pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0043729**
Facility Type	**Municipal**	APS ID	**1113004**
Major / Minor	**Major**	Authorization ID	**1483804**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Hampton Township**	Facility Name	**Allison Park STP**
Applicant Address	3101 McCully Road	Facility Address	2536 Toner Avenue
	Allison Park, PA 15101-1331		Allison Park, PA 15101-3643
Applicant Contact	James Degnan	Facility Contact	James Degnan
Applicant Phone	(412) 486-0400	Facility Phone	(412) 486-0400
Client ID	41039	Site ID	260639
Ch 94 Load Status	Existing Hydraulic Overload	Municipality	Hampton Township
Connection Status	Self Imposed Connection Prohibition	County	Allegheny
Date Application Received	April 29, 2024	EPA Waived?	No
Date Application Accepted	August 13, 2024	If No, Reason	Major Facility

Purpose of Application: NPDES permit renewal.

Summary of Review

The Pa Department of Environmental Protection (PADEP/Department) received an NPDES permit renewal application from KLH Engineers, Co, Inc (consultant) on April 29, 2024, on behalf of Hampton Township (permittee) for Permittee's Allison Park STP (facility). This is a major sewage facility with a design flow of 3.2 MGD that discharges into Pine Creek (TSF) in state watershed 18-A. The current permit will expire on October 31, 2024. The terms and conditions of the current permit is automatically extended since the renewal application was received at least 180 days prior to expiration date. Renewal NPDES permit application under Clean Water Program are not covered by PADEP's PDG per 021-2100-001. This fact sheet is developed in accordance with 40 CFR §124.56.

Changes to existing permit: Added: monitoring for Free Cyanide, Total Zinc, PFOA, PFOS, HFPO-DA, PFBS, and E-Coli. Limits with schedule for Total Copper. More stringent AML for TRC.

Sludge use and disposal description and location(s): Digested sludge is filter pressed and sent to Seneca and Imperial landfill for ultimate disposal.

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
√		Reza H. Chowdhury, E.I.T. / Project Manager	September 9, 2024
X		Pravin Patel Pravin C. Patel, P.E. / Environmental Engineer Manager	09/10/2024

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	3.2
Latitude	40º 33' 43"	Longitude	-79º 57' 51"
Quad Name	Glenshaw	Quad Code	1406
Wastewater Description:	Sewage Effluent		
Receiving Waters	Pine Creek (TSF)	Stream Code	42136
NHD Com ID	123972092	RMI	8.42
Drainage Area	43.3 mi^2	Yield (cfs/mi^2)	0.259
Q_{7-10} Flow (cfs)	11.2	Q_{7-10} Basis	Please see below
Elevation (ft)	855.45	Slope (ft/ft)	
Watershed No.	18-A	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	NUTRIENTS, PATHOGENS, SILTATION		
Source(s) of Impairment	RURAL (RESIDENTIAL AREAS), SITE CLEARANCE (LAND DEVELOPMENT OR REDEVELOPMENT), SOURCE UNKNOWN		
TMDL Status	Final, 3/8/2013	Name	Pine Creek Watershed

Background/Ambient Data		Data Source
pH (SU)	7.0	Default
Temperature (°C)	20	Default
Hardness (mg/L)	100	Default
Other:		

Nearest Downstream Public Water Supply Intake		West View Water Authority in Neville TWP Allegheny County	
PWS Waters	Ohio River	Flow at Intake (cfs)	
PWS RMI	35.26	Distance from Outfall (mi)	18.10

Changes Since Last Permit Issuance: The WQM permit was amended on September 16, 2021 that authorized construction of a new treatment plant adjacent to the existing STP. The WQM permit approved an increase in Average Annual Design Flow from 3.2 MGD to 3.9 MGD, peak instantaneous flow from 10 MGD to 20.6 MGD, and organic loading capacity from 4,938 lbs. BOD5/day to 6,180 lbs. BOD5/day. The new treatment plant will consist of debris and grit removal, SBRs, UV disinfection, sludge holding and dewatering etc. The construction work is yet to be completed, therefore, current review of the NPDES permit is limited to existing treatment capabilities. An NPDES amendment application should be submitted once the treatment plant is upgraded and operational.

Streamflow:
Several studies were conducted in the past on the stream to determine appropriate Q7-10 flow. As a result, the following was adopted and applied in previous permits:

$$(0.028 cfs/mi^2)(44.27 mi^2) = 1.24 \text{ cfs} + (6 \text{ mgd Pine Ck. STP} + 0.4 \text{ mgd A\&B STP})\ (1.55) =$$

$$11.2 \text{ cfs}$$

This results in applicable yield of 11.2 cfs/43.3 mi2 or 0.259 cfs/mi2.

Stormwater Outfalls:
The permit application lists following two stormwater-only outfalls:

4. List all stormwater outfalls. If outfall numbers were previously assigned in a permit, use those numbers.

OUTFALL NO.	LATITUDE			LONGITUDE			RECEIVING WATERS		
	Deg.	Min.	Sec.	Deg.	Min.	Sec.	Name	Ch. 93 Class.	Drainage Area (ft^2)
101	40	33	47.18	79	57	48.79	Pine Creek	TSF	
102	40	33	44.06	79	57	49.88	Pine Creek	TSF	

Part C of the permit will contain special condition pertaining to stormwater discharge requirements from industrial activities, as required by 40 CFR 122.26(b)(14)(ix).

PWS Intake:
The nearest downstream public water supply is West View Water Authority in Neville TWP Allegheny County on Ohio River at RMI 35.26. Its approximately 18.10 miles downstream of Outfall 001. Discharge from this facility is expected not to impact the PWS intake.

Wastewater Characteristics:
The 90th percentile pH of 6.95 was calculated from daily DMR during dry months July through September for the years 2022-2023. Default discharge hardness of 100 mg/l and temperature of 25^{0}C will be used for modeling, as appropriate.

Background data:
The nearest WQN station is 0902 and StreamGage is 03086000 which are on Ohio River at Sewickley and approximately 25 miles downstream of Outfall 001 and therefore not representative. In absence of site-specific data, a default pH of 7.0 S.U., stream hardness of 100 mg/l, and temperature of 20^{0}C will be used for modeling.

Pine Creek Watershed TMDL:
The discharge is to Pine Creek which has a Final TMDL, Pine Creek Watershed TMDL, and is impaired for pathogens, nutrients, siltation. There's no WLA assigned to this facility. Existing limits for Fecal Coliform and TSS, and monitoring for TN and TP will be continued.

Antidegradation (93.4):
The effluent limits for this discharge have been developed to ensure that existing in-stream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. The receiving streams are designated as Trout Stocking (TSF). No High-Quality stream or Exceptional Value water is impacted by this discharge; therefore, no Antidegradation Analysis is performed for the discharge.

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

Treatment Facility Summary

Treatment Facility Name: Allison Park STP

WQM Permit No.	Issuance Date
0219401 A-1	September 16, 2021
0219401 A	February 18, 2020
0275402-T1	November 5, 2004
0285423-T1	November 5, 2004
0285423-A1-T1	November 5, 2004
0285423-A2-T1	November 5, 2004

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Gas Chlorine	3.2

Hydraulic Capacity (MGD)	Organic Capacity (lbs./day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
3.2	4,938	Existing Hydraulic Overload	Sludge Digestion and Belt Filter Press	Landfill Site

Facility Information

Allison Park STP (facility) is a major sewage treatment facility owned, operated, and maintained by Hampton Township (permittee). The facility is in Hampton Township, Allegheny County. The average annual design flow and hydraulic design capacity is 3.2 MGD and organic design capacity is 4,938 lbs. BOD5/day. As stated in page 2 of this report, the facility is currently under construction of a new treatment plant which has higher AADF, peak instantaneous flow, and organic design capacity. The current hydraulic overload condition will be rectified through this expansion.

The facility serves the following municipalities:

TRIBUTARY INFORMATION				
Municipalities Served	Flow Contribution (%)	Type of Sewer System		Population
		Separate (%)	Combined (%)	
Hampton Township	91	100		18425
Richland Township	9	100		11942

Per the inspection report dated July 12, 2023, the existing facility consists of the following treatment units: four influent pumps, two primary clarifiers, four aeration tanks, two secondary clarifiers, four aerobic digesters, one belt filter press, two chlorine contact tank, one rotary screen, two dimmunators, and three back-up secondary clarifiers. Settled solids from primary and secondary clarifiers are sent to aerated sludge digesters. Supernatant is sent to the head of the plant and solids are sent to sludge filter press and final offsite disposal at Seneca Landfill.

There's no significant or categorical industrial or commercial users within the sewer service area.

Compliance History/Inspection summary:

07/12/2023: CEI conducted. Noted violation: Effluent composite sampler takes flow proportional samples based on influent flow. This violation will be addressed when the township upgrades the STP.

02/28/2022: CEI conducted. Noted violation: TRC IMAX exceeded on January 2022, the main gate was throttled back on September 2021 and February 2022 causing overflow in the system, and effluent composite sampler takes flow proportional samples based on influent flow. This violation will be addressed when the township upgrades the STP.

The following two pages complies eDMR data for last 12 months. A review of the data doesn't show any violation.

Compliance History

DMR Data for Outfall 001 (from July 1, 2023 to June 30, 2024)

Parameter	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23	SEP-23	AUG-23	JUL-23
Flow (MGD) Average Monthly	1.83	2.54	3.31	2.78	2.11	3.25	1.89	1.62	1.50	1.52	2.11	1.80
Flow (MGD) Daily Maximum	2.51	6.33	10.035	6.38	5.52	8.56	4.49	2.69	2.71	1.98	6.89	3.31
pH (S.U.) IMIN	6.39	6.29	6.45	6.31	6.52	6.50	6.48	6.29	6.36	6.45	6.55	6.41
pH (S.U.) IMAX	6.75	7.05	7.05	6.83	6.83	6.73	6.98	6.84	6.97	6.94	7.43	6.87
DO (mg/L) IMIN	6.40	6.2	6.3	7.0	7.2	6.70	9.08	6.10	6.3	6.8	6.70	6.30
TRC (mg/L) Average Monthly	0.09	0.15	0.11	0.19	0.12	0.21	0.09	0.07	0.09	0.06	0.12	0.11
TRC (mg/L) IMAX	0.22	0.38	0.37	0.56	0.39	0.63	0.48	0.20	0.31	0.24	0.56	0.54
CBOD5 (lbs/day) Average Monthly	35.3	61.8	110.9	84.6	76.7	93.6	40.0	40.0	20.2	21.6	32.83	41.87
CBOD5 (lbs/day) Weekly Average	35.3	59.2	96.7	73.4	43.9	116.2	43.3	37.4	24.4	20.1	34.61	46.6
CBOD5 (mg/L) Average Monthly	2.33	3.3	3.2	3.9	3.4	3.14	2.31	2.8	1.7	1.76	1.93	2.96
CBOD5 (mg/L) Weekly Average	2.33	3.1	2.7	3.5	3.0	3.5	2.48	2.6	2.0	1.63	1.77	3.3
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	1516	1803	2062	1795	2105	1976	1679	1758	1758	1443	2067	1868
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	2298	2924	3643	2727	2986	3701	2296	2889	2401	2934	3577	3173
BOD5 (mg/L) Raw Sewage Influent Average Monthly	99.5	94.3	86.7	87.3	120.8	79.5	114	123	147	116.5	117	131
BOD5 (mg/L) Raw Sewage Influent Weekly Average	99.5	80.8	96.1	84.0	135.3	64.3	119	119	144	109.3	128.7	145
TSS (lbs/day) Average Monthly	46.1	56.62	191.9	113.6	66.84	116.5	112.5	30.9	36.0	50.6	33.3	56.7
TSS (lbs/day) Raw Sewage Influent Average Monthly	2404	2378	4519	2722	3313	3145	1231	1872	2182	1523	2233	1852
TSS (lbs/day) Raw Sewage Influent Daily Maximum	6925	3655	14060	5771	5143	5714	2022	2648	3697	2682	5842	3157

TSS (lbs/day) Weekly Average	46.1	53.0	53.7	113.6	47.70	132.0	112.5	35.8	37.3	60.9	32.79	60.6
TSS (mg/L) Average Monthly	3.10	2.9	4.6	5.2	3.42	3.87	5.35	2.4	3.1	3.90	2.16	4.2
TSS (mg/L) Raw Sewage Influent Average Monthly	157	119	142	119	184	120	83	145	186	118	135	136
TSS (mg/L) Raw Sewage Influent Weekly Average	157	124	148	118.8	200	120	83	143	185	123	169.7	133
TSS (mg/L) Weekly Average	3.10	2.7	2.4	5.2	3.00	4.00	5.35	2.8	3.2	4.67	1.93	4.6
Fecal Coliform (No./100 ml) Geometric Mean	131.2	31.2	323.4	209	194.4	60.4	72.6	221	78.9	49.5	93.57	122.6
Fecal Coliform (No./100 ml) IMAX	461.1	83.3	648.8	631	365.4	172.3	144.5	687	344.8	261.3	178.20	365.4
Total Nitrogen (mg/L) Daily Maximum	5.5			8.7			14.1			15.8		
Ammonia (lbs/day) Average Monthly	5.44	3.7	4.73	2.6	3.36	2.75	1.28	1.41	0.70	1.71	1.64	4.02
Ammonia (lbs/day) Raw Sewage Influent Average Monthly	352	343	381	369.6	372	526	476	344	315	365	328	253
Ammonia (lbs/day) Raw Sewage Influent Daily Maximum	394	414	812	645.5	581	1614	1160	427	471	556	399	339
Ammonia (lbs/day) Weekly Average	5.44	2.1	1.25	2.6	2.31	3.13	1.28	1.42	0.71	2.01	1.65	4.45
Ammonia (mg/L) Average Monthly	0.36	0.21	0.19	0.11	0.17	0.09	0.07	0.11	0.06	0.13	0.11	0.31
Ammonia (mg/L) Raw Sewage Influent Average Monthly	23.6	17.4	14.1	17.2	21.2	18.3	27	27	27	28.3	21.6	18.6
Ammonia (mg/L) Raw Sewage Influent Weekly Average	23.6	16.9	15.3	17.2	24.1	18.3	27	26	27	28.3	19.4	17.4
Ammonia (mg/L) Weekly Average	0.36	0.10	0.10	0.11	0.15	0.09	0.07	0.11	0.06	0.15	0.10	0.35
Total Phosphorus (mg/L) Daily Maximum	0.6			1.7			3.1			3.2		

Existing limits

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report 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
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.5	XXX	0.93	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) Nov 1 - Apr 30	667.6	1014.8	XXX	25	38	50	2/week	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) May 1 - Oct 31	400.6	614.2	XXX	15	23	30	2/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report	XXX	2/week	24-Hr Composite
Total Suspended Solids	801.1	1201.7	XXX	30	45	60	2/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report	XXX	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
Ammonia-Nitrogen Dec 1 - Feb 28	120.2	181.5	XXX	4.5	6.8	9	2/week	24-Hr Composite
Ammonia-Nitrogen Mar 1 - Nov 30	40.1	61.4	XXX	1.5	2.3	3	2/week	24-Hr Composite
Ammonia-Nitrogen Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report	XXX	2/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite

Development of Effluent Limitations

Outfall No.	001	**Design Flow (MGD)**	3.2
Latitude	40º 33' 43.00"	**Longitude**	-79º 57' 51.00"

Wastewater Description: Sewage Effluent

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

Model input data

The following data will be used for modeling, as needed:

• Discharge pH	6.95	(90th percentile, July-Sep 2022-23, daily eDMR data)
• Discharge Temperature	25°C	(Default)
• Discharge Hardness	100 mg/l	(Default)
• Stream pH	7.0	(Default)
• Stream Temperature	20.0°C	(Default)
• Stream Hardness	100 mg/l	(Default)

The following two nodes were used in modeling:

Node 1: At the outfall 001 on Pine Creek (42136)

Elevation:	855.45 ft (National Map-Advanced Viewer, 08/13/2024)
Drainage Area:	43.3 mi^2 (StreamStats Version 3.0, 08/13/2024)
River Mile Index:	8.42 (PA DEP eMapPA)
Low Flow Yield:	0.259 cfs/mi^2
Q_{7-10}:	11.2 cfs
Discharge Flow:	3.2 MGD

Node 2: At confluence with Gourdhead Run at Pine Creek RMI 8.05

Elevation:	842.56 ft (National Map-Advanced Viewer, 08/13/2024)
Drainage Area:	47.5 mi^2 (StreamStats Version 3.0, 08/13/2024)
River Mile Index:	8.05 (PA DEP eMapPA)
Low Flow Yield:	0.04 cfs/mi^2
Discharge Flow:	0.0 MGD

WQM 7.0 Model

WQM 7.0 version 1.11 is a water quality model designed to assist DEP to determine appropriate effluent limits for $CBOD_5$, NH_3-N and DO. The model simulates two basic processes. In the NH_3-N module, the model simulates the mixing and degradation of NH_3-N in the stream and compares calculated instream NH_3-N concentrations to NH_3-N water quality criteria. In the D.O. module, the model simulates the mixing and consumption of D.O. in the stream due to the degradation of $CBOD_5$ and NH_3N and compares calculated instream D.O. concentrations to D.O. water quality criteria. The model was utilized for this permit renewal by using Q_{7-10} and current background water quality levels of the stream.

NH_3-N

WQM 7.0 suggested NH_3-N limit of 1.5 mg/l as monthly average and 3.0 mg/l as IMAX limit during summer to protect water quality standards. The winter limits are calculated by multiplying the summer limits with a factor of 3. These limits are the same as existing limits and will be carried over.

CBOD5

WQM 7.0 suggests CBOD5 limit of 15.0 mg/l as AML which is the same as the existing limits. Existing limits will be carried over.

DO
WQM 7.0 suggests minimum DO of 6.0 mg/l which is the model input and same as existing limit. Existing limit will be carried over.

General Discussion on Toxics Management Spreadsheet (TMS)
Based on the available data, PADEP utilizes Toxics Management Spreadsheet (TMS) to (1) evaluate reasonable potential for toxic pollutants to cause or contribute to an excursion above the water quality standards and (2) develop WQBELs for those such toxic pollutants (i.e., 40 CFR § 122.44(d)(1)(i)). It is noteworthy that some of these pollutants that may be reported as "non-detect", but still exceeded the criteria, were determined to be candidates for modeling because the method detection levels used to analyze those pollutants were higher than target QLs and/or the most stringent Chapter 93 criteria. The model then recommended the appropriate action for the Pollutants of Concerns based on the following logic as stated in PADEP's SOP titled *"Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers (DEP SOP No.: BCW-PMT-037, Revised May 20, 2021)"*:

1. In general, establish limits in the draft permit where the effluent concentration determined in B.1 or B.2 equals or exceeds 50% of the WQBEL (i.e., RP is demonstrated). Use the average monthly, maximum daily and instantaneous maximum (IMAX) limits for the permit as recommended by the TMS (or, if appropriate, use a multiplier of 2 times the average monthly limit for the maximum daily limit and 2.5 times the average monthly limit for IMAX).

2. For non-conservative pollutants, in general, establish monitoring requirements where the effluent concentration determined in B.1 or B.2 is between 25% - 50% of the WQBEL.

3. For conservative pollutants, in general, establish monitoring requirements where the effluent concentration determined in B.1 or B.2 is between 10% - 50% of the WQBEL.

NOTE 4 – If the effluent concentration determined in B.1 or B.2 is "non-detect" at or below the target quantitation limit (TQL) for the pollutant as specified in the TMS and permit application, the pollutant may be eliminated as a candidate for WQBELs or monitoring requirements unless 1) a more sensitive analytical method is available for the pollutant under 40 CFR Part 136 where the quantitation limit for the method is less than the applicable water quality criterion and 2) a detection at the more sensitive method may lead to a determination that an effluent limitation is necessary, considering available dilution at design conditions.

NOTE 5 – If the effluent concentration determined in B.1 or B.2 is a detection below the TQL but above or equal to the applicable water quality criterion, WQBELs or monitoring may be established for the pollutant.

4. Application managers may, on a site- and pollutant-specific basis, deviate from these guidelines where there is specific rationale that is documented in the fact sheet.

Major sewage facilities are required to sample for pollutants group 1-5, at a minimum, and 6 and/or 7, if applicable. TMDL parameters, as applicable, are also required to be sampled if they aren't covered in any pollutant groups or by Part A of the permit. Pollutants groups 2-7 are modeled through TMS. The facility is required to provide at least three sample results of the effluent from outfall(s) discharging processed wastewater. The permittee submitted at least three sample results of all pollutants in groups 1-5. Maximum sample results of a given pollutant is the input of the model if the sample size is less than 10. For pollutants with sample size ≥ 10, PADEP utilizes TOXCONC to calculate Average Monthly Effluent Concentration (AMEC) and Coefficient of Variation (CoV) to refine the model input. The statistical methodologies used in this spreadsheet are taken from EPA's *TSD for Water Quality-based Toxics Control, Appendix E* and are consistent with PADEP's technical guidance 391-2000-024.

The pollutants are modeled through TMS and output from the TMS is provided below:

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Copper	0.65	1.01	24.3	38.0	60.8	µg/L	24.3	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	Report	Report	Report	Report	Report	µg/L	13.0	THH	Discharge Conc > 25% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	208	AFC	Discharge Conc > 10% WQBEL (no RP)

Each of the parameters are discussed below:

Total Copper:
The TMS model suggested AML of 24.3 ug/l as AML, 38 ug/l as MDL, and 60.8 ug/l as IMAX, based on a model input value of 20 ug/l (maximum of 3 sample results). Current permit doesn't have limits or monitoring requirement. The permittee stated that the drinking water might be the suspected source of the elevated copper concentration. A draft compliance schedule will be applied in the permit with final dates will be applied in the final permit after permittee's input. A TRE and Corrosion Control Feasibility Study special conditions will be added in the Part C of the permit.

Free Cyanide:
The TMS model suggested monitoring requirements for Free Cyanide based on a model input concentration of 4.0 ug/l (maximum of 3 sample results). A quarterly monitoring will be included.

Total Zinc:
The TMS model suggested monitoring requirements for Total Zinc based on a model input concentration of 49 ug/l (maximum of 3 sample results). A quarterly monitoring will be included.

Other Requirements:

Nutrients monitoring:
PADEP's SOP BCW-PMT-033 recommends monitoring for Total Nitrogen and Total Phosphorus for facilities with design flow more than 2000-GPD, which is also supported by Pa Code 25 Ch. 92a.61. Current monitoring requirement will be continued.

Fecal Coliform:
The recent coliform guidance in 25 Pa. code § 92a.47.(a)(4) requires a summer technology limit of 200/100 ml as a geometric mean and an instantaneous maximum not greater than 1,000/100ml and § 92a.47.(a)(5) requires a winter limit of 2,000/100ml as a geometric mean and an instantaneous maximum not greater than 10,000/100ml. These are existing requirements and will be carried over in this renewal.

E. Coli:
Pa Code 25 § 92a. 61 requires monitoring of E. Coli. DEP's SOP titled "Establishing Effluent Limitations for Individual Sewage Permits (BCW-PMT-033, revised March 24, 2021) recommends monthly E. Coli monitoring for major sewage dischargers. This requirement will be applied from this permit term.

pH:
The TBEL for pH is above 6.0 and below 9.0 S.U. (40 CFR §133.102(c) and Pa Code 25 §§ 95.2(1), 92a.47) which are existing limits and will be carried over.

Total Suspended Solids (TSS):
There is no water quality criterion for TSS. The existing limits of 30 mg/L average monthly, 45 mg/l average weekly, and 60 mg/L instantaneous maximum will remain in the permit based on the minimum level of effluent quality attainable by secondary treatment, 25 Pa. Code § 92a.47 and 40CFR 133.102(b). The mass based average monthly and weekly average limits are calculated to be 800.64 lbs./day and 1,201 lbs./day respectively, which are slightly more stringent compared to the existing permit.

Total Residual Chlorine (TRC):

The attached computer printout utilizes the equation and calculations as presented in the Department's 2003 Implementation Guidance for Total Residual Chlorine (TRC) (ID#391-2000-015) for developing chlorine limitations. The attached printout indicates that a water quality limit of 0.4 mg/l would be needed to prevent toxicity concerns at the discharge point for Outfall 001. The recommended IMAX limit is 1.11 mg/l. The model default daily CV value was changed from 0.5 to 0.887 from TOXCONC, out of 100 most recent data points. The current permit has an AML of 0.5 mg/l and IMAX of 0.93 mg/l. More stringent AML of 0.4 mg/l and less stringent IMAX limit of 1.11 mg/l will be applied in this renewal. The less stringent IMAX limit is justified through CWA Section 402(O)(2)(B)(i), pertinent to Anti-backsliding prohibition exception. A review of daily data between July 1 2022 through July 31 2024 (dry months only) indicated that the facility will be meeting the more stringent AML at all time. New limits will be applied from the effective date of the permit.

PFOA, PFOS, HFPO-DA and PFBS:

As part of the renewal application, the discharge concentrations for PFAS parameters (all detectable) are provided as follows: 11.2 ng/l for PFOA, 3.5 ng/l for PFOS, 19.8 ng/l and 8.5 ng/l for HFPO-DA. Per BCW-PMT-033 (revised February 5, 2024) and under the authority of Pa Code 25 § 92a.61, quarterly monitoring for PFOA, PFOS, HFPO-DA, and PFBS will be added in this renewal with a footnote that will read:

"The permittee may discontinue monitoring for PFOA, PFOS, HFPO-DA, and PFBS if the results in 4 consecutive monitoring periods indicate non-detect results at or below Quantitation Limits of 4.0 ng/L for PFOA, 3.7 ng/L for PFOS, 3.5 ng/L for PFBS and 6.4 ng/L for HFPO-DA. When monitoring is discontinued, permittees must enter a No Discharge Indicator (NODI) Code of "GG" on DMRs."

Monitoring Frequency and Sample Types:

Otherwise specified above, the monitoring frequency and sample type of compliance monitoring for existing parameters are recommended by DEP's SOP and Permit Writers Manual and/or on a case-by-case basis using best professional judgment (BPJ).

Flow and Influent BOD_5 and TSS Monitoring Requirement:

The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR § 122.44(i)(1)(ii). Influent BOD_5 and TSS monitoring requirements are established in the permit per the requirements set in Pa Code 25 Chapter 94.

Anti-Backsliding

Anti-backsliding prohibition is justified in sections where an exception is justified for the affected pollutant(s). For remaining pollutants, this prohibition isn't applicable since the proposed limits are at least as stringent as were in current permit.

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: **Annual sampling throughout the permit term**

The dilution series used for the tests was: 100%, 66%, 31%, 16%, and 8%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 31%.

Summary of Four Most Recent Test Results

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

NOEC/LC50 Data Analysis

Test Date	*Ceriodaphnia* Results (% Effluent)			*Pimephales* Results (% Effluent)			Pass? *
	NOEC Survival	NOEC Reproduction	LC50	NOEC Survival	NOEC Growth	LC50	
05/23/2023	100%	100%	100%	100%	100%	100%	Pass
05/16/2022	100%	100%	100%	66%	100%	100%	Pass
05/18/2021	100%	100%	100%	100%	100%	100%	Pass
06/23/2020	100%	100%	100%	100%	100%	100%	Pass

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

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

☐ **YES** ☒ **NO**

Comments:

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

Acute Partial Mix Factor (PMFa): **0.757** Chronic Partial Mix Factor (PMFc): **1**

1. Determine IWC – Acute (IWCa):

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

[(3.2 MGD x 1.547) / ((11.2 cfs x **0**.757) + (3.2 MGD x 1.547))] x 100 = **36.86%**

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:

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

2a. Determine Target IWCa (If Acute Tests Required)

TIWCa = IWCa / 0.3 = **%**

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

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

[(3.2 MGD x 1.547) / ((11.2 cfs x 1) + (3.2 MGD x 1.547))] x 100 = **30.65%**

3. Determine Dilution Series

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

Dilution Series = 100%, 66%, 31%, 16%, and 8%.

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).

If WET limits will not be established, but reasonable potential was determined, indicate the rationale for not establishing WET limits:

Proposed Effluent Limitations and Monitoring Requirements

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

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	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
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.4	XXX	1.11	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) Nov 1 - Apr 30	667.6	1014.8	XXX	25	38	50	2/week	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) May 1 - Oct 31	400.6	614.2	XXX	15	23	30	2/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report	XXX	2/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	Report	XXX	2/week	24-Hr Composite
Total Suspended Solids	800.6	1201.0	XXX	30.0	45.0	60	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report Daily Max	1/month	Grab

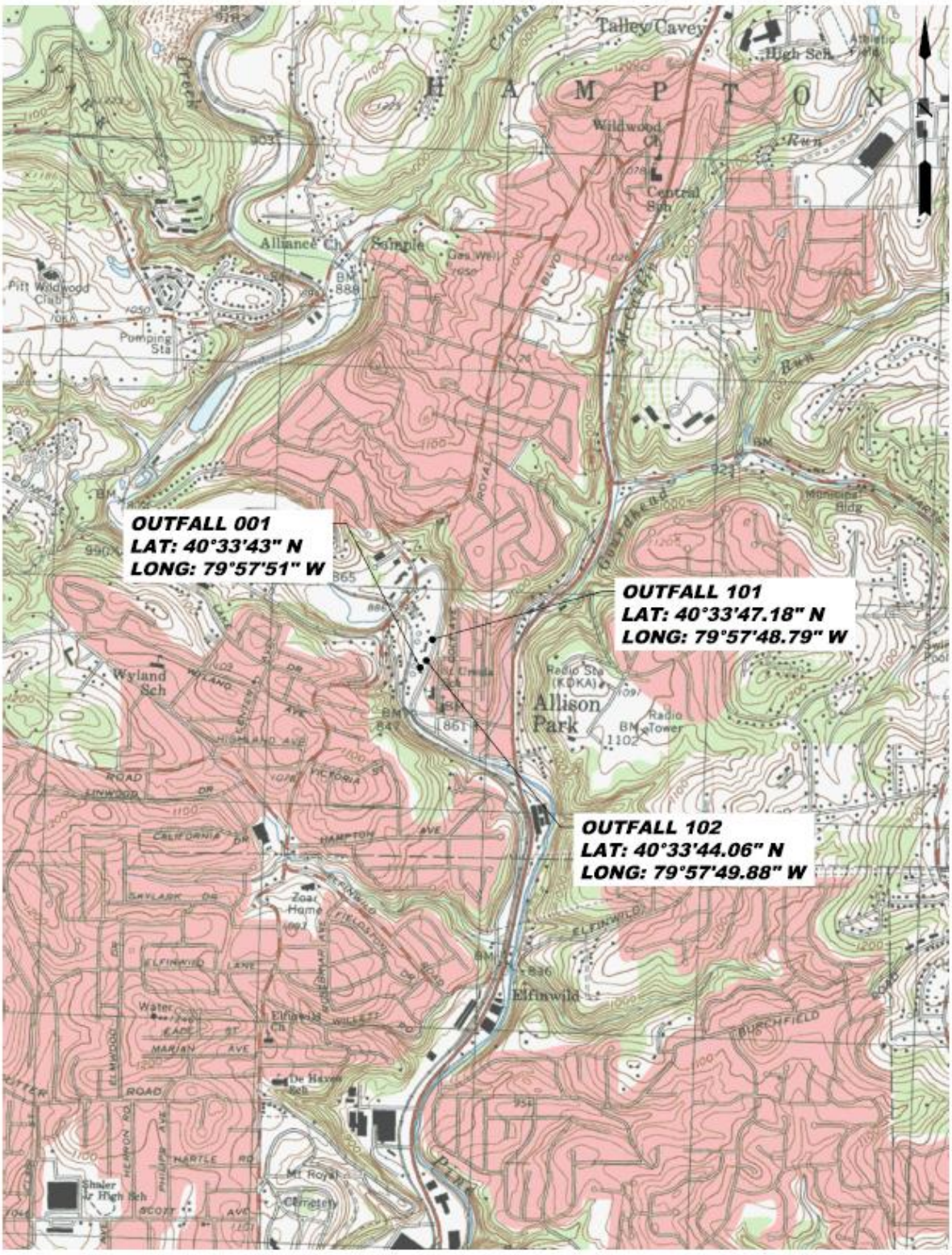
Outfall 001, Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Calculation
Ammonia-Nitrogen Dec 1 - Feb 29	120.2	181.5	XXX	4.5	6.8	9	2/week	24-Hr Composite
Ammonia-Nitrogen Mar 1 - Nov 30	40.1	61.4	XXX	1.5	2.3	3	2/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Copper, Total (ug/L) (interim)	XXX	XXX	XXX	Report	Report Daily Max	XXX	1/month	24-Hr Composite
Copper, Total (ug/L) (final)	XXX	XXX	XXX	24.3	38.0 Daily Max	60.8	1/month	24-Hr Composite
Cyanide, Free (ug/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Zinc, Total (ug/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
PFOA (ug/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
PFOS (ug/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
PFBS (ug/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
HFPO-DA (ug/L)	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab

Compliance Sampling Location: At outfall 001

Other Comments: None

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



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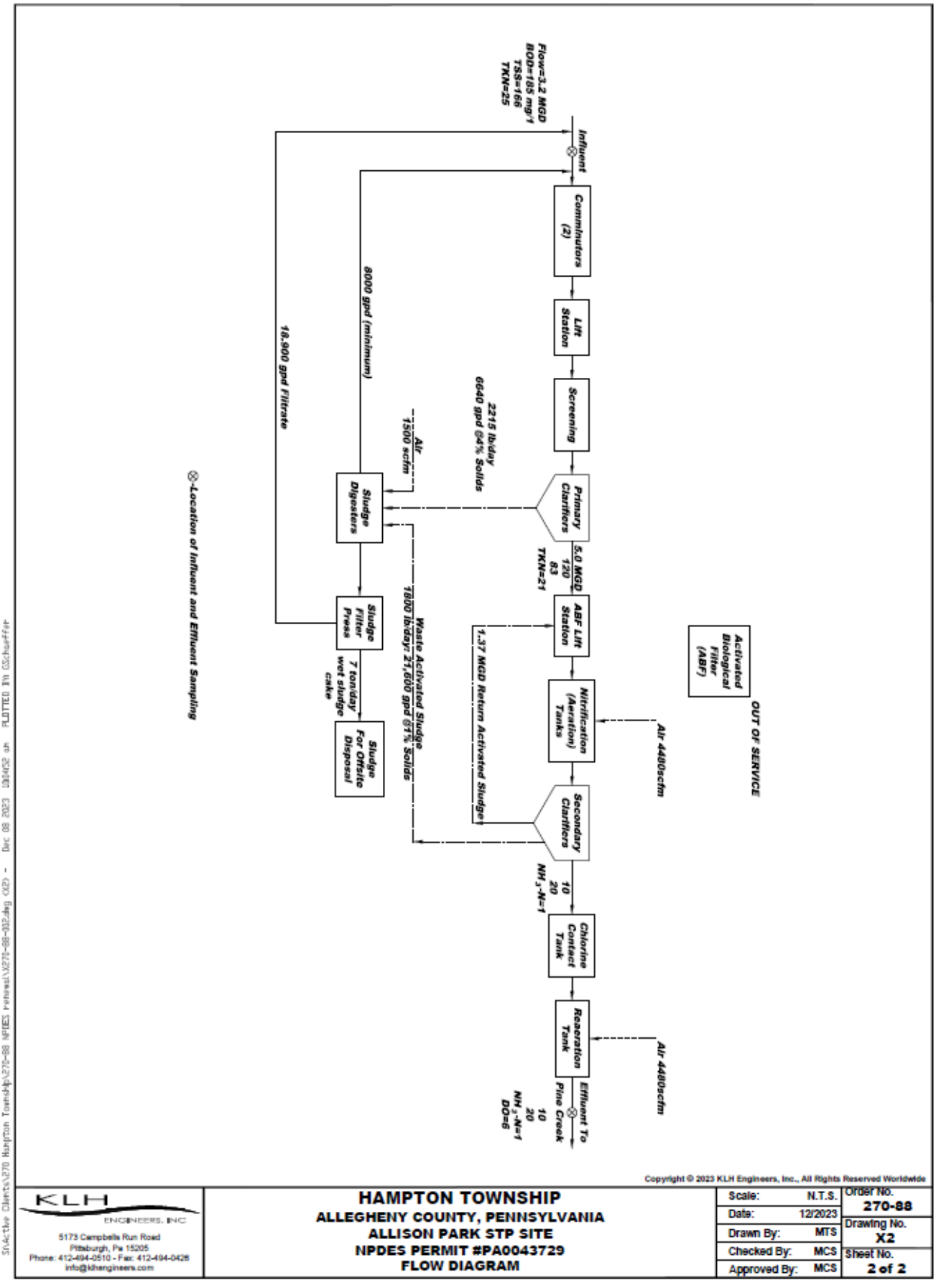
HAMPTON TOWNSHIP
ALLEGHENY COUNTY, PENNSYLVANIA
ALLISON PARK STP SITE
NPDES PERMIT #PA0043729
OUTFALL LOCATION EXHIBIT

Scale:	1" = 2000'
Date:	12/2023
Drawn By:	MTS
Checked By:	MCS
Approved By:	MCS

Order No. 270-88
Drawing No. X1
Sheet No. 1 of 2


Flow=3.2 MGD
BOD=185 mg/l
TSS=166
TKN=25
Influent
Comminutors (2)
Lift Station
Screening
Primary Clarifiers
2215 lb/day
6640 gpd @4% Solids
8000 gpd (minimum)
Air
1500 scfm
18,900 gpd Filtrate
Sludge Digesters
Sludge Filter Press
7 ton/day wet sludge cake
Sludge For Offsite Disposal
1800 lb/day; 21,600 gpd @1% Solids
Waste Activated Sludge
5.0 MGD
120
83
TKN=21
ABF Lift Station
1.37 MGD Return Activated Sludge
Nitrification (Aeration) Tanks
Air 4480scfm
Secondary Clarifiers
10
20
NH3-N=1
Chlorine Contact Tank
Reaeration Tank
Air 4480scfm
Effluent To Pine Creek
10
20
NH3-N=1
DO=6
Activated Biological Filter (ABF)
OUT OF SERVICE
Location of Influent and Effluent Sampling
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HAMPTON TOWNSHIP
ALLEGHENY COUNTY, PENNSYLVANIA
ALLISON PARK STP SITE
NPDES PERMIT #PA0043729
FLOW DIAGRAM
Scale: N.T.S.
Date: 12/2023
Drawn By: MTS
Checked By: MCS
Approved By: MCS
Order No. 270-88
Drawing No. X2
Sheet No. 2 of 2

StreamStats at Outfall 001

PA0043729 at Outfall 001

Region ID: PA
Workspace ID: PA20240814010729706000
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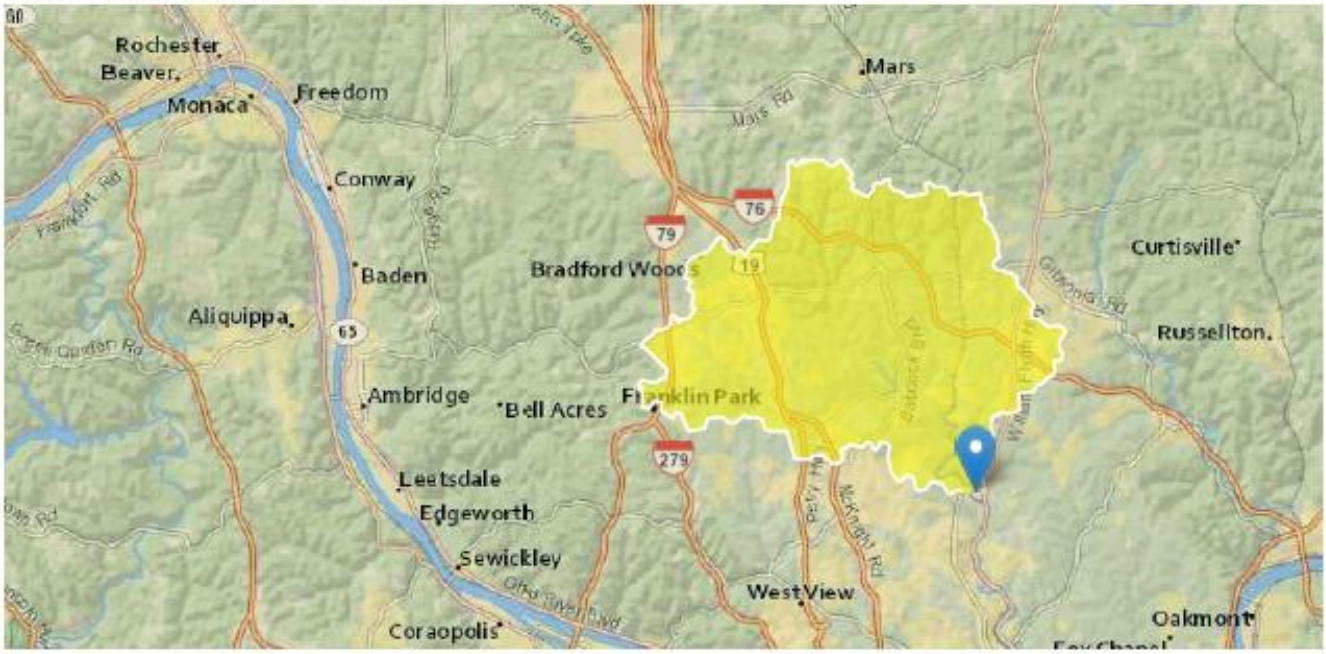
Time: 2024-08-13 21:07:53 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	43.3	square miles
ELEV	Mean Basin Elevation	1150	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	43.3	square miles	2.26	1400
ELEV	Mean Basin Elevation	1150	feet	1050	2580

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

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	1.98	ft^3/s	43	43
30 Day 2 Year Low Flow	3.2	ft^3/s	38	38
7 Day 10 Year Low Flow	0.837	ft^3/s	66	66
30 Day 10 Year Low Flow	1.34	ft^3/s	54	54
90 Day 10 Year Low Flow	2.27	ft^3/s	41	41

Low-Flow Statistics Citations

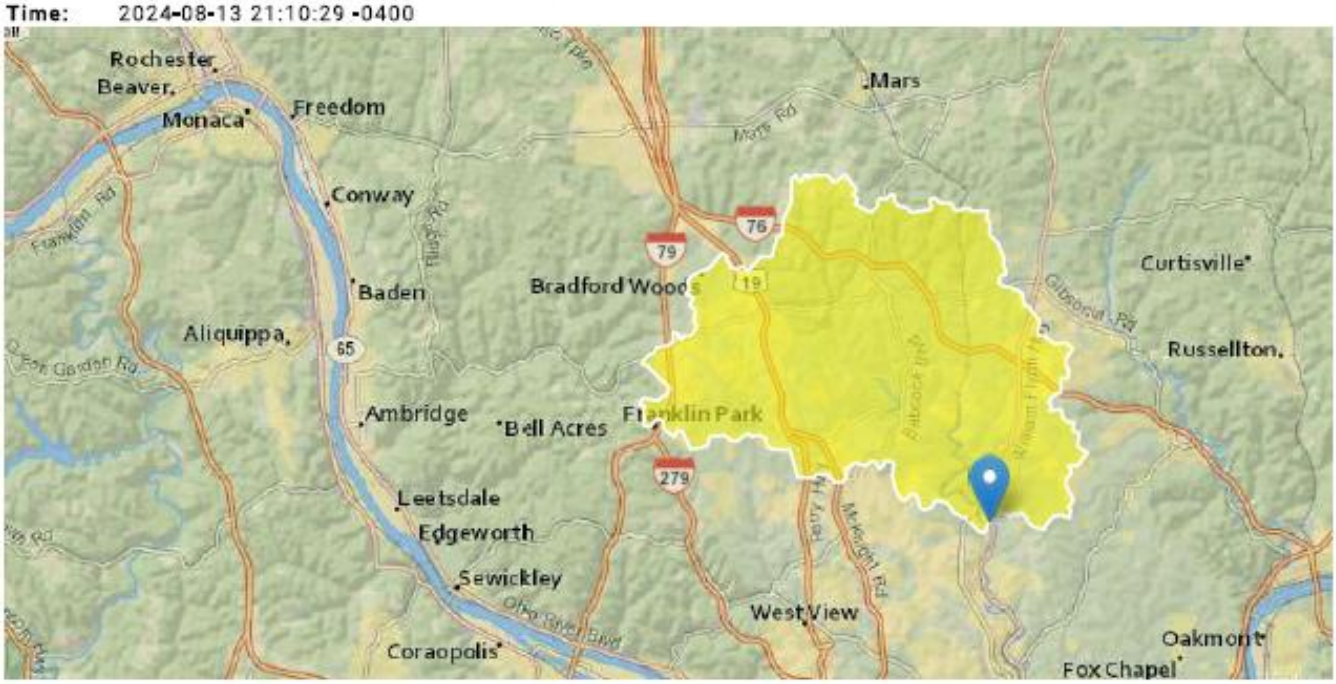
Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.23.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats at Node 2

At node 2

Region ID: PA
Workspace ID: PA20240814011005541000
Clicked Point (Latitude, Longitude): 40.55804, -79.96075
Time: 2024-08-13 21:10:29 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	47.5	square miles
ELEV	Mean Basin Elevation	1147	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	47.5	square miles	2.26	1400
ELEV	Mean Basin Elevation	1147	feet	1050	2580

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

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	2.2	ft^3/s	43	43
30 Day 2 Year Low Flow	3.53	ft^3/s	38	38
7 Day 10 Year Low Flow	0.937	ft^3/s	66	66
30 Day 10 Year Low Flow	1.49	ft^3/s	54	54
90 Day 10 Year Low Flow	2.51	ft^3/s	41	41

Low-Flow Statistics Citations

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

Application Version: 4.23.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

WQM 7.0

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
18A	42136	PINE CREEK	8.420	855.45	43.30	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.259	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
Allison Park ST	PA0043729	3.2000	3.2000	3.2000	0.000	25.00	6.95

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	15.00	2.00	0.00	1.50
Dissolved Oxygen	6.00	8.24	0.00	0.00
NH3-N	1.50	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
18A	42136	PINE CREEK	8.050	842.56	47.50	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.259	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 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
18A	42136	PINE 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
Q7-10 Flow												
8.420	11.21	0.00	11.21	4.9504	0.00660	.773	46.88	60.61	0.45	0.051	21.53	6.98
Q1-10 Flow												
8.420	7.18	0.00	7.18	4.9504	0.00660	NA	NA	NA	0.38	0.060	22.04	6.98
Q30-10 Flow												
8.420	15.25	0.00	15.25	4.9504	0.00660	NA	NA	NA	0.51	0.045	21.23	6.99

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
18A	42136	PINE 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
8.420	Allison Park ST	14.41	3	14.41	3	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
8.420	Allison Park ST	1.75	1.5	1.75	1.5	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
8.42	Allison Park ST	15	15	1.5	1.5	6	6	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
18A	42136	PINE CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
8.420	3.200	21.531	6.984
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
46.879	0.773	60.613	0.446
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
5.98	1.141	0.46	0.788
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.556	20.817	Tsivoglou	6
Reach Travel Time (days)			
0.051			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.005	5.94	0.46	7.63
0.010	5.91	0.46	7.70
0.015	5.87	0.45	7.76
0.020	5.83	0.45	7.81
0.025	5.80	0.45	7.86
0.030	5.76	0.45	7.91
0.036	5.73	0.45	7.95
0.041	5.69	0.44	7.99
0.046	5.66	0.44	8.01
0.051	5.62	0.44	8.01

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
18A	42136	PINE 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)
8.420	Allison Park ST	PA0043729	3.200	CBOD5	15		
				NH3-N	1.5	3	
				Dissolved Oxygen			6

TMS

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: Allison Park STP | NPDES Permit No.: PA0043729 | Outfall No.: 001

Evaluation Type: Major Sewage / Industrial Waste | Wastewater Description: Treated Sewage

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
3.2	100	6.95						

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L											
	Chloride (PWS)	mg/L											
	Bromide	mg/L											
	Sulfate (PWS)	mg/L											
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		21									
	Total Antimony	µg/L	<	0.4									
	Total Arsenic	µg/L	<	2									
	Total Barium	µg/L		47									
	Total Beryllium	µg/L	<	0.4									
	Total Boron	µg/L		283									
	Total Cadmium	µg/L	<	0.1									
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L	<	0.1									
	Total Cobalt	µg/L	<	1									
	Total Copper	µg/L		20									
	Free Cyanide	µg/L		4									
	Total Cyanide	µg/L	<	5									
	Dissolved Iron	µg/L		46									
	Total Iron	µg/L		61.7									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		98									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		2									
	Total Phenols (Phenolics) (PWS)	µg/L	<	2									
	Total Selenium	µg/L		0.7									
	Total Silver	µg/L	<	0.2									
	Total Thallium	µg/L	<	0.4									
	Total Zinc	µg/L		49									
	Total Molybdenum	µg/L	<	4									
	Acrolein	µg/L	<	0.5									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	0.3									
	Benzene	µg/L	<	0.4									
	Bromoform	µg/L	<	0.4									
	Carbon Tetrachloride	µg/L	<	0.4									

Group 3	Chlorobenzene	µg/L		0.5									
	Chlorodibromomethane	µg/L	<	0.4									
	Chloroethane	µg/L	<	0.06									
	2-Chloroethyl Vinyl Ether	µg/L	<	0.3									
	Chloroform	µg/L	<	1.4									
	Dichlorobromomethane	µg/L	<	0.4									
	1,1-Dichloroethane	µg/L	<	0.4									
	1,2-Dichloroethane	µg/L	<	0.3									
	1,1-Dichloroethylene	µg/L	<	0.5									
	1,2-Dichloropropane	µg/L	<	0.5									
	1,3-Dichloropropylene	µg/L	<	0.4									
	1,4-Dioxane	µg/L	<	0.1									
	Ethylbenzene	µg/L	<	0.2									
	Methyl Bromide	µg/L	<	0.4									
	Methyl Chloride	µg/L	<	0.5									
	Methylene Chloride	µg/L	<	0.4									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5									
	Tetrachloroethylene	µg/L	<	0.3									
	Toluene	µg/L	<	0.3									
	1,2-trans-Dichloroethylene	µg/L	<	0.4									
	1,1,1-Trichloroethane	µg/L	<	0.3									
	1,1,2-Trichloroethane	µg/L	<	0.3									
	Trichloroethylene	µg/L	<	0.4									
	Vinyl Chloride	µg/L	<	0.3									
Group 4	2-Chlorophenol	µg/L	<	0.16									
	2,4-Dichlorophenol	µg/L	<	0.2									
	2,4-Dimethylphenol	µg/L	<	0.34									
	4,6-Dinitro-o-Cresol	µg/L	<	1.11									
	2,4-Dinitrophenol	µg/L	<	1.72									
	2-Nitrophenol	µg/L	<	0.21									
	4-Nitrophenol	µg/L	<	1.29									
	p-Chloro-m-Cresol	µg/L	<	0.24									
	Pentachlorophenol	µg/L	<	0.46									
	Phenol	µg/L	<	0.18									
	2,4,6-Trichlorophenol	µg/L	<	0.51									
Group 5	Acenaphthene	µg/L	<	0.32									
	Acenaphthylene	µg/L	<	0.32									
	Anthracene	µg/L	<	0.3									
	Benzidine	µg/L	<	0.56									
	Benzo(a)Anthracene	µg/L	<	0.25									
	Benzo(a)Pyrene	µg/L	<	0.38									
	3,4-Benzofluoranthene	µg/L	<	0.25									
	Benzo(ghi)Perylene	µg/L	<	0.38									
	Benzo(k)Fluoranthene	µg/L	<	0.21									
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.21									
	Bis(2-Chloroethyl)Ether	µg/L	<	0.25									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.25									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	1.45									
	4-Bromophenyl Phenyl Ether	µg/L	<	0.36									
	Butyl Benzyl Phthalate	µg/L	<	0.95									
	2-Chloronaphthalene	µg/L	<	0.32									
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.31									
	Chrysene	µg/L	<	0.47									
	Dibenzo(a,h)Anthrancene	µg/L	<	0.38									
	1,2-Dichlorobenzene	µg/L	<	0.18									
	1,3-Dichlorobenzene	µg/L	<	0.39									
	1,4-Dichlorobenzene	µg/L	<	0.43									
	3,3-Dichlorobenzidine	µg/L	<	0.68									
	Diethyl Phthalate	µg/L	<	0.78									
	Dimethyl Phthalate	µg/L	<	0.47									
	Di-n-Butyl Phthalate	µg/L	<	2.47									
	2,4-Dinitrotoluene	µg/L	<	0.42									
	2,6-Dinitrotoluene	µg/L	<	0.41									
	Di-n-Octyl Phthalate	µg/L	<	0.34									

	1,2-Diphenylhydrazine	µg/L	<	0.48										
	Fluoranthene	µg/L	<	0.57										
	Fluorene	µg/L	<	0.28										
	Hexachlorobenzene	µg/L	<	0.38										
	Hexachlorobutadiene	µg/L	<	0.24										
	Hexachlorocyclopentadiene	µg/L	<	0.37										
	Hexachloroethane	µg/L	<	0.43										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.36										
	Isophorone	µg/L	<	0.27										
	Naphthalene	µg/L	<	0.23										
	Nitrobenzene	µg/L	<	0.22										
	n-Nitrosodimethylamine	µg/L	<	0.22										
	n-Nitrosodi-n-Propylamine	µg/L	<	0.39										
	n-Nitrosodiphenylamine	µg/L	<	0.34										
	Phenanthrene	µg/L	<	0.39										
	Pyrene	µg/L	<	0.54										
	1,2,4-Trichlorobenzene	µg/L	<	0.25										
Group 6	Aldrin	µg/L	<											
	alpha-BHC	µg/L	<											
	beta-BHC	µg/L	<											
	gamma-BHC	µg/L	<											
	delta BHC	µg/L	<											
	Chlordane	µg/L	<											
	4,4-DDT	µg/L	<											
	4,4-DDE	µg/L	<											
	4,4-DDD	µg/L	<											
	Dieldrin	µg/L	<											
	alpha-Endosulfan	µg/L	<											
	beta-Endosulfan	µg/L	<											
	Endosulfan Sulfate	µg/L	<											
	Endrin	µg/L	<											
	Endrin Aldehyde	µg/L	<											
	Heptachlor	µg/L	<											
	Heptachlor Epoxide	µg/L	<											
	PCB-1016	µg/L	<											
	PCB-1221	µg/L	<											
	PCB-1232	µg/L	<											
	PCB-1242	µg/L	<											
	PCB-1248	µg/L	<											
	PCB-1254	µg/L	<											
	PCB-1260	µg/L	<											
	PCBs, Total	µg/L	<											
	Toxaphene	µg/L	<											
	2,3,7,8-TCDD	ng/L	<											
Group 7	Gross Alpha	pCi/L												
	Total Beta	pCi/L	<											
	Radium 226/228	pCi/L	<											
	Total Strontium	µg/L	<											
	Total Uranium	µg/L	<											
	Osmotic Pressure	mOs/kg												

Stream / Surface Water Information

Allison Park STP, NPDES Permit No. PA0043729, Outfall 001

Instructions | Discharge | Stream

Receiving Surface Water Name: Pine Creek

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	042136	8.42	855.45	43.3			Yes
End of Reach 1	042136	8.05	842.56	47.5			Yes

Q_{7-10}

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	8.42	0.259	11.2									100	7		
End of Reach 1	8.05	0.259													

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	8.42														
End of Reach 1	8.05														

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

☐ *Hydrodynamics*

☑ *Wasteload Allocations*

☑ *AFC* CCT (min): 15 PMF: 0.757 Analysis Hardness (mg/l): 100 Analysis pH: 6.98

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	750	750	2,034	
Total Antimony	0	0		0	1,100	1,100	2,983	
Total Arsenic	0	0		0	340	340	922	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	56,944	
Total Boron	0	0		0	8,100	8,100	21,964	
Total Cadmium	0	0		0	2.014	2.13	5.78	Chem Translator of 0.944 applied
Hexavalent Chromium	0	0		0	16	16.3	44.2	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	258	
Total Copper	0	0		0	13.439	14.0	38.0	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	59.7	
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	64.581	81.6	221	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	4.47	Chem Translator of 0.85 applied
Total Nickel	0	0		0	468.236	469	1,272	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	3.217	3.78	10.3	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	176	
Total Zinc	0	0		0	117.180	120	325	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	8.13	
Acrylonitrile	0	0		0	650	650	1,763	
Benzene	0	0		0	640	640	1,735	
Bromoform	0	0		0	1,800	1,800	4,881	
Carbon Tetrachloride	0	0		0	2,800	2,800	7,593	
Chlorobenzene	0	0		0	1,200	1,200	3,254	

Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	48,809	
Chloroform	0	0		0	1,900	1,900	5,152	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	40,674	
1,1-Dichloroethylene	0	0		0	7,500	7,500	20,337	
1,2-Dichloropropane	0	0		0	11,000	11,000	29,828	
1,3-Dichloropropylene	0	0		0	310	310	841	
Ethylbenzene	0	0		0	2,900	2,900	7,864	
Methyl Bromide	0	0		0	550	550	1,491	
Methyl Chloride	0	0		0	28,000	28,000	75,926	
Methylene Chloride	0	0		0	12,000	12,000	32,540	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	2,712	
Tetrachloroethylene	0	0		0	700	700	1,898	
Toluene	0	0		0	1,700	1,700	4,610	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	18,439	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	8,135	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	9,220	
Trichloroethylene	0	0		0	2,300	2,300	6,237	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	1,519	
2,4-Dichlorophenol	0	0		0	1,700	1,700	4,610	
2,4-Dimethylphenol	0	0		0	660	660	1,790	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	217	
2,4-Dinitrophenol	0	0		0	660	660	1,790	
2-Nitrophenol	0	0		0	8,000	8,000	21,693	
4-Nitrophenol	0	0		0	2,300	2,300	6,237	
p-Chloro-m-Cresol	0	0		0	160	160	434	
Pentachlorophenol	0	0		0	8.557	8.56	23.2	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	1,247	
Acenaphthene	0	0		0	83	83.0	225	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	813	
Benzo(a)Anthracene	0	0		0	0.5	0.5	1.36	
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	81,349	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	12,202	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	732	
Butyl Benzyl Phthalate	0	0		0	140	140	380	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	2,224	
1,3-Dichlorobenzene	0	0		0	350	350	949	

1,4-Dichlorobenzene	0	0		0	730	730	1,979	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	10,847	
Dimethyl Phthalate	0	0		0	2,500	2,500	6,779	
Di-n-Butyl Phthalate	0	0		0	110	110	298	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	4,339	
2,6-Dinitrotoluene	0	0		0	990	990	2,685	
1,2-Diphenylhydrazine	0	0		0	15	15.0	40.7	
Fluoranthene	0	0		0	200	200	542	
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	27.1	
Hexachlorocyclopentadiene	0	0		0	5	5.0	13.6	
Hexachloroethane	0	0		0	60	60.0	163	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	27,116	
Naphthalene	0	0		0	140	140	380	
Nitrobenzene	0	0		0	4,000	4,000	10,847	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	46,098	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	813	
Phenanthrene	0	0		0	5	5.0	13.6	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	353	

☑ *CFC* CCT (min): 26.208 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 6.98

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 Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	718	
Total Arsenic	0	0		0	150	150	489	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	13,376	
Total Boron	0	0		0	1,600	1,600	5,220	
Total Cadmium	0	0		0	0.246	0.27	0.88	Chem Translator of 0.909 applied
Hexavalent Chromium	0	0		0	10	10.4	33.9	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	62.0	
Total Copper	0	0		0	8.956	9.33	30.4	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	17.0	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	4,894	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.517	3.18	10.4	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	2.96	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.007	52.2	170	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	16.3	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	42.4	
Total Zinc	0	0		0	118.139	120	391	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	9.79	
Acrylonitrile	0	0		0	130	130	424	
Benzene	0	0		0	130	130	424	
Bromoform	0	0		0	370	370	1,207	
Carbon Tetrachloride	0	0		0	560	560	1,827	
Chlorobenzene	0	0		0	240	240	783	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	11,419	
Chloroform	0	0		0	390	390	1,272	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	10,114	
1,1-Dichloroethylene	0	0		0	1,500	1,500	4,894	
1,2-Dichloropropane	0	0		0	2,200	2,200	7,177	
1,3-Dichloropropylene	0	0		0	61	61.0	199	
Ethylbenzene	0	0		0	580	580	1,892	
Methyl Bromide	0	0		0	110	110	359	
Methyl Chloride	0	0		0	5,500	5,500	17,943	
Methylene Chloride	0	0		0	2,400	2,400	7,830	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	685	
Tetrachloroethylene	0	0		0	140	140	457	
Toluene	0	0		0	330	330	1,077	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	4,567	
1,1,1-Trichloroethane	0	0		0	610	610	1,990	
1,1,2-Trichloroethane	0	0		0	680	680	2,218	
Trichloroethylene	0	0		0	450	450	1,468	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	359	
2,4-Dichlorophenol	0	0		0	340	340	1,109	
2,4-Dimethylphenol	0	0		0	130	130	424	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	52.2	
2,4-Dinitrophenol	0	0		0	130	130	424	
2-Nitrophenol	0	0		0	1,600	1,600	5,220	
4-Nitrophenol	0	0		0	470	470	1,533	
p-Chloro-m-Cresol	0	0		0	500	500	1,631	
Pentachlorophenol	0	0		0	6.565	6.57	21.4	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	297	
Acenaphthene	0	0		0	17	17.0	55.5	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	192	
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.33	
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	19,575	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	2,969	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	176	
Butyl Benzyl Phthalate	0	0		0	35	35.0	114	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	160	160	522	
1,3-Dichlorobenzene	0	0		0	69	69.0	225	
1,4-Dichlorobenzene	0	0		0	150	150	489	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	2,610	
Dimethyl Phthalate	0	0		0	500	500	1,631	
Di-n-Butyl Phthalate	0	0		0	21	21.0	68.5	
2,4-Dinitrotoluene	0	0		0	320	320	1,044	
2,6-Dinitrotoluene	0	0		0	200	200	652	
1,2-Diphenylhydrazine	0	0		0	3	3.0	9.79	
Fluoranthene	0	0		0	40	40.0	130	
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	6.52	
Hexachlorocyclopentadiene	0	0		0	1	1.0	3.26	
Hexachloroethane	0	0		0	12	12.0	39.1	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	6,851	
Naphthalene	0	0		0	43	43.0	140	
Nitrobenzene	0	0		0	810	810	2,643	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	11,092	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	192	
Phenanthrene	0	0		0	1	1.0	3.26	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	84.8	

☑ ***THH*** CCT (min): 26.208 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 Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	18.3	
Total Arsenic	0	0		0	10	10.0	32.6	
Total Barium	0	0		0	2,400	2,400	7,830	

Total Boron	0	0		0	3,100	3,100	10,114	
Total Cadmium	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	13.0	
Dissolved Iron	0	0		0	300	300	979	
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	3,262	
Total Mercury	0	0		0	0.050	0.05	0.16	
Total Nickel	0	0		0	610	610	1,990	
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	0.78	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	9.79	
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	326	
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	18.6	
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	108	
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	222	
Methyl Bromide	0	0		0	100	100.0	326	
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	186	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	326	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	32,624	
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	97.9	
2,4-Dichlorophenol	0	0		0	10	10.0	32.6	
2,4-Dimethylphenol	0	0		0	100	100.0	326	

4,6-Dinitro-o-Cresol	0	0		0	2	2.0	6.52	
2,4-Dinitrophenol	0	0		0	10	10.0	32.6	
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	13,050	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	228	
Anthracene	0	0		0	300	300	979	
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	652	
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	0.33	
2-Chloronaphthalene	0	0		0	800	800	2,610	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	3,262	
1,3-Dichlorobenzene	0	0		0	7	7.0	22.8	
1,4-Dichlorobenzene	0	0		0	300	300	979	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	1,957	
Dimethyl Phthalate	0	0		0	2,000	2,000	6,525	
Di-n-Butyl Phthalate	0	0		0	20	20.0	65.2	
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	65.2	
Fluorene	0	0		0	50	50.0	163	
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	13.0	
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	111	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	32.6	
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	65.2	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.23	

☑ *CRL* CCT (min): 18.368 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 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	
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	0.8	
Benzene	0	0		0	0.58	0.58	7.77	
Bromoform	0	0		0	7	7.0	93.8	
Carbon Tetrachloride	0	0		0	0.4	0.4	5.36	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	10.7	
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	12.7	
1,2-Dichloroethane	0	0		0	9.9	9.9	133	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	12.1	
1,3-Dichloropropylene	0	0		0	0.27	0.27	3.62	
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	268	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	2.68	
Tetrachloroethylene	0	0		0	10	10.0	134	
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	7.37	
Trichloroethylene	0	0		0	0.6	0.6	8.04	
Vinyl Chloride	0	0		0	0.02	0.02	0.27	
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	0.4	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	20.1	
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	0.001	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.013	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.001	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.013	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.13	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.4	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	4.29	
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	1.61	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.001	
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	0.67	
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	0.67	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.67	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.4	

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	0.001	
Hexachlorobutadiene	0	0	0	0.01	0.01	0.13	
Hexachlorocyclopentadiene	0	0	0	N/A	N/A	N/A	
Hexachloroethane	0	0	0	0.1	0.1	1.34	
Indeno(1,2,3-cd)Pyrene	0	0	0	0.001	0.001	0.013	
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	0.009	
n-Nitrosodi-n-Propylamine	0	0	0	0.005	0.005	0.067	
n-Nitrosodiphenylamine	0	0	0	3.3	3.3	44.2	
Phenanthrene	0	0	0	N/A	N/A	N/A	
Pyrene	0	0	0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0	0	N/A	N/A	N/A	

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Copper	0.65	1.01	24.3	38.0	60.8	µg/L	24.3	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	Report	Report	Report	Report	Report	µg/L	13.0	THH	Discharge Conc > 25% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	208	AFC	Discharge Conc > 10% WQBEL (no RP)

☑ ***Other Pollutants without Limits or Monitoring***

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

Pollutants	Governing WQBEL	Units	Comments
Total Aluminum	1,304	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	7,830	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	5,220	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	N/A	N/A	Discharge Conc < TQL
Hexavalent Chromium	N/A	N/A	Discharge Conc < TQL
Total Cobalt	62.0	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS

Dissolved Iron	979	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	4,894	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	10.4	µg/L	Discharge Conc < TQL
Total Manganese	3,262	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.16	µg/L	Discharge Conc < TQL
Total Nickel	170	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	16.3	µg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	6.58	µg/L	Discharge Conc < TQL
Total Thallium	0.78	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	5.21	µg/L	Discharge Conc < TQL
Acrylonitrile	0.8	µg/L	Discharge Conc < TQL
Benzene	7.77	µg/L	Discharge Conc < TQL
Bromoform	93.8	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	5.36	µg/L	Discharge Conc < TQL
Chlorobenzene	326	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	10.7	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	11,419	µg/L	Discharge Conc < TQL
Chloroform	18.6	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	12.7	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	133	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	108	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	12.1	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	3.62	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	222	µg/L	Discharge Conc < TQL
Methyl Bromide	326	µg/L	Discharge Conc < TQL
Methyl Chloride	17,943	µg/L	Discharge Conc < TQL
Methylene Chloride	268	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	2.68	µg/L	Discharge Conc < TQL
Tetrachloroethylene	134	µg/L	Discharge Conc < TQL
Toluene	186	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	326	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	1,990	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	7.37	µg/L	Discharge Conc < TQL
Trichloroethylene	8.04	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.27	µg/L	Discharge Conc < TQL
2-Chlorophenol	97.9	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	32.6	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	326	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	6.52	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	32.6	µg/L	Discharge Conc < TQL
2-Nitrophenol	5,220	µg/L	Discharge Conc < TQL

4-Nitrophenol	1,533	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	278	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.4	µg/L	Discharge Conc < TQL
Phenol	13,050	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	20.1	µg/L	Discharge Conc < TQL
Acenaphthene	55.5	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	979	µg/L	Discharge Conc < TQL
Benzidine	0.001	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.013	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.001	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.013	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.13	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.4	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	652	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	4.29	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	176	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.33	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	2,610	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	1.61	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.001	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	522	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	22.8	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	489	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	0.67	µg/L	Discharge Conc < TQL
Diethyl Phthalate	1,957	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	1,631	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	65.2	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	0.67	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.67	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.4	µg/L	Discharge Conc < TQL
Fluoranthene	65.2	µg/L	Discharge Conc < TQL
Fluorene	163	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.001	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.13	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	3.26	µg/L	Discharge Conc < TQL
Hexachloroethane	1.34	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.013	µg/L	Discharge Conc < TQL
Isophorone	111	µg/L	Discharge Conc < TQL
Naphthalene	140	µg/L	Discharge Conc < TQL
Nitrobenzene	32.6	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.009	µg/L	Discharge Conc < TQL

n-Nitrosodi-n-Propylamine	0.067	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	44.2	µg/L	Discharge Conc < TQL
Phenanthrene	3.26	µg/L	Discharge Conc < TQL
Pyrene	65.2	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.23	µg/L	Discharge Conc < TQL