



Application Type
Facility Type
Major / Minor

Renewal
Municipal
Minor

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. **PA0204994**
APS ID **1108521**
Authorization ID **1475084**

Applicant and Facility Information

Applicant Name	<u>Central Indiana County Joint Sewer Authority</u>	Facility Name	<u>Homer City STP</u>
Applicant Address	<u>603 S Main Street PO Box 7</u> <u>Homer City, PA 15748-1615</u>	Facility Address	<u>1451 Neal Road</u> <u>Homer City, PA 15748</u>
Applicant Contact	<u>Peggy Citeroni</u>	Facility Contact	
Applicant Phone	<u>(724) 479-3151</u>	Facility Phone	
Client ID	<u>39406</u>	Site ID	<u>686450</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Center Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Indiana</u>
Date Application Received	<u>January 31, 2024</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted		If No, Reason	
Purpose of Application	<u>Permit renewal</u>		

Summary of Review

1.0 General Discussions

This factsheet supports the renewal of an existing NPDES permit for discharge of treated domestic wastewater from - Homer City STP. Central Indiana County Joint Sewer Authority owns and operates the sewage treatment plant in Center Township, Indiana County. Sewage is collected from Homer City Borough and Center Township. The facility is a sequential batch reactor (SBR) treatment system with an annual average design capacity of 0.65MGD and organic design capacity of the facility is 1,395 lbs/day- BOD₅. The discharge goes to Two Lick Creek which is classified for trout stocking (TSF). The existing NPDES permit was issued on July 03, 2019, with an effective date of August 1, 2019, and expiration date of July 31, 2024. The applicant submitted a timely NPDES permit renewal application to the Department and is currently operating under the terms and conditions in the existing permit. A topographic map showing discharge locations is presented in attachment A.

1.1 Sludge use and disposal description and location(s):

Sludge is aerobically digested and dewatered with belt filter press prior to disposing of at a landfill.

1.2 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		<i>J. Pascal Kwedza</i> J. Pascal Kwedza, P. E./ Environmental Engineer	November 12, 2025
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	November 12, 2025

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.65
Latitude	40° 31' 3.00"	Longitude	-79° 10' 1.00"
Quad Name	Indiana	Quad Code	1412
Wastewater Description:	Sewage Effluent		
Receiving Waters	Two Lick Creek (TSF)	Stream Code	44073
NHD Com ID	123720038	RMI	4.44
Drainage Area	170.0	Yield (cfs/mi ²)	0.1
Q ₇₋₁₀ Flow (cfs)	13.4	Q ₇₋₁₀ Basis	StreamStats Calculation
Elevation (ft)	995.0	Slope (ft/ft)	
Watershed No.	18-D	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Metals, Metals		
Source(s) of Impairment	ACID MINE DRAINAGE, ACID MINE DRAINAGE		
TMDL Status	Final	Name	Kiskiminetas-Conemaugh River Watersheds TMDL
Background/Ambient Data		Data Source	
pH (SU)	7.0	Default	
Temperature (°F)	20	Default	
Hardness (mg/L)			
Other:			
Nearest Downstream Public Water Supply Intake	Buffalo Township Municipal Authority		
PWS Waters	Allegheny River	Flow at Intake (cfs)	
PWS RMI	29.4	Distance from Outfall (mi)	

Changes Since Last Permit Issuance: None

Treatment Facility Summary				
Treatment Facility Name: Homer City STP				
WQM Permit No.	Issuance Date			
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Tertiary	Activated Sludge With Solids Removal	UV	0.65
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
0.65	1395	Not Overloaded		

Changes Since Last Permit Issuance: None

2.1 Treatment System

Treatment system consists of a comminutor, 2 SBR tanks and UV for disinfection. Solids handling consists of aerobic digestion and dewatering with belt filter press prior to disposing of at a landfill.

3.0 Existing Effluent Limitations and Monitoring Requirements

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	9.0 Daily Max	XXX	1/day	Grab
DO	XXX	XXX	6.0	XXX	XXX	XXX	1/day	Grab
CBOD5	135.0	215.0	XXX	25.0	40.0	50	1/week	8-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
TSS	160.0	240.0	XXX	30.0	45.0	60	1/week	8-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000.0 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200.0 Geo Mean	XXX	1000.0	1/week	Grab
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Ammonia Nov 1 - Apr 30	135.0	XXX	XXX	25.0	XXX	50.0	1/week	8-Hr Composite
Ammonia May 1 - Oct 31	90.0	XXX	XXX	17.5	XXX	35.0	1/week	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Total Aluminum	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Total Iron	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Total Manganese	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite

3.1 Compliance History

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

Parameter	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24
Flow (MGD) Average Monthly	0.3	0.505	0.4492	0.438	0.479	0.356	0.6628	0.366	0.423	0.368	0.255	0.263
Flow (MGD) Daily Maximum	0.472	1.091	0.9716	0.892	1.229	0.608	1.225	0.735	0.808	0.762	0.338	0.348
pH (S.U.) Daily Minimum	7.3	7.2	7.4	7.4	7.2	7.3	7.0	6.4	6.5	4.5	5.3	6.2
pH (S.U.) Daily Maximum	7.9	7.8	7.9	7.9	7.8	7.6	7.7	7.4	7.4	7.4	7.33	8.8
DO (mg/L) Daily Minimum	0.1	0.4	0.01	0.01	0.01	0.8	2.3	2.2	2.4	2.8	2.7	1.5
CBOD5 (lbs/day) Average Monthly	48.8	76.3	46.9	60.3	31.1	38.0	47.5	44.3	12.0	55.6	21.8	12.5
CBOD5 (lbs/day) Weekly Average	66.7	108.0	119.2	67.2	46.2	44.0	90.1	59.9	15.0	114.3	26.4	21.0
CBOD5 (mg/L) Average Monthly	17.5	16.5	10.0	17.1	11.3	13.2	12.4	15.9	3.3	14.5	10.2	5.9
CBOD5 (mg/L) Weekly Average	30.9	21.4	17.5	20.4	18.2	14.9	22.9	20.7	3.6	18.0	15.1	9.4
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	769	743.0	433	744	652	592	904	607	819	1264	618	580
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	978	1433.0	552	1467	1292	712	1267	968	929	2852	344.55	697
BOD5 (mg/L) Raw Sewage Influent Average Monthly	260.55	144.65	125.54	210.17	243.16	206.62	236.41	207.98	215.6	313.6	278.55	310.96
TSS (lbs/day) Average Monthly	65.5	72.6	134.0	56.0	40.7	50.7	< 39.5	110.6	63.2	111.0	51.1	45.9
TSS (lbs/day) Raw Sewage Influent Average Monthly	1019	774.0	483	1279	400	523	665	539	765	2954	561	610
TSS (lbs/day) Raw Sewage Influent Daily Maximum	1513	1126.0	772	4128	677	641	1401	788	1011	9507	300	857

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TSS (lbs/day) Weekly Average	114.2	109.8	340.9	71.0	64.3	68.2	86.6	185.2	79.2	197.0	62.2	94.2
TSS (mg/L) Average Monthly	21.8	15.4	28.3	16.0	14.4	17.3	< 10.3	39.8	17.3	30.5	23.5	21.8
TSS (mg/L) Raw Sewage Influent Average Monthly	358	161.0	150	365	146	181	173	192	208	594	254	288
TSS (mg/L) Weekly Average	30.0	21.0	50.0	22.0	18.0	21.0	22.0	64.0	25.0	33.0	30.0	42.0
Fecal Coliform (No./100 ml) Geometric Mean	460813.	115311.	84943.0	112387.	51162.0	127710.	30227.0	19695.0	10074.0	10616.0	3841.0	1053.0
Fecal Coliform (No./100 ml) Instantaneous Maximum	600000	570000	440000	340000	112000	260000	240000	90000	47500	41500	10200.0	7400.0
UV Transmittance (%) Daily Minimum	1	2.0	85	2	5	1	30	22	30	19	4	4
Total Nitrogen (mg/L) Daily Maximum			60.81			48.7			85.4			< 68.3
Ammonia (lbs/day) Average Monthly	176.0	167.4	120.5	179.1	91.0	140.2	119.1	39.8	45.2	76.4	14.6	6.8
Ammonia (mg/L) Average Monthly	59.3	37.5	34.0	52.2	34.3	49.1	30.9	14.3	10.3	18.5	6.6	3.1
Ammonia (mg/L) Instantaneous Maximum	92.06	62.19	61.74	84.64	50.09	57.71	57.79	23.91	21.08	27.02	13.05	4.37
Total Phosphorus (mg/L) Daily Maximum			0.84			1.38			2.78			3.46
Total Aluminum (mg/L) Daily Maximum			0.29			0.13			0.07			0.69
Total Iron (mg/L) Daily Maximum			0.22			0.16			0.27			0.97
Total Manganese (mg/L) Daily Maximum			0.23			0.13			0.12			0.33

3.1.2 Effluent Violations for Outfall 001, from: October 1, 2024 To: August 31, 2025

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	10/31/24	Daily Min	5.3	S.U.	6.0	S.U.
pH	11/30/24	Daily Min	4.5	S.U.	6.0	S.U.
DO	02/28/25	Daily Min	2.3	mg/L	6.0	mg/L
DO	10/31/24	Daily Min	2.7	mg/L	6.0	mg/L
DO	12/31/24	Daily Min	2.4	mg/L	6.0	mg/L
DO	11/30/24	Daily Min	2.8	mg/L	6.0	mg/L
DO	05/31/25	Daily Min	0.01	mg/L	6.0	mg/L
DO	08/31/25	Daily Min	0.1	mg/L	6.0	mg/L
DO	06/30/25	Daily Min	0.01	mg/L	6.0	mg/L
DO	01/31/25	Daily Min	2.2	mg/L	6.0	mg/L
DO	07/31/25	Daily Min	0.4	mg/L	6.0	mg/L
DO	03/31/25	Daily Min	0.8	mg/L	6.0	mg/L
DO	04/30/25	Daily Min	0.01	mg/L	6.0	mg/L
TSS	06/30/25	Wkly Avg	340.9	lbs/day	240.0	lbs/day
TSS	11/30/24	Avg Mo	30.5	mg/L	30.0	mg/L
TSS	01/31/25	Avg Mo	39.8	mg/L	30.0	mg/L
TSS	06/30/25	Wkly Avg	50.0	mg/L	45.0	mg/L
TSS	01/31/25	Wkly Avg	64.0	mg/L	45.0	mg/L
Fecal Coliform	02/28/25	Geo Mean	30227.0	No./100 ml	2000.0	No./100 ml
Fecal Coliform	12/31/24	Geo Mean	10074.0	No./100 ml	2000.0	No./100 ml

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Fecal Coliform	11/30/24	Geo Mean	10616.0	No./100 ml	2000.0	No./100 ml
Fecal Coliform	07/31/25	Geo Mean	115311.0	No./100 ml	200.0	No./100 ml
Fecal Coliform	04/30/25	Geo Mean	51162.0	No./100 ml	2000.0	No./100 ml
Fecal Coliform	01/31/25	Geo Mean	19695.0	No./100 ml	2000.0	No./100 ml
Fecal Coliform	03/31/25	Geo Mean	127710.0	No./100 ml	2000.0	No./100 ml
Fecal Coliform	10/31/24	Geo Mean	3841.0	No./100 ml	2000.0	No./100 ml
Fecal Coliform	08/31/25	Geo Mean	460813.0	No./100 ml	200.0	No./100 ml
Fecal Coliform	05/31/25	Geo Mean	112387.0	No./100 ml	200.0	No./100 ml
Fecal Coliform	06/30/25	Geo Mean	84943.0	No./100 ml	200.0	No./100 ml
Fecal Coliform	05/31/25	IMAX	340000.0	No./100 ml	1000.0	No./100 ml
Fecal Coliform	08/31/25	IMAX	600000.0	No./100 ml	1000.0	No./100 ml
Fecal Coliform	07/31/25	IMAX	570000.0	No./100 ml	1000.0	No./100 ml
Fecal Coliform	02/28/25	IMAX	240000	No./100 ml	10000	No./100 ml
Fecal Coliform	06/30/25	IMAX	440000.0	No./100 ml	1000.0	No./100 ml
Fecal Coliform	10/31/24	IMAX	10200.0	No./100 ml	10000	No./100 ml
Fecal Coliform	11/30/24	IMAX	41500	No./100 ml	10000	No./100 ml
Fecal Coliform	04/30/25	IMAX	112000	No./100 ml	10000	No./100 ml
Fecal Coliform	12/31/24	IMAX	47500	No./100 ml	10000	No./100 ml
Fecal Coliform	03/31/25	IMAX	260000	No./100 ml	10000	No./100 ml
Fecal Coliform	01/31/25	IMAX	90000	No./100 ml	10000	No./100 ml
Ammonia	08/31/25	Avg Mo	176.0	lbs/day	90.0	lbs/day
Ammonia	07/31/25	Avg Mo	167.4	lbs/day	90.0	lbs/day

Ammonia	06/30/25	Avg Mo	120.5	lbs/day	90.0	lbs/day
Ammonia	03/31/25	Avg Mo	140.2	lbs/day	135.0	lbs/day
Ammonia	05/31/25	Avg Mo	179.1	lbs/day	90.0	lbs/day
Ammonia	04/30/25	Avg Mo	34.3	mg/L	25.0	mg/L
Ammonia	03/31/25	Avg Mo	49.1	mg/L	25.0	mg/L
Ammonia	07/31/25	Avg Mo	37.5	mg/L	17.5	mg/L
Ammonia	02/28/25	Avg Mo	30.9	mg/L	25.0	mg/L
Ammonia	05/31/25	Avg Mo	52.2	mg/L	17.5	mg/L
Ammonia	08/31/25	Avg Mo	59.3	mg/L	17.5	mg/L
Ammonia	06/30/25	Avg Mo	34.0	mg/L	17.5	mg/L
Ammonia	02/28/25	IMAX	57.79	mg/L	50.0	mg/L
Ammonia	03/31/25	IMAX	57.71	mg/L	50.0	mg/L
Ammonia	07/31/25	IMAX	62.19	mg/L	35.0	mg/L
Ammonia	04/30/25	IMAX	50.09	mg/L	50.0	mg/L
Ammonia	08/31/25	IMAX	92.06	mg/L	35.0	mg/L
Ammonia	05/31/25	IMAX	84.64	mg/L	35.0	mg/L
Ammonia	06/30/25	IMAX	61.74	mg/L	35.0	mg/L

3.1.3 Summary of DMRs:

DMRs reviewed for the facility for the last 12 months of operation, presented on the table above in section 3.1.1 indicates permit limits have not been met consistently. Multiple pH, DO, TSS, Fecal Coliform and Ammonia effluent violations were noted during the period reviewed and presented in section 3.1.2. There are four opened violations for the facility in eFACTS. The facility should address the opened violations, and the continuous effluent violations noted on DMRs and provide in writing to the Department steps taken to address the violations prior to issuance of the final permit. The cover letter of the draft permit will have this statement "According to DEP's records, there are unresolved violations at your facility. In accordance with DEP's Clean Water Program standard operating procedures, an applicant's compliance history is considered prior to making a final decision on any permit application. Please take the opportunity to address these violations during this draft

comment period and provide in writing steps taken to address these violations at the facility. DEP may not be able to issue a final permit until the violations are resolved".

3.1.4 Summary of Inspections:

The facility has been inspected a couple of times during the previous permit cycle. Effluent violations and SSO discharge were noted during plant inspect. Inspection reports indicated the facility has poor operation and maintenance record and the facility has been cited for not reporting pollution incidents at the site in a timely manner. Inspection report documents show the facility has chronic effluent violations that should be addressed.

4.0 Development of Effluent Limitations

Outfall No. 001
Latitude 40° 31' 3.00"
Wastewater Description: Sewage Effluent

Design Flow (MGD) .65
Longitude -79° 10' 1.00"

4.1 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: Total Residual Chlorine limit is not applicable; UV is utilized for disinfection.

4.2 Mass-Based Limits

The federal regulation at 40 CFR 122.45(f) requires that effluent limits be expressed in terms of mass, if possible. The regulation at 40 CFR 122.45(b) requires that effluent limitations for POTWs be calculated based on the design flow of the facility. The mass-based limits are expressed in pounds per day and are calculated as follows: Mass based limit (lb/day) = concentration limit (mg/L) × design flow (mgd) × 8.34

4.3 Water Quality-Based Limitations

4.3.1 WQM 7.0 Stream Model

WQM 7.0 is a water quality model DEP utilizes to establish appropriate effluent limits for CBOD₅, NH₃-N and DO in permits. The model simulates mixing and degradation of NH₃-N in the stream and compares calculated instream NH₃-N concentrations to NH₃-N water quality criteria and also simulates mixing and consumption of D.O. in the stream due to the degradation of CBOD₅ and NH₃N and compares calculated instream D.O. concentrations to D.O. water quality criteria and recommends effluent limits

4.3.2 Stream flows

The drainage area upstream of the discharge location and the Q₇₋₁₀ at discharge point were calculated using USGS streamStats and the results are presented in attachments D. The calculated drainage area upstream of discharge is 170 sq. mi and the Q₇₋₁₀ flow at the discharge point is 13.4 cfs .

The resulting streamflows at the point of discharge are as follows:

$$Q_{7-10} = 13.4 \text{ cfs}$$

Q ₃₀₋₁₀ / Q ₇₋₁₀	= 1.36
Q ₁₋₁₀ / Q ₇₋₁₀	= 0.64

4.3.3 Input for WQM and TMS Models

The following data were used in the WQM and TMS models for water quality analysis of the stream

- Discharge pH = 7.2 (DMR median)
- Discharge Temperature = 25 °C (Default)
- Discharge Hardness = 180 mg/l (Permit Application)

4.3.4 CBOD₅

The attached results of WQM 7.0 stream model (attachment B) indicates a monthly average limit (AML) of 25mg/L CBOD₅ is required to protect the water quality of the stream. The recommended limit is consistent with the existing permit limit and the facility is meeting the limits. Therefore, the existing AML of 25 mg/L, weekly average limit (AWL) of 40mg/L and instantaneous maximum (IMAX) of 50mg/L will remain with 1/week sampling frequency. Mass limits are calculated for AMLs and AWLs following the formula listed in section 4.2 above.

4.3.5 NH₃-N

The attached results of the WQM 7.0 stream model (attachment B) also indicate AML of mg/l 25 NH₃-N and IMAX of 50 mg/L are necessary to protect the aquatic life from toxicity effects. These limits are less stringent than the existing summer AML of 17.5mg/L and IMAX of 35mg/L, but consistent with the existing winter limit. Due to anti-backsliding the existing limits will remain with 1/week sampling frequency. Associated mass limits are calculated following the formula listed in section 4.2 above.

4.3.6 Dissolved Oxygen

The existing permit contains a limit of 6 mg/l for Dissolved Oxygen (DO) based on TSF criteria. DEP's Technical Guidance for the Development and Specification of Effluent Limitations (362-0400-001, 10/97) suggests that either the adopted minimum stream D.O. criteria for the receiving stream or the effluent level determined through water quality modeling be used for the limit. The existing limit of 6.0 mg/L based on TSF criteria will be continued in the renewed permit with a daily monitoring requirement.

4.3.7 Total Suspended Solids (TSS):

There are no water quality criteria for TSS. The existing limit of 30 mg/l AML based on the minimum level of effluent quality attainable by secondary treatment as defined in 40 CFR 133.102b(1) and 25 PA § 92a.47(a)(1) and an AWL of 45mg/L per 40CFR 133.102(b)(2) and 25 PA § 92a.47(a)(2) with their associated mass limit will remain in the permit with the existing sampling frequency of 1/week.

4.3.8 Toxics

The facility receives landfill leachate and was required to submit sample results for pollutant groups 1 - 6. A reasonable potential (RP) analysis was done for the pollutants provided in the application. DEP's Toxics Management Spreadsheet (TMS)(Version 1.4). was used to calculate water quality-based effluent limits (WQBELs). WQBELs recommended by the TMS are presented in attachment C. Monitoring was recommended for Total Copper, Total Zinc and Acrolein. Acrolein was reported as non-detect using a less sensitive analytical method. The permittee will be offered an opportunity to re-sample Acrolein using DEP's target quantitation limit. If the samples are non-detect using the QL, the monitoring requirement will be removed from the final permit. Monitoring Total Copper, Total Zinc and Acrolein 1/month is imposed in the permit to collect addition data for analysis during the next permit renewal.

The recommended limits follow the logic presented in DEPs SOP, to establish limits in the permit where the maximum reported concentration exceeds 50% of the WQBEL, or for non-conservative pollutants to establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL, or to establish monitoring requirements for conservative pollutants where the maximum reported concentration is between 10% - 50% of the WQBEL.

4.3.9 Fecal Coliform and E. Coli

The existing Fecal Coliform limit is consistent with the technology limits recommended in 92a.47(a)(4) and (a)(5) and will remain in the permit. In March of 2021, EPA approved DEP's Triennial Review of Water Quality Standards, which included a new swimming season criterion for E. coli. As a result, DEP is including monitoring requirements for E. Coli in new and renewed sewage permits above 2000gpd. Monitoring frequency is based on annual average flow as follows: 1/month for design flows ≥ 1 MGD, 1/quarter for design flows ≥ 0.05 and < 1 MGD and 1/year for design flows of 0.002 and < 0.05 MGD. Your discharge of 0.65 MGD requires 1/quarterly monitoring as included in the permit.

4.3.10 Best Professional Judgment (BPJ) Limitations

The existing daily UV transmittance (%) monitoring and quarterly monitoring for Total Nitrogen and Total Phosphorus will remain in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits".

4.3.11 Influent BOD and TSS Monitoring

The existing influent BOD5 and TSS monitoring at the same frequency as is done for effluent will remain in order to implement Chapter 94.12 and assess percent removal requirements.

4.3.12 Flow Monitoring

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

4.3.13 Pretreatment Requirements

The design annual average flow of the treatment plant is 0.65 MGD and the facility receives flow from no significant Industrial users. There is no approved pretreatment program for the facility, however, the permit contains standard conditions requiring the permittee to monitor and control industrial users if applicable.

5.0 Other Considerations and Requirements

5.1 The permit contains the following special conditions:

1. Stormwater Prohibition.
2. Approval Contingencies.
3. Collected screenings management.
4. Restriction on receipt of hauled in waste under certain conditions.
5. Solids Management.

5.2 Anti-Degradation (93.4)

The effluent limits for this discharge 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. No High-Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

5.3 Class A Wild Trout Fisheries

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

5.4 TMDLs for Streams Impaired by Acid Mine Drainage in the Kiskiminetas-Conemaugh River Watershed

The discharge is to the Two Lick Creek which is part of the Kiskiminetas-Conemaugh River Watershed. The Kiskiminetas-Conemaugh River Watershed TMDL was completed on January 29, 2010 for the control of acid mine drainage pollutants: aluminum, iron, manganese, sediment and pH. This facility is listed as a negligible discharger in Appendix C of the approved TMDL and is covered under the aggregate WLA for negligible dischargers in Appendix G ("Negligible Discharge Gross WLAs" tab). The TMDL ("Non-Mining NPDES Permits") states that "EPA developed aggregate WLAs based on the sum of the available information regarding flow from each facility multiplied by the applicable numeric water quality criterion." Therefore, this facility's WLA was based on a flow of 0.65 MGD and the criterion for each pollutant of concern (aluminum, iron, and manganese). Based upon the facility's application data for these parameters, the discharge

has no reasonable potential to exceed the TMDL WLAs. The existing quarterly monitoring requirements imposed for Iron, Manganese, and Aluminum for plants rated higher than 0.499 mgd will remain in the permit.

5.5 Anti-Backsliding

Not Applicable

6.0 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	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	9.0 Daily Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	6.0	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	135.0	215.0	XXX	25.0	40.0	50	1/week	8-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Total Suspended Solids	160.0	240.0	XXX	30.0	45.0	60	1/week	8-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/week	8-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000.0 Geo Mean	XXX	10000	1/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200.0 Geo Mean	XXX	1000.0	1/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
Ultraviolet light transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	135.0	XXX	XXX	25.0	XXX	50.0	1/week	8-Hr Composite

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

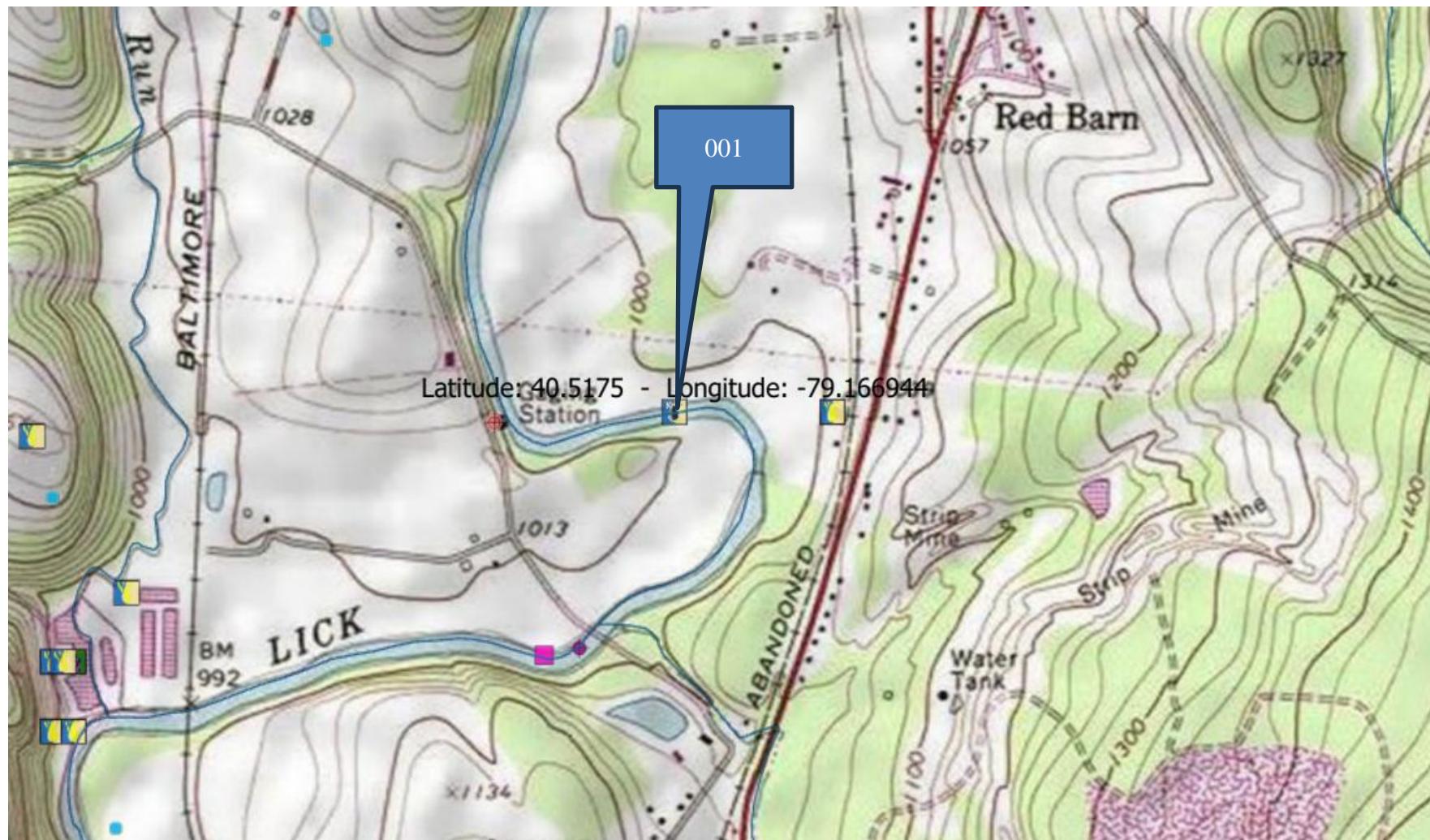
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia-Nitrogen May 1 - Oct 31	90.0	XXX	XXX	17.5	XXX	35.0	1/week	8-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Aluminum, Total	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Copper, Total	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Iron, Total	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Manganese, Total	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	8-Hr Composite
Zinc, Total	Report	XXX	XXX	Report	XXX	XXX	1/month	8-Hr Composite
Acrolein	XXX	XXX	XXX	Report	XXX	XXX	1/month	Grab

Compliance Sampling Location: At Outfall 001

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

Attachments

A. Topographical Map



B. WQM Model Results

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name					
		18D	44073	TWO LICK CREEK			
RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
4.440	Homer City STP	PA00204994	0.650	CBOD5	25		
				NH3-N	25	50	
				Dissolved Oxygen			6

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
18D	44073	TWO LICK CREEK	4.440	995.00	170.00	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data											
Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Stream pH	Temp pH
	(cfsm)	(cfs)	(cfs)								
Q7-10	0.100	0.00	13.40	0.000	0.000	0.0	0.00	0.00	20.00	7.00	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
Homer City STP	PA00204994	0.6500	0.6500	0.6500	0.000	25.00	7.20
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		6.00	8.24	0.00	0.00		
NH3-N		25.00	0.00	0.00	0.70		

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18D	44073	TWO LICK CREEK	2.000	970.00	172.00	0.00000	0.00	<input checked="" type="checkbox"/>

Stream Data

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

Discharge Data

Name	Permit Number	Existing	Permitted	Design	Reserve Factor	Disc Temp	Disc pH
		Disc Flow (mgd)	Disc Flow (mgd)	Disc Flow (mgd)			
		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		6.00	8.24	0.00	0.00		
NH3-N		25.00	0.00	0.00	0.70		

WQM 7.0 Hydrodynamic Outputs

SWP Basin			Stream Code		Stream Name							
18D			44073		TWO LICK CREEK							
RMI	Stream Flow	PWS With	Net Stream Flow	Disc Analysis Flow	Reach Slope	Depth	Width	W/D Ratio	Velocity	Reach Trav Time	Analysis Temp	Analysis pH
(cfs)	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft)	(ft)		(fps)	(days)	(°C)	
Q7-10 Flow												
4.440	13.40	0.00	13.40	1.0055	0.00194	.834	61.81	74.12	0.28	0.533	20.35	7.01
Q1-10 Flow												
4.440	8.58	0.00	8.58	1.0055	0.00194	NA	NA	NA	0.22	0.670	20.52	7.02
Q30-10 Flow												
4.440	18.22	0.00	18.22	1.0055	0.00194	NA	NA	NA	0.33	0.454	20.26	7.01

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	6		

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>		<u>Stream Code</u>	<u>Stream Name</u>									
18D	44073	TWO LICK CREEK										
NH3-N Acute Allocations												
<hr/>												
RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction					
4.440	Homer City STP	15.8	50	15.8	50	0	0					
NH3-N Chronic Allocations												
<hr/>												
RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction					
4.440	Homer City STP	1.85	25	1.85	25	0	0					
Dissolved Oxygen Allocations												
<hr/>												
RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>						
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)					
4.44	Homer City STP	25	25	25	25	6	6					
						0	0					

WQM 7.0 D.O.Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>			
18D	44073	TWO LICK CREEK			
<u>RMI</u>		<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>	
4.440		0.650	20.349	7.011	
<u>Reach Width (ft)</u>		<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>	
61.806		0.834	74.116	0.279	
<u>Reach CBOD5 (mg/L)</u>		<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>	<u>Reach Kn (1/days)</u>	
3.61		0.579	1.75	0.719	
<u>Reach DO (mg/L)</u>		<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>	
8.086		3.732	Tsivoglou	6	
<u>Reach Travel Time (days)</u>		<u>Subreach Results</u>			
0.533		TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
		0.053	3.49	1.68	7.85
		0.107	3.39	1.62	7.66
		0.160	3.28	1.56	7.53
		0.213	3.18	1.50	7.43
		0.267	3.08	1.44	7.37
		0.320	2.99	1.39	7.33
		0.373	2.89	1.33	7.30
		0.427	2.80	1.28	7.30
		0.480	2.72	1.24	7.31
		0.533	2.63	1.19	7.32



Discharge Information

Instructions **Discharge** Stream

Facility: Central Indiana JSA - Homer City STP NPDES Permit No.: PA0204994 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	
0.65	180	7.2				

		Discharge Pollutant	Units	Max Discharge Conc	0 if left blank		0.5 if left blank		0 if left blank		1 if left blank		
Group 1	Group 2				Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
		Total Dissolved Solids (PWS)	mg/L	584									
		Chloride (PWS)	mg/L	191									
		Bromide	mg/L	< 0.63									
		Sulfate (PWS)	mg/L	50.8									
		Fluoride (PWS)	mg/L	<									
		Total Aluminum	µg/L	86.2									
		Total Antimony	µg/L	< 1									
		Total Arsenic	µg/L	1.8									
		Total Barium	µg/L	58									
		Total Beryllium	µg/L	< 1									
		Total Boron	µg/L	0.76									
		Total Cadmium	µg/L	< 0.2									
		Total Chromium (III)	µg/L	< 7.2									
		Hexavalent Chromium	µg/L	< 0.001									
		Total Cobalt	µg/L	< 3.2									
		Total Copper	µg/L	7.2									
		Free Cyanide	µg/L	< 10									
		Total Cyanide	µg/L	< 14									
		Dissolved Iron	µg/L	70									
		Total Iron	µg/L	96.2									
		Total Lead	µg/L	< 1									
		Total Manganese	µg/L	72.6									
		Total Mercury	µg/L	< 0.2									
		Total Nickel	µg/L	< 13.4									
		Total Phenols (Phenolics) (PWS)	µg/L	< 0.5									
		Total Selenium	µg/L	< 1									
		Total Silver	µg/L	< 0.2									
		Total Thallium	µg/L	< 0.2									
		Total Zinc	µg/L	65.4									
		Total Molybdenum	µg/L	< 1.3									
		Acrolein	µg/L	< 4									
		Acrylamide	µg/L										
		Acrylonitrile	µg/L	< 1									
		Benzene	µg/L	< 0.5									
		Bromoform	µg/L	< 1									



Stream / Surface Water Information

Central Indiana JSA - Homer City STP, NPDES Permit No. PA0204994, Outfall 001

Instructions **Discharge** Stream

Receiving Surface Water Name: **Two Lick Creek**

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	044073	4.44	995	170			Yes
End of Reach 1	044073	2	970	172			Yes

Q₇₋₁₀

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	4.44	0.1	13.4									100	7		
End of Reach 1	2	0.1													

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	4.44														
End of Reach 1	2														



Model Results

Central Indiana JSA - Homer City STP, NPDES Permit No. PA0204994, Outfall 001

Instructions	Results	RETURN TO INPUTS	SAVE AS PDF	PRINT	<input checked="" type="radio"/> All	<input type="radio"/> Inputs	<input type="radio"/> Results	<input type="radio"/> Limits
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Hydrodynamics

Wasteload Allocations

AFC

CCT (min):

PMF:

Analysis Hardness (mg/l):

Analysis pH:

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	4,081	
Total Antimony	0	0		0	1,100	1,100	5,985	
Total Arsenic	0	0		0	340	340	1,850	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	114,265	
Total Boron	0	0		0	8,100	8,100	44,073	
Total Cadmium	0	0		0	2.301	2.45	13.3	Chem Translator of 0.938 applied
Total Chromium (III)	0	0		0	637.508	2,017	10,977	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	15.730	16.0	87.2	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	517	
Total Copper	0	0		0	15.293	15.9	86.7	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	120	
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	74.960	97.2	529	Chem Translator of 0.771 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	8.96	Chem Translator of 0.85 applied
Total Nickel	0	0		0	525.853	527	2,867	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	4.073	4.79	26.1	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	354	
Total Zinc	0	0		0	131.623	135	732	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	16.3	

Acrylonitrile	0	0		0	650	650	3,537
Benzene	0	0		0	640	640	3,482
Bromoform	0	0		0	1,800	1,800	9,794
Carbon Tetrachloride	0	0		0	2,800	2,800	15,235
Chlorobenzene	0	0		0	1,200	1,200	6,529
Chlorodibromomethane	0	0		0	N/A	N/A	N/A
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	97,941
Chloroform	0	0		0	1,900	1,900	10,338
Dichlorobromomethane	0	0		0	N/A	N/A	N/A
1,2-Dichloroethane	0	0		0	15,000	15,000	81,618
1,1-Dichloroethylene	0	0		0	7,500	7,500	40,809
1,2-Dichloropropane	0	0		0	11,000	11,000	59,853
1,3-Dichloropropylene	0	0		0	310	310	1,687
Ethylbenzene	0	0		0	2,900	2,900	15,779
Methyl Bromide	0	0		0	550	550	2,993
Methyl Chloride	0	0		0	28,000	28,000	152,353
Methylene Chloride	0	0		0	12,000	12,000	65,294
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	5,441
Tetrachloroethylene	0	0		0	700	700	3,809
Toluene	0	0		0	1,700	1,700	9,250
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	37,000
1,1,1-Trichloroethane	0	0		0	3,000	3,000	16,324
1,1,2-Trichloroethane	0	0		0	3,400	3,400	18,500
Trichloroethylene	0	0		0	2,300	2,300	12,515
Vinyl Chloride	0	0		0	N/A	N/A	N/A
2-Chlorophenol	0	0		0	560	560	3,047
2,4-Dichlorophenol	0	0		0	1,700	1,700	9,250
2,4-Dimethylphenol	0	0		0	660	660	3,591
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	435
2,4-Dinitrophenol	0	0		0	660	660	3,591
2-Nitrophenol	0	0		0	8,000	8,000	43,529
4-Nitrophenol	0	0		0	2,300	2,300	12,515
p-Chloro-m-Cresol	0	0		0	160	160	871
Pentachlorophenol	0	0		0	8.995	8.99	48.9
Phenol	0	0		0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0		0	460	460	2,503
Acenaphthene	0	0		0	83	83.0	452
Anthracene	0	0		0	N/A	N/A	N/A
Benzidine	0	0		0	300	300	1,632
Benzo(a)Anthracene	0	0		0	0.5	0.5	2.72
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	163,235
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	24,485
4-Bromophenyl Phenyl Ether	0	0		0	270	270	1,469
Butyl Benzyl Phthalate	0	0		0	140	140	762

2-Chloronaphthalene	0	0		0	N/A	N/A	N/A
Chrysene	0	0		0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0		0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0		0	820	820	4,462
1,3-Dichlorobenzene	0	0		0	350	350	1,904
1,4-Dichlorobenzene	0	0		0	730	730	3,972
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A
Diethyl Phthalate	0	0		0	4,000	4,000	21,765
Dimethyl Phthalate	0	0		0	2,500	2,500	13,603
Di-n-Butyl Phthalate	0	0		0	110	110	599
2,4-Dinitrotoluene	0	0		0	1,600	1,600	8,706
2,6-Dinitrotoluene	0	0		0	990	990	5,387
1,2-Diphenylhydrazine	0	0		0	15	15.0	81.6
Fluoranthene	0	0		0	200	200	1,088
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	54.4
Hexachlorocyclopentadiene	0	0		0	5	5.0	27.2
Hexachloroethane	0	0		0	60	60.0	326
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A
Isophorone	0	0		0	10,000	10,000	54,412
Naphthalene	0	0		0	140	140	762
Nitrobenzene	0	0		0	4,000	4,000	21,765
n-Nitrosodimethylamine	0	0		0	17,000	17,000	92,500
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A
n-Nitrosodiphenylamine	0	0		0	300	300	1,632
Phenanthrene	0	0		0	5	5.0	27.2
Pyrene	0	0		0	N/A	N/A	N/A
1,2,4-Trichlorobenzene	0	0		0	130	130	707
Aldrin	0	0		0	3	3.0	16.3
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	5.17
Chlordane	0	0		0	2.4	2.4	13.1
4,4-DDT	0	0		0	1.1	1.1	5.99
4,4-DDE	0	0		0	1.1	1.1	5.99
4,4-DDD	0	0		0	1.1	1.1	5.99
Dieldrin	0	0		0	0.24	0.24	1.31
alpha-Endosulfan	0	0		0	0.22	0.22	1.2
beta-Endosulfan	0	0		0	0.22	0.22	1.2
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A
Endrin	0	0		0	0.086	0.086	0.47
Endrin Aldehyde	0	0		0	N/A	N/A	N/A
Heptachlor	0	0		0	0.52	0.52	2.83
Heptachlor Epoxide	0	0		0	0.5	0.5	2.72
Toxaphene	0	0		0	0.73	0.73	3.97

CFC

CCT (min): #####

PMF: 1

Analysis Hardness (mg/l): 105.58

Analysis pH: 7.01

Model Results

11/4/2025

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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	3,152	
Total Arsenic	0	0		0	148	148	2,120	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	58,737	
Total Boron	0	0		0	1,600	1,600	22,922	
Total Cadmium	0	0		0	0.255	0.28	4.04	Chem Translator of 0.907 applied
Total Chromium (III)	0	0		0	77.487	90.1	1,291	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	149	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	272	
Total Copper	0	0		0	9.381	9.77	140	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	74.5	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	21,489	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.670	3.41	48.8	Chem Translator of 0.783 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	13.0	Chem Translator of 0.85 applied
Total Nickel	0	0		0	54.453	54.6	782	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	71.5	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	186	
Total Zinc	0	0		0	123.705	125	1,797	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	43.0	
Acrylonitrile	0	0		0	130	130	1,862	
Benzene	0	0		0	130	130	1,862	
Bromoform	0	0		0	370	370	5,301	
Carbon Tetrachloride	0	0		0	560	560	8,023	
Chlorobenzene	0	0		0	240	240	3,438	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	50,141	
Chloroform	0	0		0	390	390	5,587	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	44,411	
1,1-Dichloroethylene	0	0		0	1,500	1,500	21,489	
1,2-Dichloropropane	0	0		0	2,200	2,200	31,517	
1,3-Dichloropropylene	0	0		0	61	61.0	874	
Ethylbenzene	0	0		0	580	580	8,309	
Methyl Bromide	0	0		0	110	110	1,576	
Methyl Chloride	0	0		0	5,500	5,500	78,793	

Methylene Chloride	0	0	0	2,400	2,400	34,382
1,1,2,2-Tetrachloroethane	0	0	0	210	210	3,008
Tetrachloroethylene	0	0	0	140	140	2,006
Toluene	0	0	0	330	330	4,728
1,2-trans-Dichloroethylene	0	0	0	1,400	1,400	20,056
1,1,1-Trichloroethane	0	0	0	610	610	8,739
1,1,2-Trichloroethane	0	0	0	680	680	9,742
Trichloroethylene	0	0	0	450	450	6,447
Vinyl Chloride	0	0	0	N/A	N/A	N/A
2-Chlorophenol	0	0	0	110	110	1,576
2,4-Dichlorophenol	0	0	0	340	340	4,871
2,4-Dimethylphenol	0	0	0	130	130	1,862
4,6-Dinitro-o-Cresol	0	0	0	16	16.0	229
2,4-Dinitrophenol	0	0	0	130	130	1,862
2-Nitrophenol	0	0	0	1,600	1,600	22,922
4-Nitrophenol	0	0	0	470	470	6,733
p-Chloro-m-Cresol	0	0	0	500	500	7,163
Pentachlorophenol	0	0	0	6.901	6.9	98.9
Phenol	0	0	0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0	0	91	91.0	1,304
Acenaphthene	0	0	0	17	17.0	244
Anthracene	0	0	0	N/A	N/A	N/A
Benzidine	0	0	0	59	59.0	845
Benzo(a)Anthracene	0	0	0	0.1	0.1	1.43
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	85,956
Bis(2-Chloroisopropyl)Ether	0	0	0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0	0	910	910	13,037
4-Bromophenyl Phenyl Ether	0	0	0	54	54.0	774
Butyl Benzyl Phthalate	0	0	0	35	35.0	501
2-Chloronaphthalene	0	0	0	N/A	N/A	N/A
Chrysene	0	0	0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0	0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0	0	160	160	2,292
1,3-Dichlorobenzene	0	0	0	69	69.0	988
1,4-Dichlorobenzene	0	0	0	150	150	2,149
3,3-Dichlorobenzidine	0	0	0	N/A	N/A	N/A
Diethyl Phthalate	0	0	0	800	800	11,461
Dimethyl Phthalate	0	0	0	500	500	7,163
Di-n-Butyl Phthalate	0	0	0	21	21.0	301
2,4-Dinitrotoluene	0	0	0	320	320	4,584
2,6-Dinitrotoluene	0	0	0	200	200	2,865
1,2-Diphenylhydrazine	0	0	0	3	3.0	43.0

Fluoranthene	0	0		0	40	40.0	573	
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	28.7	
Hexachlorocyclopentadiene	0	0		0	1	1.0	14.3	
Hexachloroethane	0	0		0	12	12.0	172	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	30,085	
Naphthalene	0	0		0	43	43.0	616	
Nitrobenzene	0	0		0	810	810	11,604	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	48,709	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	845	
Phenanthrene	0	0		0	1	1.0	14.3	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	372	
Aldrin	0	0		0	0.1	0.1	1.43	
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	0.062	
4,4-DDT	0	0		0	0.001	0.001	0.014	
4,4-DDE	0	0		0	0.001	0.001	0.014	
4,4-DDD	0	0		0	0.001	0.001	0.014	
Dieldrin	0	0		0	0.056	0.056	0.8	
alpha-Endosulfan	0	0		0	0.056	0.056	0.8	
beta-Endosulfan	0	0		0	0.056	0.056	0.8	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	0.52	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.054	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.054	
Toxaphene	0	0		0	0.0002	0.0002	0.003	

THH

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	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	80.2	
Total Arsenic	0	0		0	10	10.0	143	
Total Barium	0	0		0	2,400	2,400	34,382	

Total Boron	0	0	0	3,100	3,100	44,411
Total Cadmium	0	0	0	N/A	N/A	N/A
Total Chromium (III)	0	0	0	N/A	N/A	N/A
Hexavalent Chromium	0	0	0	N/A	N/A	N/A
Total Cobalt	0	0	0	N/A	N/A	N/A
Total Copper	0	0	0	N/A	N/A	N/A
Free Cyanide	0	0	0	4	4.0	57.3
Dissolved Iron	0	0	0	300	300	4,298
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	14,326
Total Mercury	0	0	0	0.003	0.003	0.044
Total Nickel	0	0	0	610	610	8,739
Total Phenols (Phenolics) (PWS)	0	0	0	5	5.0	N/A
Total Selenium	0	0	0	N/A	N/A	N/A
Total Silver	0	0	0	N/A	N/A	N/A
Total Thallium	0	0	0	0.24	0.24	3.44
Total Zinc	0	0	0	N/A	N/A	N/A
Acrolein	0	0	0	3	3.0	43.0
Acrylonitrile	0	0	0	N/A	N/A	N/A
Benzene	0	0	0	N/A	N/A	N/A
Bromoform	0	0	0	N/A	N/A	N/A
Carbon Tetrachloride	0	0	0	N/A	N/A	N/A
Chlorobenzene	0	0	0	100	100.0	1,433
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	81.7
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	473
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	974
Methyl Bromide	0	0	0	100	100.0	1,433
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	817
1,2-trans-Dichloroethylene	0	0	0	100	100.0	1,433
1,1,1-Trichloroethane	0	0	0	10,000	10,000	143,260
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	430

2,4-Dichlorophenol	0	0		0	10	10.0	143
2,4-Dimethylphenol	0	0		0	100	100.0	1,433
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	28.7
2,4-Dinitrophenol	0	0		0	10	10.0	143
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	57,304
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A
Acenaphthene	0	0		0	70	70.0	1,003
Anthracene	0	0		0	300	300	4,298
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	2,865
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A
Butyl Benzyl Phthalate	0	0		0	0.1	0.1	1.43
2-Chloronaphthalene	0	0		0	800	800	11,461
Chrysene	0	0		0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0		0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0		0	1,000	1,000	14,326
1,3-Dichlorobenzene	0	0		0	7	7.0	100
1,4-Dichlorobenzene	0	0		0	300	300	4,298
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A
Diethyl Phthalate	0	0		0	600	600	8,596
Dimethyl Phthalate	0	0		0	2,000	2,000	28,652
Di-n-Butyl Phthalate	0	0		0	20	20.0	287
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	287
Fluorene	0	0		0	50	50.0	716
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	57.3
Hexachloroethane	0	0		0	N/A	N/A	N/A
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A
Isophorone	0	0		0	34	34.0	487
Naphthalene	0	0		0	N/A	N/A	N/A
Nitrobenzene	0	0		0	10	10.0	143

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	287
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	1.0
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	0.47	0.47	6.73
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	287
beta-Endosulfan	0	0		0	20	20.0	287
Endosulfan Sulfate	0	0		0	20	20.0	287
Endrin	0	0		0	0.03	0.03	0.43
Endrin Aldehyde	0	0		0	1	1.0	14.3
Heptachlor	0	0		0	N/A	N/A	N/A
Heptachlor Epoxide	0	0		0	N/A	N/A	N/A
Toxaphene	0	0		0	N/A	N/A	N/A

CRL

CCT (min): 52.107

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
Acrylonitrile	0	0		0	0.06	0.06	4.34
Benzene	0	0		0	0.58	0.58	42.0
Bromoform	0	0		0	7	7.0	507
Carbon Tetrachloride	0	0		0	0.4	0.4	29.0
Chlorobenzene	0	0		0	N/A	N/A	N/A
Chlorodibromomethane	0	0		0	0.8	0.8	57.9
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	68.8
1,2-Dichloroethane	0	0		0	9.9	9.9	717
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A
1,2-Dichloropropane	0	0		0	0.9	0.9	65.2
1,3-Dichloropropylene	0	0		0	0.27	0.27	19.5
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	4.7	4.7	340
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	14.5
Tetrachloroethylene	0	0		0	10	10.0	724
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	39.8
Trichloroethylene	0	0		0	0.6	0.6	43.4
Vinyl Chloride	0	0		0	0.02	0.02	1.45
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	2.17
Phenol	0	0		0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	109

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	0.007
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.072
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.007
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.072
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.72
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	2.17
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	23.2
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A
Chrysene	0	0		0	0.12	0.12	8.69
Dibenzo(a,h)Anthracene	0	0		0	0.0001	0.0001	0.007
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	3.62
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	3.62
2,6-Dinitrotoluene	0	0		0	0.05	0.05	3.62
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	2.17
Fluoranthene	0	0		0	N/A	N/A	N/A
Fluorene	0	0		0	N/A	N/A	N/A
Hexachlorobenzene	0	0		0	0.000045	0.00005	0.003
Hexachlorobutadiene	0	0		0	0.01	0.01	0.72
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A
Hexachloroethane	0	0		0	0.1	0.1	7.24
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.072
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	0.051
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.36
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	239
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	0.00006
alpha-BHC	0	0		0	0.0004	0.0004	0.029
beta-BHC	0	0		0	0.008	0.008	0.58
gamma-BHC	0	0		0	N/A	N/A	N/A

Chlordane	0	0		0	0.000025	0.00003	0.002	
4,4-DDT	0	0		0	0.000015	0.00002	0.001	
4,4-DDE	0	0		0	0.00002	0.00002	0.001	
4,4-DDD	0	0		0	0.0001	0.0001	0.007	
Dieldrin	0	0		0	6.5E-07	6.50E-07	0.00005	
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	0.0004	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.002	
Toxaphene	0	0		0	0.0000068	0.000007	0.0005	

Recommended WQBELs & Monitoring Requirements

No. Samples/Month: 4

Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Total Copper	Report	Report	Report	Report	Report	µg/L	55.6	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	469	AFC	Discharge Conc > 10% WQBEL (no RP)
Acrolein	Report	Report	Report	Report	Report	µg/L	10.5	AFC	Discharge Conc > 25% WQBEL (no RP)

Other Pollutants without Limits or Monitoring

The following pollutants do not require effluent limits or monitoring based on water quality because reasonable potential to exceed water quality criteria was not determined and the discharge concentration was less than thresholds for monitoring, or the pollutant was not detected and a sufficiently sensitive analytical method was used (e.g., <= Target QL).

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	2,616	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	143	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	34,382	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	22,922	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	4.04	µg/L	Discharge Conc < TQL

Total Chromium (III)	1,291	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	55.9	µg/L	Discharge Conc < TQL
Total Cobalt	272	µg/L	Discharge Conc ≤ 10% WQBEL
Free Cyanide	57.3	µg/L	Discharge Conc ≤ 25% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	4,298	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	21,489	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	48.8	µg/L	Discharge Conc < TQL
Total Manganese	14,326	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.003	µg/L	Discharge Conc < TQL
Total Nickel	782	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	71.5	µg/L	Discharge Conc < TQL
Total Silver	16.7	µg/L	Discharge Conc < TQL
Total Thallium	3.44	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrylonitrile	4.34	µg/L	Discharge Conc < TQL
Benzene	42.0	µg/L	Discharge Conc < TQL
Bromoform	507	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	29.0	µg/L	Discharge Conc < TQL
Chlorobenzene	1,433	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	57.9	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	50,141	µg/L	Discharge Conc < TQL
Chloroform	81.7	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	68.8	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	717	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	473	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	65.2	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	19.5	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	974	µg/L	Discharge Conc < TQL
Methyl Bromide	1,433	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	78,793	µg/L	Discharge Conc < TQL
Methylene Chloride	340	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	14.5	µg/L	Discharge Conc < TQL
Tetrachloroethylene	724	µg/L	Discharge Conc < TQL
Toluene	817	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	1,433	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	8,739	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	39.8	µg/L	Discharge Conc ≤ 25% WQBEL
Trichloroethylene	43.4	µg/L	Discharge Conc < TQL
Vinyl Chloride	1.45	µg/L	Discharge Conc < TQL
2-Chlorophenol	430	µg/L	Discharge Conc < TQL

2,4-Dichlorophenol	143	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	1,433	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	28.7	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	143	µg/L	Discharge Conc < TQL
2-Nitrophenol	22,922	µg/L	Discharge Conc < TQL
4-Nitrophenol	6,733	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	558	µg/L	Discharge Conc < TQL
Pentachlorophenol	2.17	µg/L	Discharge Conc < TQL
Phenol	57,304	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	109	µg/L	Discharge Conc < TQL
Acenaphthene	244	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	4,298	µg/L	Discharge Conc < TQL
Benzidine	0.007	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.072	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.007	µg/L	Discharge Conc < TQL
3,4-Benzo fluoranthene	0.072	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.72	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	2.17	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	2,865	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	23.2	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	774	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	1.43	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	11,461	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	8.69	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthracene	0.007	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	2,292	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	100	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	2,149	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	3.62	µg/L	Discharge Conc < TQL
Diethyl Phthalate	8,596	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	7,163	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	287	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	3.62	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	3.62	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	2.17	µg/L	Discharge Conc < TQL
Fluoranthene	287	µg/L	Discharge Conc < TQL
Fluorene	716	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.00005	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.01	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	14.3	µg/L	Discharge Conc < TQL

Hexachloroethane	7.24	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.072	µg/L	Discharge Conc < TQL
Isophorone	487	µg/L	Discharge Conc < TQL
Naphthalene	488	µg/L	Discharge Conc < TQL
Nitrobenzene	143	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.051	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.36	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	239	µg/L	Discharge Conc < TQL
Phenanthrene	14.3	µg/L	Discharge Conc < TQL
Pyrene	287	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	1.0	µg/L	Discharge Conc < TQL
Aldrin	0.00006	µg/L	Discharge Conc < TQL
alpha-BHC	0.029	µg/L	Discharge Conc < TQL
beta-BHC	0.58	µg/L	Discharge Conc < TQL
gamma-BHC	0.47	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.00003	µg/L	Discharge Conc < TQL
4,4-DDT	0.00002	µg/L	Discharge Conc < TQL
4,4-DDE	0.00002	µg/L	Discharge Conc < TQL
4,4-DDD	0.0001	µg/L	Discharge Conc < TQL
Dieldrin	6.50E-07	µg/L	Discharge Conc < TQL
alpha-Endosulfan	0.77	µg/L	Discharge Conc < TQL
beta-Endosulfan	0.77	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	287	µg/L	Discharge Conc < TQL
Endrin	0.3	µg/L	Discharge Conc < TQL
Endrin Aldehyde	14.3	µg/L	Discharge Conc < TQL
Heptachlor	0.0004	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.002	µg/L	Discharge Conc < TQL
Toxaphene	0.00007	µg/L	Discharge Conc < TQL