

Application Type Renewal  
Facility Type Municipal  
Major / Minor Major

**NPDES PERMIT FACT SHEET  
INDIVIDUAL SEWAGE**

Application No. PA0026751  
APS ID 1128581  
Authorization ID 1511785

**Applicant and Facility Information**

Applicant Name	<u>Indiana Borough</u>	Facility Name	<u>Indiana Borough WWTP</u>
Applicant Address	<u>80 N 8th Street</u> <u>Indiana, PA 15701</u>	Facility Address	<u>1678 Wayne Avenue</u> <u>Indiana, PA 15701</u>
Applicant Contact	<u>Roland Francis</u>	Facility Contact	<u>Bradley Rousell</u>
Applicant Phone	<u>(724) 479-9766</u>	Facility Phone	<u>(724) 479-9766</u>
Applicant Email	<u>rfrancis@indianaboro.com</u>	Facility Email	<u>brousell@indianaboro.com</u>
Client ID	<u>6344</u>	Site ID	<u>246617</u>
Ch 94 Load Status	<u>Existing Hydraulic Overload</u>	Municipality	<u>Indiana Borough</u>
Connection Status	<u>Dept. Imposed Connection Prohibitions</u>	County	<u>Indiana</u>
Date Application Received	<u>January 6, 2025</u>	EPA Waived?	<u>No</u>
Date Application Accepted	<u>August 28, 2025</u>	If No, Reason	<u>Major Facility, Pretreatment</u>
Purpose of Application	<u>NPDES Permit Renewal for a Municipal Wastewater Treatment Plant</u>		

**Summary of Review**

This is a NPDES Permit Renewal for a Municipal Wastewater Treatment Plant for an Existing Design Flow of 8.2 MGD. The WWTP is serving Indiana Borough and White Township in Indiana County.

The Borough is implementing an approved pretreatment program administered by EPA.

Sludge use and disposal description and location(s): Dewatered sludge is hauled to the Evergreen Landfill located at 1310 Luciusboro Rd, Coral, PA in Center Township, Indiana County for final disposal.

Act 14 – Proof of Notification was submitted and received.

This facility is currently using eDMR system.

SPECIAL CONDITIONS: NONE.

There are NO open violations in WMS for the subject Client ID (6344) as of February 24, 2026.

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		Aeshah Shameseldin Aeshah Shameseldin / Project Manager	February 24, 2026
X		Adam Olesnanik Adam Olesnanik, P.E. / Environmental Engineer Manager	April 3, 2026

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>8.2</u>
Latitude	<u>40° 34' 14.30"</u>	Longitude	<u>-79° 9' 40.80"</u>
Wastewater Description:	<u>Sewage Effluent</u>		
Outfall No.	<u>101</u>	Design Flow (MGD)	<u>0</u>
Latitude	<u>40° 34' 26.86"</u>	Longitude	<u>-79° 9' 48.31"</u>
Outfall No.	<u>102</u>	Design Flow (MGD)	<u>0</u>
Latitude	<u>40° 34' 26.03"</u>	Longitude	<u>-79° 9' 49.18"</u>
Wastewater Description:	<u>Stormwater</u>		
Quad Name	<u>Indiana</u>	Quad Code	<u>40079E2</u>
Receiving Waters	<u>Stoney Run (CWF) at confluence with Two Lick Creek (CWF)</u>	Stream Code	<u>44073</u>
NHD Com ID	<u>123720064</u>	RMI for Outfall 001	<u>9.14</u>
Drainage Area	<u>95.4 square miles</u>	Yield (cfs/mi <sup>2</sup> )	<u>0.13</u>
Q <sub>7-10</sub> Flow (cfs)	<u>12.40</u>	Q <sub>7-10</sub> Basis	<u>Calculated*</u>
Elevation (ft)	<u>1036</u>	Slope (ft/ft)	<u>---</u>
Watershed No.	<u>18-D</u>	Chapter 93 Class.	<u>CWF</u>
Existing Use	<u>---</u>	Existing Use Qualifier	<u>---</u>
Exceptions to Use	<u>---</u>	Exceptions to Criteria	<u>---</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Organic Enrichment, Siltation</u>		
Source(s) of Impairment	<u>Municipal Point Source Discharges, Streambank Modifications/Destabilization</u>		
TMDL Status	<u>Final, Tentative</u>	Name	<u>Kiskiminetas-Conemaugh River Watersheds TMDL, McCarthy Creek</u>
Background/Ambient Data		Data Source	
pH (SU)	<u>7.0</u>	Default	
Temperature (°F)	<u>68</u>	Default	
Hardness (mg/L)	<u>131</u>	Background Sampling Results Submitted with the Renewal Application	
Other:	<u>---</u>	---	
Nearest Downstream Public Water Supply Intake	<u>Buffalo Township Municipal Water Authority - Freeport</u>		
PWS Waters	<u>Allegheny River</u>	Flow at Intake (cfs)	<u>---</u>
PWS RMI	<u>30.0</u>	Distance from Outfall (mi)	<u>64.18</u>

\*The yield value was calculated based on the minimum release flow of 10.986 cfs from the Two Lick Creek Reservoir, and the existing stream flow in the reach between the Reservoir and the point of discharge.

**Changes Since Last Permit Issuance:** N/A

**Other Comments:** Stormwater Outfalls 101 and 102 also discharge to Stoney Run (CWF) at confluence with Two Lick Creek (CWF). The Indiana sanitary sewer collection system is also equipped with a 3.2 MG, off-site excess flow detention tank. The detention tank provides reserve capacity within the collection system during peak flow events to control hydraulic loading on the wastewater treatment plant. Outfall No. 004 is provided to discharge the overflow when the tank reaches its maximum capacity. The permittee stated in the renewal application that there have been no tank overflows since August 2005.

Treatment Facility Summary				
<b>Treatment Facility Name:</b> Indiana Borough WWTP				
<b>WQM Permit No.</b>		<b>Issuance Date</b>		
3279406 A-10		March 10, 2025		
<b>Waste Type</b>	<b>Degree of Treatment</b>	<b>Process Type</b>	<b>Disinfection</b>	<b>Avg Annual Flow (MGD)</b>
Sewage	Tertiary	Activated Sludge with Solids Removal	Ultraviolet Radiation	8.2
<b>Hydraulic Capacity (MGD)</b>	<b>Organic Capacity (lbs/day)</b>	<b>Load Status</b>	<b>Biosolids Treatment</b>	<b>Biosolids Use/Disposal</b>
8.2	10,000	Existing Hydraulic Overload	Stabilized/Dewatered	Landfill

**Changes Since Last Permit Issuance:** WQM Permit No. 3279406 A-10 authorized the replacement of four (4) raw sewage grinders with two parallel fine bar screen units rated for peak flow conditions of 23.5 MGD each.

**Other Comments:** Existing treatment facilities consist of: Two (2) fine bar screen units, ultrasonic flow meter, grit removal system. Wastewater flows from the headworks to four (4) primary settling tanks. Settled primary sludge is then collected and pumped to two (2) anaerobic digesters for stabilization. The clarified effluent from the primary settling tanks then flows by gravity to the secondary treatment process. The activated sludge process consists of a total of ten (10) aeration tanks in two parallel trains. Air is provided to the aeration tanks by six (6) positive displacement blowers and a ceramic disk, fine bubble diffuser system. The resulting mixed liquor then flows by gravity from the aeration tanks to four (4) final settling tanks (final clarifiers). The activated sludge solids settle to the bottom of the final settling tanks and are collected by a chain driven flight system and are deposited in the sludge troughs situated at the end of each tank. The clarified effluent from the final settling tanks flows to a dual channel, ultraviolet disinfection station. Each channel is equipped with one (1) UV lamp bank that contains 36 UV lamps. The disinfected effluent is then discharged to Outfall 001 located at the confluence of Stoney Run and Two Lick Creek.

Settled sludge that is collected in the four (4) final settling tanks is returned to the aeration tanks. The waste activated sludge is pumped to the two (2) anaerobic digesters for stabilization. Following the anaerobic digestion period, the anaerobically digested sludge is discharged to an aerobic sludge holding tank to provide additional storage, further stabilization, thickening and conditioning prior to dewatering and disposal. Aeration of the sludge holding tank is provided by two (2) blowers and a coarse bubble diffuser system. The final aerobically digested sludge is then pumped to the solids processing building where it is dewatered using two six-channel rotary presses (installed mid-2017). The dewatered sludge is then hauled to the Evergreen Landfill.

Sludge production within the facility in 2023 was 301 dry tons and 475.42 dry tons in 2024.

The facility is utilizing Mg(OH)<sub>2</sub> as alkalinity booster for Ammonia control, Polymer to promote sludge thickening and NaOCl for biological control.

**Summary of Inspections:** An inspection of the facility was conducted on October 28, 2024. The inspection report did not cite any violations.

It was stated in the Chapter 94 review checklist dated June 25, 2025, that the Indiana Borough Wastewater Treatment Plant is not hydraulically or organically overloaded, however the collection system is hydraulically overloaded and is under a CAP. Special study was submitted to DEP for review at the end of 2024.

Compliance History

DMR Data for Outfall 001 (from November 1, 2024, to October 31, 2025)

Parameter	OCT-25	SEP-25	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24
Flow (MGD) Average Monthly	3.58	3.43	3.34	4.57	5.07	4.65	5.83	3.79	7.86	3.65	4.8	4.26
Flow (MGD) Daily Maximum	6.55	5.27	6.18	7.30	11.6	11.86	16.90	6.67	22.6	9.54	10.6	10.50
pH (S.U.) Instantaneous Minimum	6.57	6.67	6.63	6.67	6.42	6.61	6.56	6.55	6.54	6.49	6.65	6.84
pH (S.U.) Instantaneous Maximum	6.96	7.14	7.20	7.42	7.13	7.1	7.06	6.98	7.07	7.12	7.20	7.21
DO (mg/L) Instantaneous Minimum	6.57	7.24	6.89	7.72	7.80	8.48	7.81	8.18	9.08	8.25	7.07	8.08
CBOD5 (lbs/day) Average Monthly	72	< 44	57	81	< 108	71	129	84	191	92	99	78
CBOD5 (lbs/day) Weekly Average	91	58	78	96	215	81	215	91	209	142	147	119
CBOD5 (mg/L) Average Monthly	2	< 2	2	2	< 2	2	2	3	3	3	2	2
CBOD5 (mg/L) Weekly Average	3	2	3	2	3	2	3	3	4	4	3	2
BOD5 (lbs/day) Raw Sewage Influent   Average Monthly	7243	< 5937	6347	< 5334	< 5436	< 4957	< 6250	5705	6358	5921	5543	< 5085
BOD5 (lbs/day) Raw Sewage Influent   Daily Maximum	13547	8633	14277	11896	15673	10577	23539	10307	16398	15833	16708	14186
BOD5 (mg/L) Raw Sewage Influent   Average Monthly	246	< 212	228	< 142	< 136	< 135	< 142	190	< 101	197	144	156
TSS (lbs/day) Average Monthly	165	125	157	206	312	122	170	89	282	161	207	166
TSS (lbs/day) Raw Sewage Influent   Average Monthly	7070	6490	6399	6100	6007	4585	6286	5893	6689	5732	6025	5189

**NPDES Permit Fact Sheet  
Indiana Borough WWTP**

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TSS (lbs/day) Raw Sewage Influent   Daily Maximum	15842	10867	19792	19954	16253	12263	18848	11198	18701	18141	17504	12610
TSS (lbs/day) Weekly Average	213	138	220	366	720	155	304	108	342	291	279	294
TSS (mg/L) Average Monthly	5	4	6	5	6	3	3	3	4	5	5	4
TSS (mg/L) Raw Sewage Influent   Average Monthly	237	229	229	159	160	126	144	197	102	187	155	159
TSS (mg/L) Weekly Average	6	5	8	8	10	4	5	3	6	8	8	5
Fecal Coliform (No./100 ml) Geometric Mean	2	2	3	3	2	4	6	76	4	31	4	6
Fecal Coliform (No./100 ml) Instantaneous Maximum	21	15	356	27	52	124	819	552	74	909	14	44
Total Nitrogen (mg/L) Daily Maximum		22.4			13.8			7.76			15.8	
Ammonia (lbs/day) Average Monthly	< 6	< 6	< 6	< 8	< 9	< 18	< 12	< 8	< 27	< 19	< 8	< 10
Ammonia (lbs/day) Weekly Average	< 9	< 7	< 6	< 11	< 14	< 10	< 50	< 13	< 57	< 61	< 11	< 18
Ammonia (mg/L) Average Monthly	< 0.215	< 0.201	< 0.2	< 0.211	< 0.205	< 0.493	< 0.267	< 0.269	< 0.572	< 0.707	< 0.201	< 0.24
Ammonia (mg/L) Weekly Average	< 0.266	< 0.203	< 0.2	< 0.239	< 0.220	< 0.2	< 1.46	< 0.507	< 1.456	< 2.447	< 0.203	< 0.3
Total Phosphorus (mg/L) Daily Maximum		3.52			1.94			0.612			3.07	
Total Aluminum (lbs/day) Daily Maximum		0.4			0.5			1.4			0.4	
Total Aluminum (mg/L) Daily Maximum		0.016			0.019			0.031			0.019	
Total Iron (lbs/day) Daily Maximum		2.5			2.8			4.5			1.6	
Total Iron (mg/L) Daily Maximum		0.0902			0.113			0.1			0.0797	

**NPDES Permit Fact Sheet  
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Total Manganese (lbs/day) Daily Maximum		1.2			0.8			0.4			0.5	
Total Manganese (mg/L) Daily Maximum		0.045			0.031			0.009			0.024	
UV Dosage (mjoules/cm <sup>2</sup> ) Daily Minimum	24.85	26.13	24.85	24.23	24.31	24.53	24.27	24.60	24.03	25.10	24.19	24.56
UV Dosage (mjoules/cm <sup>2</sup> ) Average Monthly	28.84	29.84	28.91	27.90	26.89	26.71	26.75	27.45	26.10	28.34	26.99	27.77

**Development of Effluent Limitations**

<b>Outfall No.</b> <u>001</u>	<b>Design Flow (MGD)</b> <u>8.2</u>
<b>Latitude</b> <u>40° 34' 14.30"</u>	<b>Longitude</b> <u>-79° 9' 40.80"</u>
<b>Wastewater Description:</b> <u>Sewage Effluent</u>	

**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 <sub>5</sub>	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)
E. Coli	Report (No./100 ml)	IMAX	-	§ 92a.61

**Comments:** Monitoring for E. Coli is placed in the permit in accordance with the Department’s SOP entitled “Establishing Effluent Limitations for Individual Sewage Permits (SOP No. BCW-PMT-033)”.

The TRC technology-based limitations are not applicable due to the use of UV disinfection.

**Water Quality-Based Limitations**

CBOD<sub>5</sub>, Ammonia, and DO are evaluated using WQM 7.0 (Attachment 1). Non-Conventional Pollutants (Toxics) were evaluated using the Department’s Toxic Management Spreadsheet (Attachment 2).

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

Parameter	Limit (mg/L)	SBC	Model
Dissolved Oxygen	4.0	Daily Min.	WQM 7.0
CBOD <sub>5</sub>	13.94	Average Monthly	WQM 7.0
	27.88	IMAX	
Ammonia Nitrogen (May 1 – Oct 31)	3.83	Average Monthly	WQM 7.0
	7.66	IMAX	

**Comments:** The water quality modeling has determined more stringent average monthly effluent limits for NH<sub>3</sub>-N and CBOD<sub>5</sub> under perennial conditions. As part of this permit renewal, new monitoring requirements and revised mass loading limits are being proposed. A seasonal multiplier of 3 times the summertime average monthly limit should be used to establish the winter period limit for Ammonia Nitrogen. However, because this would result in less stringent limits than the current wintertime limits, the existing wintertime limits will be retained in accordance with EPA’s anti-backsliding regulation 40 CFR 122.44(l).

The mass loading limits are applicable to the publicly owned treatment works. The revised mass loading limits correspond to the new effluent limitations derived from the water quality modeling. Average monthly mass loading limits (lbs/day) are calculated using the following formula: Design Flow (MGD) x Concentration Limit (mg/L) x a Conversion Factor of (8.34). The existing permit includes average weekly effluent limitations for CBOD<sub>5</sub>, TSS, and NH<sub>3</sub>-N. As part of this permit renewal, revised average weekly effluent limitations for CBOD<sub>5</sub> and NH<sub>3</sub>-N are proposed based on the new effluent limits generated through the water quality modeling. In accordance with the "Permit Writer's Manual", average weekly limitations are established at 1.5 times the average monthly limitation.

The Borough submitted the required sampling results for Priority Pollutant Groups 1 through 5 with the permit renewal application. All parameters were evaluated using the Department's Toxic Management Spreadsheet. Based on the TMS evaluation, effluent limitations are proposed for Total Copper. Additionally, effluent monitoring requirements are proposed for Total Arsenic, Dissolved Iron and Total Zinc, as the maximum discharge concentrations reported in the application exceed or are within a certain percentage of the calculated governing Water Based Effluent Quality Limit (WQBEL).

Sampling results for Hexachlorobutadiene, 1,2,4-Trichlorobenzene, Di-n-Butyl Phthalate and Total Cadmium, were reported as non-detect, however, the Quantitation Limits (QLs) used were above the Department's QLs (see Table 1). As a result, the Department's TMS initially proposed effluent limits for these parameters. The permittee was provided with the opportunity to resample to further evaluate these parameters. On September 17, 2025, a pre-draft survey was sent to the permittee to assess their ability to control these pollutants and to provide the option to resample the discharge using lower QLs in an effort to remove the proposed limitations if subsequent results were below the Department's QLs.

**Table 1: Effluent Results Submitted with the Renewal Application**

Parameter	Sample Date / Results (µg/L)			No. Analysis	No. non-detect	QL Used (µg/L)	DEP's QL (µg/L)
	9-17-24	9-24-24	10-8-24				
Di-n-Butyl Phthalate	26.3*	<2.83	<2.47	3	2	2.83	5.0
Hexachlorobutadiene	<0.94	<0.94	<0.243	3	3	0.94	0.5
1,2,4-Trichlorobenzene	<0.94	<0.94	<0.25	3	3	0.94	0.5
Total Cadmium	< 0.36	< 0.36	< 0.12	3	3	0.356	0.2

\*Laboratory control error, results not representative of discharge

The permittee elected to resample the pollutants of concern and submitted the results on December 3, 2025. All reported concentrations were below the Department's QLs (summarized in Table 2). Therefore, effluent limits for Hexachlorobutadiene and 1,2,4-Trichlorobenzene, Di-n-Butyl Phthalate and Total Cadmium will not be proposed in this permit renewal.

**Table 2: Resampling Effluent Results**

Parameter	Sample Date / Results (µg/L)		No. Analysis	No. non-detect	DEP's QL (µg/L)
	10-2-25	10-16-25			
Di-n-Butyl Phthalate	<2.50	<2.52	2	2	5.0
Hexachlorobutadiene	<0.245	<0.248	2	2	0.5
1,2,4-Trichlorobenzene	<0.252	<0.254	2	2	0.5
Total Cadmium	< 0.1	< 0.1	2	2	0.2

**Dissolved Oxygen**

The water quality modeling did not calculate a more stringent daily minimum Dissolved Oxygen limit under perennial flow conditions. The water based effluent quality limit established in previous permits is attainable and will be retained.

**Kiskiminetas River Basin**

The monitoring requirements for the TMDL parameters established in the previous permit will be retained for this permit renewal. The Kiskiminetas-Conemaugh River Watershed is impaired by Acid Mine Drainage and TMDLs have been established for Iron, Manganese, and Aluminum.

The annual loading limits established under the TMDLs for the Indiana Borough WWTP along with the corresponding effluent concentration limits and daily load limits are summarized in table 4. These limits are based on the treatment plant's design flow of 8.2 MGD and applicable water quality criteria. To comply with these criteria, the facility will continue to monitor these pollutants on a quarterly basis.

**Table 4: Established TMDLs For Indiana Borough WWTP**

Parameter	TMDLs (lbs/year)	Effluent Concentration Limit (mg/L)	Daily Load Limit (lbs/day)
Iron (Fe)	37,472	1.5	102.6
Manganese (Mn)	24,981	1.0	68.4
Aluminum (Al)	18,736	0.75	51.3

**Best Professional Judgment (BPJ) Limitations**

**Total Nitrogen and Total Phosphorus**

Monitoring for Total Nitrogen and Total Phosphorus are placed in the permit in accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits (SOP No. BCW-PMT-033)". The current 1/quarter monitoring frequency for TN and TP will be retained.

**Ultraviolet Disinfection**

In accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits (SOP No. BCW-PMT-033)", where ultraviolet (UV) disinfection is used, TRC limits are not applicable, but the limits will generally contain, at a minimum, routine monitoring of UV transmittance (%), UV dosage ( $\mu$ Ws/cm<sup>2</sup> or mWs/cm<sup>2</sup> or mjoules/cm<sup>2</sup>) or UV intensity ( $\mu$ W/cm<sup>2</sup> or mW/cm<sup>2</sup>) at the same monitoring frequency that would be used for TRC.

**PFAS Monitoring Requirements**

In accordance with the Department's SOP entitled "Establishing Effluent Limitations for Individual Sewage Permits (SOP No. BCW-PMT-033)", if sampling conducted as part of a permit renewal application detects PFOA, PFOS, HFPO-DA or PFBS, quarterly monitoring requirements must be established for detected PFAS parameters. Non-detect results at or below the Department's QLs require annual monitoring.

Table 3 summarizes the PFAS effluent results submitted with the renewal application. Detections above the Department's QLs were reported for PFOA, PFOS and PFBS. Therefore, quarterly monitoring requirements for PFOA, PFOS, PFBS and HFPO-DA are being proposed in this permit renewal.

**Table 3: PFAS Effluent Results Submitted with the Renewal Application**

Parameter	Sample Date / Results (ng/L)			DEP QL (ng/L)
	09-17-2024	09-24-2024	10-08-2024	
PFOA	11	7.7	8.6	4.0
PFBS	8.4	7.6	12	3.5
PFOS	8.5	6.6	7.6	3.7
HFPO-DA	ND	ND	ND	6.4

**Anti-Backsliding**

Effluent limits for summertime Ammonia Nitrogen and CBOD5 have been revised to be more stringent in this permit renewal based on the results of the updated water quality modeling. Effluent limits for the remaining parameters are being retained from the previous permit in accordance with EPA's anti-backsliding regulation 40 CFR 122.44(l). Accordingly, no previously established effluent limits have been relaxed as part of this permit renewal. The addition of monitoring requirements for E. Coli, PFAS Parameters, Total Arsenic, Dissolved Iron and Total Zinc is being proposed. Additionally, effluent limits are proposed for Total Copper.

**Effluent Limitations and Monitoring Requirements Established in the Current Permit**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5)	<b>1710</b>	<b>2600</b>	XXX	<b>25</b>	<b>38</b>	<b>50</b>	1/day	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/day	24-Hr Composite
Total Suspended Solids	2052	3079	XXX	30	45	60	1/day	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/day	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/day	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/day	Grab
Ultraviolet light dosage (mjoules/cm <sup>2</sup> )	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Ammonia-Nitrogen Nov 1 - Apr 30	753	1129	XXX	11.0	16.5	22	1/day	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	<b>274</b>	<b>410</b>	XXX	<b>4.0</b>	<b>6.0</b>	<b>8.0</b>	1/day	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Iron, Total	XXX	102.6 Daily Max	XXX	XXX	1.5 Daily Max	XXX	1/quarter	24-Hr Composite
Manganese, Total	XXX	68.4 Daily Max	XXX	XXX	1.0 Daily Max	XXX	1/quarter	24-Hr Composite
Aluminum, Total	XXX	51.3 Daily Max	XXX	XXX	0.75 Daily Max	XXX	1/quarter	24-Hr Composite

**Comments:** The highlighted limits in the table will be revised as part of this permit renewal based on the new effluent limits generated through the water quality modeling.

**Whole Effluent Toxicity (WET)**

For Outfall **001**,  Acute  Chronic WET Testing was completed:

- For the permit renewal application (4 tests).
- Quarterly throughout the permit term.
- Quarterly throughout the permit term and a TIE/TRE was conducted.
- Other: **Annually**

The dilution series used for the tests was: 13%, 25%, 50%, 75%, and 100%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 50%.

**Summary of Four Most Recent Test Results**

TST Data Analysis (see Attachment 3 for WET Test Analysis Spreadsheet)

Test Date	Ceriodaphnia Results (Pass/Fail)		Pimephales Results (Pass/Fail)	
	Survival	Reproduction	Survival	Growth
2/23/2021	Pass	Pass	Pass	Pass
3/29/2022	Pass	Pass	Pass	Pass
2/28/2023	Pass	Pass	Pass	Pass
3/05/2024	Pass	Pass	Pass	Pass

Is there reasonable potential for an excursion above water quality standards based on the results of these tests?

- YES  NO

**Comments:** The permittee was required to conduct WET testing using a dilution series of 13%, 27%, 53%, 77% and 100%, with the 53% dilution designated as the TIWC. However, during the previous permit cycle, the permittee conducted testing using an alternative dilution series of 13%, 25%, 50%, 75% and 100% and used the 50% dilution as the TIWC. The Department will evaluate the submitted WET testing as part of this permit renewal.

Chronic WET testing results reported survival and reproduction endpoints for *Ceriodaphnia dubia* and survival and growth endpoints for *Pimephales promelas*. WET testing will again be required with the upcoming permit renewal because:

- The treatment plant is a major facility with an average annual design flow greater than 1.0 MGD (25 Pa. Code § 92a.27(a)(1)(i))
- and has EPA-approved pretreatment program (25 Pa. Code § 92a.27(a)(1)(i)).

The permittee is required to adhere to the dilution series specified in Part C of the NPDES permit and use the assigned TIWC.

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

Acute Partial Mix Factor (PMFa): **0.452**

Chronic Partial Mix Factor (PMFc): **1.0**

**1. Determine IWC – Acute (IWCa%):**

$$- \left( \frac{Q_d \times 1.547}{Q_{7-10} \times PMF_a + Q_d \times 1.547} \right) \times 100$$

$$- \left( \frac{8.2 \text{ MGD} \times 1.547}{12.4 \text{ cfs} \times 0.452 + 8.2 \text{ MGD} \times 1.547} \right) \times 100 = \mathbf{69.35\%}$$

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

- If the discharge is to the tidal portion of the Delaware River, indicate how the type of test was determined: **N/A**
- Type of Test for Permit Renewal: **Chronic**

**2. Determine Target IWCc% (If Chronic Tests Required)**

- $$\left( \frac{Q_d \times 1.547}{Q_{7-10} \times PMF_c + Q_d \times 1.547} \right) \times 100$$
- $$\left( \frac{8.2 \text{ MGD} \times 1.547}{12.4 \text{ cfs} \times 1 + 8.2 \text{ MGD} \times 1.547} \right) \times 100 = \underline{\underline{50.56\%}}$$

**3. Determine Dilution Series**

- Dilution Series = **13%, 26%, 51%, 76%, and 100%**.

**WET Limits**

- Has reasonable potential been determined?  YES  NO
- Will WET limits be established in the permit?  YES  NO
- If WET limits will be established, identify the species and the limit values for the permit (TU): **N/A**
- If WET limits will not be established, but reasonable potential was determined, indicate the rationale for not establishing WET limits: **N/A**

**Development of Effluent Limitations**

<b>Outfall No.</b>	<u>101</u>	<b>Design Flow (MGD)</b>	<u>0</u>
<b>Latitude</b>	<u>40° 34' 26.86"</u>	<b>Longitude</b>	<u>-79° 9' 48.31"</u>
<b>Outfall No.</b>	<u>102</u>	<b>Design Flow (MGD)</b>	<u>0</u>
<b>Latitude</b>	<u>40° 43' 26.03"</u>	<b>Longitude</b>	<u>-79° 9' 49.18"</u>
<b>Wastewater Description:</b>	<u>Stormwater</u>		

**Technology-Based Limitations**

Comments: N/A

**Water Quality-Based Limitations**

Comments: No water quality modeling was conducted due to this being a discharge of stormwater only.

**Best Professional Judgment (BPJ) Limitations**

N/A

**Anti-Backsliding**

N/A

**Proposed Influent 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.

**STP Influent Location, Effective Period: Permit Effective Date through Permit Expiration Date.**

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/day	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	1/day	24-Hr Composite

**Compliance Sampling Location:** At the STP Influent Location, Prior to Any Treatment.

**Other Comments:** Monitoring for influent BOD5 and Total Suspended Solids is based on Chapter 92a.61.

**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) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
CBOD5	957	1436	XXX	14.0	21.0	28.0	1/day	24-Hr Composite
TSS	2052	3079	XXX	30	45	60	1/day	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	1/day	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	1/day	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Ammonia Nov 1 - Apr 30	753	1129	XXX	11.0	16.5	22.0	1/day	24-Hr Composite
Ammonia May 1 - Oct 31	259.9	389.9	XXX	3.8	5.7	7.7	1/day	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Aluminum	XXX	51.3 Daily Max	XXX	XXX	0.75 Daily Max	XXX	1/quarter	24-Hr Composite
Arsenic, Total (ug/L)	Report	Report	XXX	Report	Report Daily Max	XXX	1/week	Grab

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) <sup>(1)</sup>		Concentrations (mg/L)				Minimum <sup>(2)</sup> Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Daily Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Copper, Total (ug/L)	1.0	1.5	XXX	15.0	22.0 Daily Max	XXX	1/week	Grab
Iron, Dissolved (ug/L)	Report	Report	XXX	Report	Report Daily Max	XXX	1/week	Grab
Total Iron	XXX	102.6 Daily Max	XXX	XXX	1.5 Daily Max	XXX	1/quarter	24-Hr Composite
Total Manganese	XXX	68.4 Daily Max	XXX	XXX	1.0 Daily Max	XXX	1/quarter	24-Hr Composite
Zinc, Total (ug/L)	Report	Report	XXX	Report	Report Daily Max	XXX	1/week	Grab
UV Dosage (mjoules/cm <sup>2</sup> )	XXX	XXX	Report	Report	XXX	XXX	1/day	Measured
PFOA (ng/L)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	XXX	Report	1/quarter	Grab

**Compliance Sampling Location:** At Outfall 001, After Disinfection.

Outfall Location & Receiving Stream – eMap with Aerial Imagery

The screenshot displays the Pennsylvania eMapPA web application interface. At the top, the Pennsylvania Department of Environmental Protection logo is on the left, and navigation links for PA State Agencies, Online Services, and state officials are on the right. The main map area shows aerial imagery with a grid overlay. A popup window titled "Designated Use Streams (1 of 5)" is open over a stream segment, displaying the following metadata:

- Designated Use Gen ID: 57131
- GNIS Name: Stoney Run
- GNIS ID: 01188753
- ReachCode: 05010007000586
- COMID: 123720064
- Length Miles: 0.142
- Map Symbology: CWF
- Length Miles: 0.142
- Designated Use: 1
- DES Use ID: 1
- Use Description: CWF(COLD WATER FISHES)
- Migratory\_Fish: N
- HUC: 05010007
- Basin: N
- Basin Narrative: Null
- Segment Narrative: Null
- Evaluation Date: Null
- Last Edit Date: Null
- Zoom to

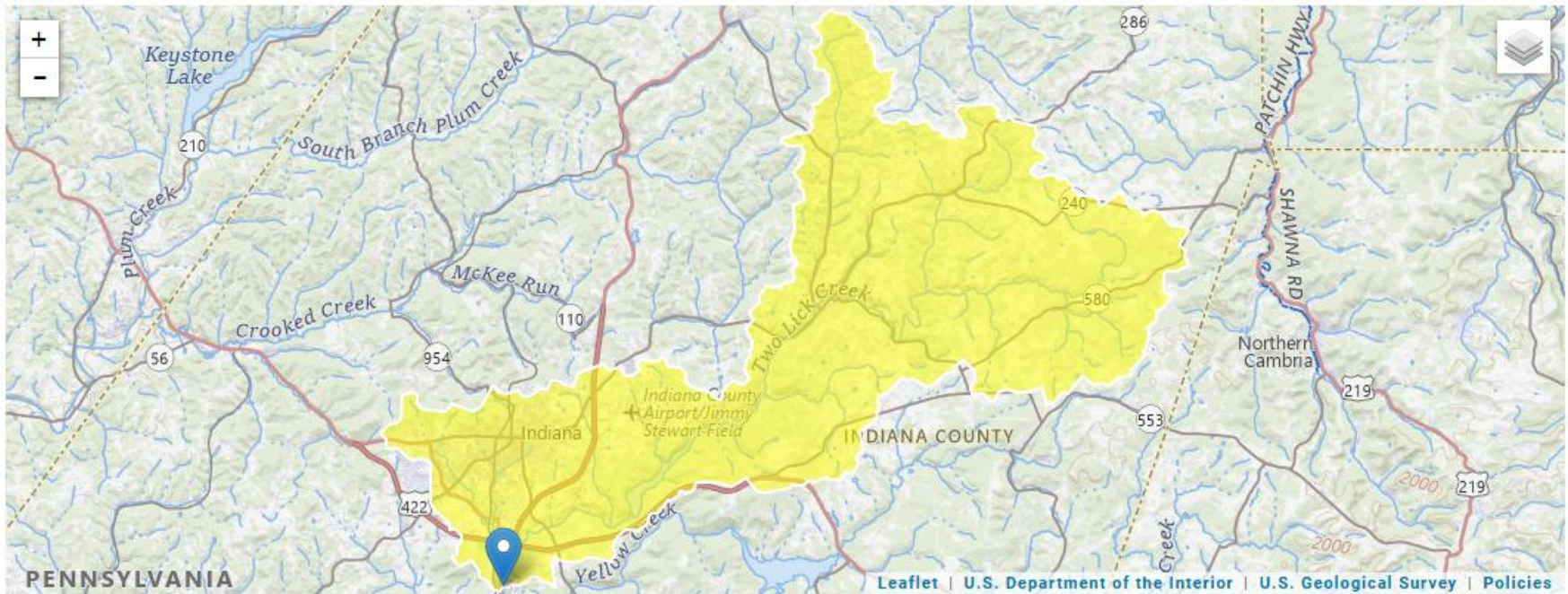
On the right side of the map, a "Locate Latitude and Longitude" panel is visible, showing input fields for Latitude (40, 34, 15.36) and Longitude (-79, 9, 42.67) in DD/MM/SS format, with "Locate" and "Close" buttons. The legend on the left categorizes "Regulated Facilities and Related Information", "Streams and Water Resources", and "Boundaries".

Imagery: Source: Esri, Vantor, Earthstar Geographics, and the GIS User Community; ESRI Streets: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

Drainage Area Location – StreamStats with Aerial Imagery

StreamStats Report

Region ID: PA  
 Workspace ID: PA20250828152236135000  
 Clicked Point (Latitude, Longitude): 40.57009, -79.16016  
 Time: 2025-08-28 11:23:00 -0400



+ Collapse All

> Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	95.4	square miles

**Attachment 1**

**WQM 7.0 Effluent Limits**

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>			
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)
9.140	Indiana Bo WWTP	PA0026751	8.200	CBOD5	13.94		
				NH3-N	3.83	7.66	
				Dissolved Oxygen			4

**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 D.O. Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
18D	44073	TWO LICK CREEK		
<hr/>				
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>	
9.140	8.200	22.528	6.887	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>	
67.040	0.840	79.793	0.445	
<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>	
8.04	0.717	1.98	0.850	
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>	
6.098	6.014	Tsivoglou	6	
<u>Reach Travel Time (days)</u>	<b>Subreach Results</b>			
0.362	<u>TravTime</u>	<u>CBOD5</u>	<u>NH3-N</u>	<u>D.O.</u>
	(days)	(mg/L)	(mg/L)	(mg/L)
	0.036	7.81	1.92	6.06
	0.072	7.58	1.87	6.04
	0.109	7.36	1.81	6.05
	0.145	7.15	1.75	6.06
	0.181	6.95	1.70	6.09
	0.217	6.75	1.65	6.13
	0.254	6.55	1.60	6.18
	0.290	6.37	1.55	6.23
	0.326	6.18	1.50	6.28
	0.362	6.00	1.46	6.34

**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	9.140	1036.00	95.40	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	Tributary pH	Stream Temp	Stream pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.130	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

**Discharge Data**

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Indiana Bo WWTP	PA0026751	8.2000	0.0000	0.0000	0.000	25.00	6.80

**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	4.00	8.24	0.00	0.00
NH3-N	25.00	0.10	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	6.500	998.00	98.00	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		Stream	
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	Temp (°C)	pH	Temp (°C)	pH
Q7-10	0.130	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

**Discharge Data**

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

**Parameter Data**

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

### WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
18D	44073	TWO LICK CREEK

**NH3-N Acute Allocations**

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
9.140	Indiana Bo WWT	14.44	23.42	14.44	23.42	0	0

**NH3-N Chronic Allocations**

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
9.140	Indiana Bo WWT	1.7	3.83	1.7	3.83	0	0

**Dissolved Oxygen Allocations**

RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
9.14	Indiana Bo WWTP	13.94	13.94	3.83	3.83	4	4	0	0

**WQM 7.0 Hydrodynamic Outputs**

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>								
18D		44073		TWO LICK CREEK								
RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
<b>Q7-10 Flow</b>												
9.140	12.40	0.00	12.40	12.6854	0.00273	.84	67.04	79.79	0.45	0.362	22.53	6.89
<b>Q1-10 Flow</b>												
9.140	7.94	0.00	7.94	12.6854	0.00273	NA	NA	NA	0.40	0.404	23.08	6.87
<b>Q30-10 Flow</b>												
9.140	16.87	0.00	16.87	12.6854	0.00273	NA	NA	NA	0.49	0.330	22.15	6.90

Attachment 2



Toxics Management Spreadsheet  
Version 1.4, May 2025

## Discharge Information

Instructions Discharge Stream

Facility: Indiana Borough NPDES Permit No.: PA0026751 Outfall No.: 001

Evaluation Type Major Sewage / Industrial Waste Wastewater Description: Domestic Sewage

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q <sub>7-10</sub>	Q <sub>h</sub>
8.2	131	6.8						

Discharge Pollutant	Units	Max Discharge Conc	0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
			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	501								
	Chloride (PWS)	mg/L	139								
	Bromide	mg/L	0.199								
	Sulfate (PWS)	mg/L	123								
	Fluoride (PWS)	mg/L									
Group 2	Total Aluminum	µg/L	26								
	Total Antimony	µg/L	0.5								
	Total Arsenic	µg/L	6								
	Total Barium	µg/L	34								
	Total Beryllium	µg/L	< 0.4								
	Total Boron	µg/L	156								
	Total Cadmium	µg/L	< 1								
	Total Chromium (III)	µg/L	< 1								
	Hexavalent Chromium	µg/L	0.13								
	Total Cobalt	µg/L	< 1								
	Total Copper	µg/L	13								
	Free Cyanide	µg/L	0.8								
	Total Cyanide	µg/L	11								
	Dissolved Iron	µg/L	113								
	Total Iron	µg/L	211								
	Total Lead	µg/L	< 1								
	Total Manganese	µg/L	33								
	Total Mercury	µg/L	< 0.2								
	Total Nickel	µg/L	3								
	Total Phenols (Phenolics) (PWS)	µg/L	3.8								
	Total Selenium	µg/L	0.06								
	Total Silver	µg/L	< 0.376								
	Total Thallium	µg/L	< 0.4								
	Total Zinc	µg/L	26								
	Total Molybdenum	µg/L	26								
	Acrolein	µg/L	< 0.5								
Acrylamide	µg/L	<									
Acrylonitrile	µg/L	< 0.5									
Benzene	µg/L	< 0.4									
Bromoform	µg/L	< 0.5									
Carbon Tetrachloride	µg/L	< 0.4									
Chlorobenzene	µg/L	0.5									
Chlorodibromomethane	µg/L	< 0.4									
Chloroethane	µg/L	< 1									
2-Chloroethyl Vinyl Ether	µg/L	< 0.5									







Stream / Surface Water Information

Indiana Borough, NPDES Permit No. PA0026751, 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 <sup>2</sup> )*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	044228	64.18	1036	95.4			Yes
End of Reach 1	042122	0	746	11200			Yes

Q<sub>7-10</sub>

Location	RMI	LFY (cfs/mi <sup>2</sup> )*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	64.18	0.13										61.6	7		
End of Reach 1	0	0.18										100	7		

Q<sub>h</sub>

Location	RMI	LFY (cfs/mi <sup>2</sup> )*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	64.18														
End of Reach 1	0														



Model Results

Indiana Borough, NPDES Permit No. PA0026751, Outfall 001

All
  Inputs
  Results
  Limits

Hydrodynamics

**Q<sub>7-10</sub>**

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time	Complete Mix Time (min)
64.18	12.40		12.40	12.685	0.00086	0.865	71.723	82.955	0.405	9.695	73.267
0	2011.23		2011.23								

**Q<sub>h</sub>**

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time	Complete Mix Time (min)
64.18	67.10		67.10	12.685	0.00086	1.438	71.723	49.861	0.773	5.072	98.813
0	5730.788		5730.79								

Wasteload Allocations

AFC

CCT (min):

PMF:

Analysis Hardness (mg/l):

Analysis pH:

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	1,082	
Total Antimony	0	0		0	1,100	1,100	1,587	
Total Arsenic	0	0		0	340	340	490	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	30,290	
Total Boron	0	0		0	8,100	8,100	11,683	
Total Cadmium	0	0		0	2,204	2.34	3.38	Chem Translator of 0.94 applied
Total Chromium (III)	0	0		0	614.715	1,945	2,806	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	23.5	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	137	
Total Copper	0	0		0	14.666	15.3	22.0	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	31.7	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	

Total Lead	0	0	0	71.431	91.9	133	Chem Translator of 0.777 applied
Total Manganese	0	0	0	N/A	N/A	N/A	
Total Mercury	0	0	0	1.400	1.65	2.38	Chem Translator of 0.85 applied
Total Nickel	0	0	0	506.444	507	732	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0	0	N/A	N/A	N/A	
Total Selenium	0	0	0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0	0	3.773	4.44	6.4	Chem Translator of 0.85 applied
Total Thallium	0	0	0	65	65.0	93.8	
Total Zinc	0	0	0	126.758	130	187	Chem Translator of 0.978 applied
Acrolein	0	0	0	3	3.0	4.33	
Acrylonitrile	0	0	0	650	650	938	
Benzene	0	0	0	640	640	923	
Bromoform	0	0	0	1,800	1,800	2,596	
Carbon Tetrachloride	0	0	0	2,800	2,800	4,039	
Chlorobenzene	0	0	0	1,200	1,200	1,731	
Chlorodibromomethane	0	0	0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0	0	18,000	18,000	25,963	
Chloroform	0	0	0	1,900	1,900	2,740	
Dichlorobromomethane	0	0	0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0	0	15,000	15,000	21,635	
1,1-Dichloroethylene	0	0	0	7,500	7,500	10,818	
1,2-Dichloropropane	0	0	0	11,000	11,000	15,866	
1,3-Dichloropropylene	0	0	0	310	310	447	
Ethylbenzene	0	0	0	2,900	2,900	4,183	
Methyl Bromide	0	0	0	550	550	793	
Methyl Chloride	0	0	0	28,000	28,000	40,386	
Methylene Chloride	0	0	0	12,000	12,000	17,308	
1,1,2,2-Tetrachloroethane	0	0	0	1,000	1,000	1,442	
Tetrachloroethylene	0	0	0	700	700	1,010	
Toluene	0	0	0	1,700	1,700	2,452	
1,2-trans-Dichloroethylene	0	0	0	6,800	6,800	9,808	
1,1,1-Trichloroethane	0	0	0	3,000	3,000	4,327	
1,1,2-Trichloroethane	0	0	0	3,400	3,400	4,904	
Trichloroethylene	0	0	0	2,300	2,300	3,317	
Vinyl Chloride	0	0	0	N/A	N/A	N/A	
2-Chlorophenol	0	0	0	560	560	808	
2,4-Dichlorophenol	0	0	0	1,700	1,700	2,452	
2,4-Dimethylphenol	0	0	0	660	660	952	
4,6-Dinitro-o-Cresol	0	0	0	80	80.0	115	
2,4-Dinitrophenol	0	0	0	660	660	952	
2-Nitrophenol	0	0	0	8,000	8,000	11,539	
4-Nitrophenol	0	0	0	2,300	2,300	3,317	
p-Chloro-m-Cresol	0	0	0	160	160	231	
Pentachlorophenol	0	0	0	7.519	7.52	10.8	
Phenol	0	0	0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0	0	460	460	663	
Acenaphthene	0	0	0	83	83.0	120	

Anthracene	0	0	0	N/A	N/A	N/A	
Benzidine	0	0	0	300	300	433	
Benzo(a)Anthracene	0	0	0	0.5	0.5	0.72	
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	43,271	
Bis(2-Chloroisopropyl)Ether	0	0	0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0	0	4,500	4,500	6,491	
4-Bromophenyl Phenyl Ether	0	0	0	270	270	389	
Butyl Benzyl Phthalate	0	0	0	140	140	202	
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	1,183	
1,3-Dichlorobenzene	0	0	0	350	350	505	
1,4-Dichlorobenzene	0	0	0	730	730	1,053	
3,3-Dichlorobenzidine	0	0	0	N/A	N/A	N/A	
Diethyl Phthalate	0	0	0	4,000	4,000	5,769	
Dimethyl Phthalate	0	0	0	2,500	2,500	3,606	
Di-n-Butyl Phthalate	0	0	0	110	110	159	
2,4-Dinitrotoluene	0	0	0	1,600	1,600	2,308	
2,6-Dinitrotoluene	0	0	0	990	990	1,428	
1,2-Diphenylhydrazine	0	0	0	15	15.0	21.6	
Fluoranthene	0	0	0	200	200	288	
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	14.4	
Hexachlorocyclopentadiene	0	0	0	5	5.0	7.21	
Hexachloroethane	0	0	0	60	60.0	86.5	
Indeno(1,2,3-cd)Pyrene	0	0	0	N/A	N/A	N/A	
Isophorone	0	0	0	10,000	10,000	14,424	
Naphthalene	0	0	0	140	140	202	
Nitrobenzene	0	0	0	4,000	4,000	5,769	
n-Nitrosodimethylamine	0	0	0	17,000	17,000	24,520	
n-Nitrosodi-n-Propylamine	0	0	0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0	0	300	300	433	
Phenanthrene	0	0	0	5	5.0	7.21	
Pyrene	0	0	0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0	0	130	130	188	

**CFC**      CCT (min):       PMF:       Analysis Hardness (mg/l):       Analysis pH:

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0	0	0	N/A	N/A	N/A	
Chloride (PWS)	0	0	0	0	N/A	N/A	N/A	
Sulfate (PWS)	0	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	435	
Total Arsenic	0	0	0	150	150	297	Chem Translator of 1 applied
Total Barium	0	0	0	4,100	4,100	8,108	
Total Boron	0	0	0	1,600	1,600	3,164	
Total Cadmium	0	0	0	0.240	0.26	0.52	Chem Translator of 0.91 applied
Total Chromium (III)	0	0	0	72.100	83.8	166	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0	0	10	10.4	20.6	Chem Translator of 0.962 applied
Total Cobalt	0	0	0	19	19.0	37.6	
Total Copper	0	0	0	8.702	9.06	17.9	Chem Translator of 0.96 applied
Free Cyanide	0	0	0	5.2	5.2	10.3	
Dissolved Iron	0	0	0	N/A	N/A	N/A	
Total Iron	0	0	0	1,500	1,500	2,966	WQC = 30 day average; PMF = 1
Total Lead	0	0	0	2.426	3.05	6.03	Chem Translator of 0.796 applied
Total Manganese	0	0	0	N/A	N/A	N/A	
Total Mercury	0	0	0	0.770	0.91	1.79	Chem Translator of 0.85 applied
Total Nickel	0	0	0	50.547	50.7	100	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	9.87	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	25.7	
Total Zinc	0	0	0	114.819	116	230	Chem Translator of 0.986 applied
Acrolein	0	0	0	3	3.0	5.93	
Acrylonitrile	0	0	0	130	130	257	
Benzene	0	0	0	130	130	257	
Bromoform	0	0	0	370	370	732	
Carbon Tetrachloride	0	0	0	560	560	1,107	
Chlorobenzene	0	0	0	240	240	475	
Chlorodibromomethane	0	0	0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0	0	3,500	3,500	6,922	
Chloroform	0	0	0	390	390	771	
Dichlorobromomethane	0	0	0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0	0	3,100	3,100	6,131	
1,1-Dichloroethylene	0	0	0	1,500	1,500	2,966	
1,2-Dichloropropane	0	0	0	2,200	2,200	4,351	
1,3-Dichloropropylene	0	0	0	61	61.0	121	
Ethylbenzene	0	0	0	580	580	1,147	
Methyl Bromide	0	0	0	110	110	218	
Methyl Chloride	0	0	0	5,500	5,500	10,877	
Methylene Chloride	0	0	0	2,400	2,400	4,746	
1,1,2,2-Tetrachloroethane	0	0	0	210	210	415	
Tetrachloroethylene	0	0	0	140	140	277	
Toluene	0	0	0	330	330	653	
1,2-trans-Dichloroethylene	0	0	0	1,400	1,400	2,769	
1,1,1-Trichloroethane	0	0	0	610	610	1,206	
1,1,2-Trichloroethane	0	0	0	680	680	1,345	
Trichloroethylene	0	0	0	450	450	890	
Vinyl Chloride	0	0	0	N/A	N/A	N/A	
2-Chlorophenol	0	0	0	110	110	218	

2,4-Dichlorophenol	0	0	0	340	340	672
2,4-Dimethylphenol	0	0	0	130	130	257
4,6-Dinitro-o-Cresol	0	0	0	16	16.0	31.6
2,4-Dinitrophenol	0	0	0	130	130	257
2-Nitrophenol	0	0	0	1,600	1,600	3,164
4-Nitrophenol	0	0	0	470	470	929
p-Chloro-m-Cresol	0	0	0	500	500	989
Pentachlorophenol	0	0	0	5.769	5.77	11.4
Phenol	0	0	0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0	0	91	91.0	180
Acenaphthene	0	0	0	17	17.0	33.6
Anthracene	0	0	0	N/A	N/A	N/A
Benzidine	0	0	0	59	59.0	117
Benzo(a)Anthracene	0	0	0	0.1	0.1	0.2
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	11,886
Bis(2-Chloroisopropyl)Ether	0	0	0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0	0	910	910	1,800
4-Bromophenyl Phenyl Ether	0	0	0	54	54.0	107
Butyl Benzyl Phthalate	0	0	0	35	35.0	69.2
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	316
1,3-Dichlorobenzene	0	0	0	69	69.0	136
1,4-Dichlorobenzene	0	0	0	150	150	297
3,3-Dichlorobenzidine	0	0	0	N/A	N/A	N/A
Diethyl Phthalate	0	0	0	800	800	1,582
Dimethyl Phthalate	0	0	0	500	500	989
Di-n-Butyl Phthalate	0	0	0	21	21.0	41.5
2,4-Dinitrotoluene	0	0	0	320	320	633
2,6-Dinitrotoluene	0	0	0	200	200	396
1,2-Diphenylhydrazine	0	0	0	3	3.0	5.93
Fluoranthene	0	0	0	40	40.0	79.1
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	3.96
Hexachlorocyclopentadiene	0	0	0	1	1.0	1.98
Hexachloroethane	0	0	0	12	12.0	23.7
Indeno(1,2,3-cd)Pyrene	0	0	0	N/A	N/A	N/A
Isophorone	0	0	0	2,100	2,100	4,153
Naphthalene	0	0	0	43	43.0	85.0
Nitrobenzene	0	0	0	810	810	1,602
n-Nitrosodimethylamine	0	0	0	3,400	3,400	6,724
n-Nitrosodi-n-Propylamine	0	0	0	N/A	N/A	N/A
n-Nitrosodiphenylamine	0	0	0	59	59.0	117
Phenanthrene	0	0	0	1	1.0	1.98

**NPDES Permit Fact Sheet  
Indiana Borough WWTP**

**NPDES Permit No. PA0026751**

Pyrene	0	0	0	N/A	N/A	N/A
1,2,4-Trichlorobenzene	0	0	0	26	26.0	51.4

**THH**      CCT (min):       PMF:       Analysis Hardness (mg/l):       Analysis pH:

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0	0	0	500,000	500,000	N/A	
Chloride (PWS)	0	0	0	0	250,000	250,000	N/A	
Sulfate (PWS)	0	0	0	0	250,000	250,000	N/A	
Total Aluminum	0	0	0	0	N/A	N/A	N/A	
Total Antimony	0	0	0	0	5.6	5.6	11.1	
Total Arsenic	0	0	0	0	10	10.0	19.8	
Total Barium	0	0	0	0	2,400	2,400	4,746	
Total Boron	0	0	0	0	3,100	3,100	6,131	
Total Cadmium	0	0	0	0	N/A	N/A	N/A	
Total Chromium (III)	0	0	0	0	N/A	N/A	N/A	
Hexavalent Chromium	0	0	0	0	N/A	N/A	N/A	
Total Cobalt	0	0	0	0	N/A	N/A	N/A	
Total Copper	0	0	0	0	N/A	N/A	N/A	
Free Cyanide	0	0	0	0	4	4.0	7.91	
Dissolved Iron	0	0	0	0	300	300	593	
Total Iron	0	0	0	0	N/A	N/A	N/A	
Total Lead	0	0	0	0	N/A	N/A	N/A	
Total Manganese	0	0	0	0	1,000	1,000	1,978	
Total Mercury	0	0	0	0	0.050	0.05	0.099	
Total Nickel	0	0	0	0	610	610	1,206	
Total Phenols (Phenolics) (PWS)	0	0	0	0	5	5.0	N/A	
Total Selenium	0	0	0	0	N/A	N/A	N/A	
Total Silver	0	0	0	0	N/A	N/A	N/A	
Total Thallium	0	0	0	0	0.24	0.24	0.47	
Total Zinc	0	0	0	0	N/A	N/A	N/A	
Acrolein	0	0	0	0	3	3.0	5.93	
Acrylonitrile	0	0	0	0	N/A	N/A	N/A	
Benzene	0	0	0	0	N/A	N/A	N/A	
Bromoform	0	0	0	0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0	0	0	N/A	N/A	N/A	
Chlorobenzene	0	0	0	0	100	100.0	198	
Chlorodibromomethane	0	0	0	0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0	0	0	N/A	N/A	N/A	
Chloroform	0	0	0	0	5.7	5.7	11.3	
Dichlorobromomethane	0	0	0	0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0	0	0	N/A	N/A	N/A	
1,1-Dichloroethylene	0	0	0	0	33	33.0	65.3	
1,2-Dichloropropane	0	0	0	0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0	0	0	N/A	N/A	N/A	
Ethylbenzene	0	0	0	0	68	68.0	134	
Methyl Bromide	0	0	0	0	100	100.0	198	
Methyl Chloride	0	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	113
1,2-trans-Dichloroethylene	0	0	0	100	100.0	198
1,1,1-Trichloroethane	0	0	0	10,000	10,000	19,777
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	59.3
2,4-Dichlorophenol	0	0	0	10	10.0	19.8
2,4-Dimethylphenol	0	0	0	100	100.0	198
4,6-Dinitro-o-Cresol	0	0	0	2	2.0	3.96
2,4-Dinitrophenol	0	0	0	10	10.0	19.8
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	7,911
2,4,6-Trichlorophenol	0	0	0	N/A	N/A	N/A
Acenaphthene	0	0	0	70	70.0	138
Anthracene	0	0	0	300	300	593
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	396
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	0.2
2-Chloronaphthalene	0	0	0	800	800	1,582
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	1,978
1,3-Dichlorobenzene	0	0	0	7	7.0	13.8
1,4-Dichlorobenzene	0	0	0	300	300	593
3,3-Dichlorobenzidine	0	0	0	N/A	N/A	N/A
Diethyl Phthalate	0	0	0	600	600	1,187
Dimethyl Phthalate	0	0	0	2,000	2,000	3,955
Di-n-Butyl Phthalate	0	0	0	20	20.0	39.6
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	39.6
Fluorene	0	0	0	50	50.0	98.9
Hexachlorobenzene	0	0	0	N/A	N/A	N/A
Hexachlorobutadiene	0	0	0	N/A	N/A	N/A

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Hexachlorocyclopentadiene	0	0	0	4	4.0	7.91
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	67.2
Naphthalene	0	0	0	N/A	N/A	N/A
Nitrobenzene	0	0	0	10	10.0	19.8
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	39.6
1,2,4-Trichlorobenzene	0	0	0	0.07	0.07	0.14

**CRL**      CCT (min):       PMF:       Analysis Hardness (mg/l):       Analysis pH:

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0	0	0	N/A	N/A	N/A	
Chloride (PWS)	0	0	0	0	N/A	N/A	N/A	
Sulfate (PWS)	0	0	0	0	N/A	N/A	N/A	
Total Aluminum	0	0	0	0	N/A	N/A	N/A	
Total Antimony	0	0	0	0	N/A	N/A	N/A	
Total Arsenic	0	0	0	0	N/A	N/A	N/A	
Total Barium	0	0	0	0	N/A	N/A	N/A	
Total Boron	0	0	0	0	N/A	N/A	N/A	
Total Cadmium	0	0	0	0	N/A	N/A	N/A	
Total Chromium (III)	0	0	0	0	N/A	N/A	N/A	
Hexavalent Chromium	0	0	0	0	N/A	N/A	N/A	
Total Cobalt	0	0	0	0	N/A	N/A	N/A	
Total Copper	0	0	0	0	N/A	N/A	N/A	
Free Cyanide	0	0	0	0	N/A	N/A	N/A	
Dissolved Iron	0	0	0	0	N/A	N/A	N/A	
Total Iron	0	0	0	0	N/A	N/A	N/A	
Total Lead	0	0	0	0	N/A	N/A	N/A	
Total Manganese	0	0	0	0	N/A	N/A	N/A	
Total Mercury	0	0	0	0	N/A	N/A	N/A	
Total Nickel	0	0	0	0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0	0	0	N/A	N/A	N/A	
Total Selenium	0	0	0	0	N/A	N/A	N/A	
Total Silver	0	0	0	0	N/A	N/A	N/A	
Total Thallium	0	0	0	0	N/A	N/A	N/A	
Total Zinc	0	0	0	0	N/A	N/A	N/A	
Acrolein	0	0	0	0	N/A	N/A	N/A	
Acrylonitrile	0	0	0	0	0.06	0.06	0.38	
Benzene	0	0	0	0	0.58	0.58	3.65	
Bromoform	0	0	0	0	7	7.0	44.0	
Carbon Tetrachloride	0	0	0	0	0.4	0.4	2.52	
Chlorobenzene	0	0	0	0	N/A	N/A	N/A	
Chlorodibromomethane	0	0	0	0	0.8	0.8	5.03	

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	5.97
1,2-Dichloroethane	0	0	0	9.9	9.9	62.3
1,1-Dichloroethylene	0	0	0	N/A	N/A	N/A
1,2-Dichloropropane	0	0	0	0.9	0.9	5.66
1,3-Dichloropropylene	0	0	0	0.27	0.27	1.7
Ethylbenzene	0	0	0	N/A	N/A	N/A
Methyl Bromide	0	0	0	N/A	N/A	N/A
Methyl Chloride	0	0	0	N/A	N/A	N/A
Methylene Chloride	0	0	0	20	20.0	126
1,1,2,2-Tetrachloroethane	0	0	0	0.2	0.2	1.26
Tetrachloroethylene	0	0	0	10	10.0	62.9
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	3.46
Trichloroethylene	0	0	0	0.6	0.6	3.77
Vinyl Chloride	0	0	0	0.02	0.02	0.13
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	0.19
Phenol	0	0	0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0	0	1.5	1.5	9.43
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	0.0006
Benzo(a)Anthracene	0	0	0	0.001	0.001	0.006
Benzo(a)Pyrene	0	0	0	0.0001	0.0001	0.0006
3,4-Benzofluoranthene	0	0	0	0.001	0.001	0.006
Benzo(k)Fluoranthene	0	0	0	0.01	0.01	0.063
Bis(2-Chloroethyl)Ether	0	0	0	0.03	0.03	0.19
Bis(2-Chloroisopropyl)Ether	0	0	0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0	0	0.32	0.32	2.01
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	0.75
Dibenzo(a,h)Anthracene	0	0	0	0.0001	0.0001	0.0006
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	0.31

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	0.31	
2,6-Dinitrotoluene	0	0	0	0.05	0.05	0.31	
1,2-Diphenylhydrazine	0	0	0	0.03	0.03	0.19	
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	0.0005	
Hexachlorobutadiene	0	0	0	0.01	0.01	0.063	
Hexachlorocyclopentadiene	0	0	0	N/A	N/A	N/A	
Hexachloroethane	0	0	0	0.1	0.1	0.63	
Indeno(1,2,3-cd)Pyrene	0	0	0	0.001	0.001	0.006	
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	0.004	
n-Nitrosodi-n-Propylamine	0	0	0	0.005	0.005	0.031	
n-Nitrosodiphenylamine	0	0	0	3.3	3.3	20.8	
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

Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Total Arsenic	Report	Report	Report	Report	Report	µg/L	19.8	THH	Discharge Conc > 10% WQBEL (no RP)
Total Cadmium	0.036	0.056	0.52	0.81	1.31	µg/L	0.52	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Copper	1.04	1.51	15.3	22.0	22.0	µg/L	15.3	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	593	THH	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	130	AFC	Discharge Conc > 10% WQBEL (no RP)
Di-n-Butyl Phthalate	2.7	4.22	39.6	61.7	98.9	µg/L	39.6	THH	Discharge Conc ≥ 50% WQBEL (RP)
Hexachlorobutadiene	0.004	0.007	0.063	0.098	0.16	µg/L	0.063	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,2,4-Trichlorobenzene	0.009	0.015	0.14	0.22	0.35	µg/L	0.14	THH	Discharge Conc ≥ 50% WQBEL (RP)

Other Pollutants without Limits or Monitoring

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	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	750	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	11.1	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	4,746	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	3,164	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	166	µg/L	Discharge Conc < TQL
Hexavalent Chromium	16.3	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	37.6	µg/L	Discharge Conc < TQL
Free Cyanide	7.91	µg/L	Discharge Conc ≤ 25% WQBEL
Total Cyanide	N/A	N/A	No WQS
Total Iron	2,966	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	6.03	µg/L	Discharge Conc < TQL
Total Manganese	1,978	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.099	µg/L	Discharge Conc < TQL
Total Nickel	100	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	9.87	µg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	4.44	µg/L	Discharge Conc < TQL
Total Thallium	0.47	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	3.0	µg/L	Discharge Conc < TQL
Acrylonitrile	0.38	µg/L	Discharge Conc < TQL
Benzene	3.65	µg/L	Discharge Conc < TQL
Bromoform	44.0	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	2.52	µg/L	Discharge Conc < TQL
Chlorobenzene	198	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	5.03	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	6,922	µg/L	Discharge Conc < TQL
Chloroform	11.3	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	5.97	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	62.3	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	65.3	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	5.66	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	1.7	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	134	µg/L	Discharge Conc < TQL
Methyl Bromide	198	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	10,877	µg/L	Discharge Conc < TQL
Methylene Chloride	126	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	1.26	µg/L	Discharge Conc < TQL
Tetrachloroethylene	62.9	µg/L	Discharge Conc < TQL

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Toluene	113	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	198	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	1,206	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	3.46	µg/L	Discharge Conc < TQL
Trichloroethylene	3.77	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.13	µg/L	Discharge Conc < TQL
2-Chlorophenol	59.3	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	19.8	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	198	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	3.96	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	19.8	µg/L	Discharge Conc < TQL
2-Nitrophenol	3,164	µg/L	Discharge Conc < TQL
4-Nitrophenol	929	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.19	µg/L	Discharge Conc < TQL
Phenol	7,911	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	9.43	µg/L	Discharge Conc < TQL
Acenaphthene	33.6	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	593	µg/L	Discharge Conc < TQL
Benzidine	0.0006	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.006	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.0006	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.006	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.063	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.19	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	386	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	2.01	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	107	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.2	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	1,582	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.75	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthracene	0.0006	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	316	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	13.8	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	297	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	0.31	µg/L	Discharge Conc < TQL
Diethyl Phthalate	1,187	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	989	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	0.31	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.31	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.19	µg/L	Discharge Conc < TQL
Fluoranthene	39.6	µg/L	Discharge Conc < TQL
Fluorene	98.9	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.0005	µg/L	Discharge Conc < TQL

Model Results

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Hexachlorocyclopentadiene	1.98	µg/L	Discharge Conc < TQL
Hexachloroethane	0.63	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.006	µg/L	Discharge Conc < TQL
Isophorone	67.2	µg/L	Discharge Conc < TQL
Naphthalene	85.0	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	19.8	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.004	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.031	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	20.8	µg/L	Discharge Conc < TQL
Phenanthrene	1.98	µg/L	Discharge Conc < TQL
Pyrene	39.6	µg/L	Discharge Conc < TQL

Attachment 3

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet					
Type of Test	Chronic		<b>Facility Name</b> Indiana Borough WWTP		
Species Tested	Pimephales				
Endpoint	Survival		<b>Permit No.</b> PA0026751		
TIWC (decimal)	0.5				
No. Per Replicate	10				
TST b value	0.75				
TST alpha value	0.25				

Test Completion Date			Test Completion Date		
2/23/2021			3/29/2022		
Replicate	Control	TIWC	Replicate	Control	TIWC
1	0.889	0.9	1	1	1
2	1	0.7	2	1	0.8
3	1	1	3	1	0.9
4	0.9	0.5	4	0.9	0.9
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	0.947	0.775	Mean	0.975	0.900
Std Dev.	0.061	0.222	Std Dev.	0.050	0.082
# Replicates	4	4	# Replicates	4	4
T-Test Result	2.0902		T-Test Result	8.4776	
Deg. of Freedom	3		Deg. of Freedom	4	
Critical T Value	0.7649		Critical T Value	0.7407	
Pass or Fail	<b>PASS</b>		Pass or Fail	<b>PASS</b>	

Test Completion Date			Test Completion Date		
2/28/2023			3/5/2024		
Replicate	Control	TIWC	Replicate	Control	TIWC
1	0.9	0.7	1	0.9	1
2	0.9	0.7	2	0.9	0.6
3	0.9	1	3	0.9	0.9
4	1	0.8	4	0.9	1
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	0.925	0.800	Mean	0.900	0.875
Std Dev.	0.050	0.141	Std Dev.	0.000	0.189
# Replicates	4	4	# Replicates	4	4
T-Test Result	4.1370		T-Test Result	3.9965	
Deg. of Freedom	4		Deg. of Freedom	3	
Critical T Value	0.7407		Critical T Value	0.7649	
Pass or Fail	<b>PASS</b>		Pass or Fail	<b>PASS</b>	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet					
Type of Test	Chronic	<b>Facility Name</b>			
Species Tested	Pimephales	Indiana Borough WWTP			
Endpoint	Growth				
TIWC (decimal)	0.5				
No. Per Replicate	10	<b>Permit No.</b>			
TST b value	0.75	PA0026751			
TST alpha value	0.25				

Test Completion Date			Test Completion Date		
Replicate	2/23/2021		Replicate	3/29/2022	
No.	Control	TIWC	No.	Control	TIWC
1	0.444	0.427	1	0.392	0.279
2	0.397	0.252	2	0.326	0.317
3	0.343	0.449	3	0.338	0.346
4	0.359	0.233	4	0.294	0.363
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	0.386	0.340	Mean	0.338	0.326
Std Dev.	0.045	0.113	Std Dev.	0.041	0.037
# Replicates	4	4	# Replicates	4	4
T-Test Result	0.8605		T-Test Result	3.0565	
Deg. of Freedom	4		Deg. of Freedom	5	
Critical T Value	0.7407		Critical T Value	0.7267	
Pass or Fail	<b>PASS</b>		Pass or Fail	<b>PASS</b>	

Test Completion Date			Test Completion Date		
Replicate	2/28/2023		Replicate	3/5/2024	
No.	Control	TIWC	No.	Control	TIWC
1	0.402	0.347	1	0.276	0.288
2	0.402	0.39	2	0.23	0.146
3	0.365	0.409	3	0.263	0.27
4	0.429	0.387	4	0.284	0.276
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	0.400	0.383	Mean	0.263	0.245
Std Dev.	0.026	0.026	Std Dev.	0.024	0.066
# Replicates	4	4	# Replicates	4	4
T-Test Result	5.1187		T-Test Result	1.3831	
Deg. of Freedom	5		Deg. of Freedom	4	
Critical T Value	0.7267		Critical T Value	0.7407	
Pass or Fail	<b>PASS</b>		Pass or Fail	<b>PASS</b>	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet						
Type of Test	Chronic		<b>Facility Name</b>			
Species Tested	Ceriodaphnia		Indiana Borough WWTP			
Endpoint	Survival		<b>Permit No.</b>			
TIWC (decimal)	0.5		PA0026751			
No. Per Replicate	1					
TST b value	0.75					
TST alpha value	0.2					

Test Completion Date			Test Completion Date		
Replicate	2/22/2021		Replicate	3/29/2022	
No.	Control	TIWC	No.	Control	TIWC
1	1	1	1	1	1
2	1	1	2	1	1
3	1	1	3	1	1
4	1	1	4	1	1
5	1	1	5	1	1
6	1	0	6	1	1
7	1	1	7	1	1
8	1	1	8	0	0
9	1	1	9	1	1
10	1	1	10	1	1
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	1.000	0.900	Mean	0.900	0.900
Std Dev.	0.000	0.316	Std Dev.	0.316	0.316
# Replicates	10	10	# Replicates	10	10

T-Test Result			T-Test Result		
Deg. of Freedom			Deg. of Freedom		
Critical T Value			Critical T Value		
Pass or Fail	<b>PASS</b>		Pass or Fail	<b>PASS</b>	

Test Completion Date			Test Completion Date		
Replicate	2/27/2023		Replicate	3/5/2024	
No.	Control	TIWC	No.	Control	TIWC
1	1	1	1	0	1
2	1	1	2	1	1
3	1	1	3	1	1
4	1	1	4	1	1
5	1	1	5	1	0
6	1	1	6	1	1
7	1	1	7	1	1
8		1	8	1	1
9	1	1	9	1	1
10	1	1	10	1	1
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	1.000	1.000	Mean	0.900	0.900
Std Dev.	0.000	0.000	Std Dev.	0.316	0.316
# Replicates	9	10	# Replicates	10	10

T-Test Result			T-Test Result		
Deg. of Freedom			Deg. of Freedom		
Critical T Value			Critical T Value		
Pass or Fail	<b>PASS</b>		Pass or Fail	<b>PASS</b>	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test: Chronic  
 Species Tested: Ceriodaphnia  
 Endpoint: Reproduction  
 TIWC (decimal): 0.5  
 No. Per Replicate: 1  
 TST b value: 0.75  
 TST alpha value: 0.2

Facility Name

Indiana Borough WWTP

Permit No.

PA0026751

Test Completion Date		
Replicate	2/22/2021	
No.	Control	TIWC
1	24	31
2	30	38
3	27	34
4	33	35
5	37	27
6	31	0
7	31	31
8	33	26
9	30	29
10	31	35
11		
12		
13		
14		
15		

Mean: 30.700, 28.600  
 Std Dev.: 3.498, 10.741  
 # Replicates: 10, 10

T-Test Result: 1.5944  
 Deg. of Freedom: 12  
 Critical T Value: 0.8726  
 Pass or Fail: **PASS**

Test Completion Date		
Replicate	3/29/2022	
No.	Control	TIWC
1	22	25
2	15	23
3	21	30
4	24	25
5	12	18
6	21	25
7	22	25
8	2	2
9	23	22
10	30	20
11		
12		
13		
14		
15		

Mean: 19.200, 21.500  
 Std Dev.: 7.757, 7.590  
 # Replicates: 10, 10

T-Test Result: 2.3477  
 Deg. of Freedom: 16  
 Critical T Value: 0.8647  
 Pass or Fail: **PASS**

Test Completion Date		
Replicate	2/27/2023	
No.	Control	TIWC
1	28	32
2	29	34
3	30	32
4	29	32
5	28	32
6	24	33
7	31	32
8		32
9	31	28
10	27	27
11		
12		
13		
14		
15		

Mean: 28.556, 31.400  
 Std Dev.: 2.186, 2.171  
 # Replicates: 9, 10

T-Test Result: 11.3791  
 Deg. of Freedom: 16  
 Critical T Value: 0.8647  
 Pass or Fail: **PASS**

Test Completion Date		
Replicate	3/5/2024	
No.	Control	TIWC
1	21	23
2	25	27
3	29	32
4	20	29
5	16	1
6	30	19
7	24	28
8	21	40
9	25	24
10	20	25
11		
12		
13		
14		
15		

Mean: 23.100, 24.800  
 Std Dev.: 4.332, 10.108  
 # Replicates: 10, 10

T-Test Result: 2.2263  
 Deg. of Freedom: 13  
 Critical T Value: 0.8702  
 Pass or Fail: **PASS**

**WET Summary and Evaluation**

<b>Facility Name</b>	Indiana Borough WWTP
<b>Permit No.</b>	PA0026751
<b>Design Flow (MGD)</b>	8.2
<b>Q<sub>7-10</sub> Flow (cfs)</b>	12.4
<b>PMF<sub>a</sub></b>	0.452
<b>PMF<sub>c</sub></b>	1

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		2/23/21	3/29/22	2/28/23	3/5/24
Pimephales	Survival	PASS	PASS	PASS	PASS

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		2/23/21	3/29/22	2/28/23	3/5/24
Pimephales	Growth	PASS	PASS	PASS	PASS

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		2/22/21	3/29/22	2/27/23	3/5/24
Ceriodaphnia	Survival	PASS	PASS	PASS	PASS

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
		2/22/21	3/29/22	2/27/23	3/5/24
Ceriodaphnia	Reproduction	PASS	PASS	PASS	PASS

**Reasonable Potential?** NO

**Permit Recommendations**

Test Type **Chronic**  
 TIWC **51** % Effluent  
 Dilution Series **13, 26, 51, 76, 100** % Effluent  
 Permit Limit **None**  
 Permit Limit Species