophenyl Phenyl Ether	285	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.53	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	4,227	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	2.87	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.002	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	845	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	37.0	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	793	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	1.2	µg/L	Discharge Conc < TQL
Diethyl Phthalate	3,171	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	2,642	µg/L	Discharge Conc < TQL

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Di-n-Butyl Phthalate	106	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	1.2	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	1.2	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.72	µg/L	Discharge Conc < TQL
Fluoranthene	106	µg/L	Discharge Conc < TQL
Fluorene	264	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.002	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.24	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	5.28	µg/L	Discharge Conc < TQL
Hexachloroethane	2.39	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.024	µg/L	Discharge Conc < TQL
Isophorone	180	µg/L	Discharge Conc < TQL
Naphthalene	227	µg/L	Discharge Conc < TQL
Nitrobenzene	52.8	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.017	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.12	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	78.9	µg/L	Discharge Conc < TQL
Phenanthrene	5.28	µg/L	Discharge Conc < TQL
Pyrene	106	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.37	µg/L	Discharge Conc < TQL

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.28
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name: Saxonburg Area Authority

Permit No.: PA0029122

Test Completion Date: 6/28/2021

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

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

Test Completion Date: 7/4/2022

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

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

Test Completion Date: 7/5/2023

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

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

Test Completion Date: 7/1/2024

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	0	1
9	1	0
10	1	1
11		
12		
13		
14		
15		
Mean	0.900	0.900
Std Dev.	0.316	0.316
# Replicates	10	10

T-Test Result: 1.8000
Deg. of Freedom: 16
Critical T Value: 0.8647
Pass or Fail: **PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Reproduction
TIWC (decimal)	0.28
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name: Saxonburg Area Authority

Permit No.: PA0029122

Test Completion Date: 6/28/2021

Replicate No.	Control	TIWC
1	33	33
2	30	23
3	33	23
4	22	22
5	24	33
6	22	29
7	26	29
8	22	26
9	25	29
10	26	31
11		
12		
13		
14		
15		
Mean	26.300	27.800
Std Dev.	4.296	4.104
# Replicates	10	10

T-Test Result	4.8939
Deg. of Freedom	16
Critical T Value	0.8647
Pass or Fail	PASS

Test Completion Date: 7/4/2022

Replicate No.	Control	TIWC
1	26	22
2	14	6
3	22	20
4	26	23
5	22	24
6	19	23
7	21	22
8	25	7
9	25	23
10	23	20
11		
12		
13		
14		
15		
Mean	22.300	19.000
Std Dev.	3.713	6.716
# Replicates	10	10

T-Test Result	0.9894
Deg. of Freedom	14
Critical T Value	0.8681
Pass or Fail	PASS

Test Completion Date: 7/5/2023

Replicate No.	Control	TIWC
1	21	25
2	25	15
3	24	15
4	11	15
5	27	19
6	31	22
7	21	15
8	22	27
9	11	22
10	33	21
11		
12		
13		
14		
15		
Mean	22.600	19.600
Std Dev.	7.306	4.502
# Replicates	10	10

T-Test Result	1.1817
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	PASS

Test Completion Date: 7/1/2024

Replicate No.	Control	TIWC
1	17	16
2	15	16
3	14	17
4	14	19
5	19	20
6	20	17
7	17	23
8	0	21
9	16	6
10	20	15
11		
12		
13		
14		
15		
Mean	15.200	17.000
Std Dev.	5.789	4.619
# Replicates	10	10

T-Test Result	2.7936
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	PASS

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	0.28
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: Saxonburg Area Authority

Permit No.: PA0029122

Test Completion Date: 6/29/2021

Replicate No.	Control	TIWC
1	1	0.8
2	0.7	1
3	0.7	0.7
4	1	0.9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.850	0.850
Std Dev.	0.173	0.129
# Replicates	4	4

T-Test Result	4.5011
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

Test Completion Date: 7/5/2022

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

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

Test Completion Date: 7/4/2023

Replicate No.	Control	TIWC
1	0.9	0.9
2	0.9	0.5
3	1	0.9
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	0.825
Std Dev.	0.058	0.222
# Replicates	4	4

T-Test Result	2.4762
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	PASS

Test Completion Date: 7/2/2024

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

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

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Growth
TIWC (decimal)	0.28
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: Saxonburg Area Authority

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Replicate No.	Test Completion Date: 6/29/2021 Control	TIWC
1	0.256	0.259
2	0.285	0.246
3	0.3	0.31
4	0.31	0.301
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.288	0.279
Std Dev.	0.024	0.031
# Replicates	4	4
T-Test Result	3.5194	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	PASS	

Replicate No.	Test Completion Date: 7/4/2022 Control	TIWC
1	0.356	0.383
2	0.35	0.399
3	0.373	0.376
4	0.345	0.358
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.356	0.379
Std Dev.	0.012	0.017
# Replicates	4	4
T-Test Result	11.6093	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	PASS	

Replicate No.	Test Completion Date: 7/4/2023 Control	TIWC
1	0.451	0.424
2	0.453	0.266
3	0.463	0.462
4	0.485	0.472
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.463	0.406
Std Dev.	0.016	0.096
# Replicates	4	4
T-Test Result	1.2200	
Deg. of Freedom	3	
Critical T Value	0.7649	
Pass or Fail	PASS	

Replicate No.	Test Completion Date: 7/2/2024 Control	TIWC
1	0.403	0.362
2	0.356	0.396
3	0.418	0.437
4	0.447	0.443
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.406	0.410
Std Dev.	0.038	0.038
# Replicates	4	4
T-Test Result	4.4256	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	PASS	

WET Summary and Evaluation

Facility Name	Saxonburg Area Authority
Permit No.	PA0029122
Design Flow (MGD)	2.052
Q_{7-10} Flow (cfs)	8.65
PMF_a	0.454
PMF_c	1

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	6/28/21	7/4/22	7/5/23	7/1/24
Ceriodaphnia	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	6/28/21	7/4/22	7/5/23	7/1/24
Ceriodaphnia	Reproduction	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	6/29/21	7/5/22	7/4/23	7/2/24
Pimephales	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	6/29/21	7/4/22	7/4/23	7/2/24
Pimephales	Growth	PASS	PASS	PASS	PASS

Reasonable Potential? NO

Permit Recommendations

Test Type	**Chronic**
TIWC	**27** % Effluent
Dilution Series	**7, 14, 27, 64, 100** % Effluent
Permit Limit	**None**
Permit Limit Species	