pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0026255**
Facility Type	**Municipal**	APS ID	**716713**
Major / Minor	**Major**	Authorization ID	**1275428**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Allegheny Valley Joint Sewer Authority**	Facility Name	**Allegheny Valley Joint Sewer Authority STP**
Applicant Address	PO Box 158	Facility Address	2400 Freeport Road
	Cheswick, PA 15024-0158		Cheswick, PA 15024
Applicant Contact	Tim Kephart	Facility Contact	Same as Applicant
Applicant Phone	(412) 828-7227	Facility Phone	Same as Applicant
Client ID	82759	Site ID	714426
Ch 94 Load Status	Not Overloaded	Municipality	Harmar Township
Connection Status	No Limitations	County	Allegheny
Date Application Received	June 3, 2019	EPA Waived?	No
Date Application Accepted	June 4, 2019	If No, Reason	Major Facility, Pretreatment

Purpose of Application: Application for a renewal of an existing NPDES Permit for the discharge of treated Sewage.

Summary of Review

The permittee has applied for a renewal of NPDES Permit No. PA0026255. NPDES Permit No. PA0026255 was previously issued by the PA Department of Environmental Protection (DEP) on October 11, 2014. That permit expired on October 31, 2019. The permit was submitted in a timely manner, and therefore was granted an administrative extension.

Sewage from this facility is treated with screening, grit removal, primary clarification, aeration, final clarification, and chlorine disinfection prior to discharge into the Allegheny River.

The receiving stream, Allegheny River, is classified as a WWF and is located in State Watershed No. 18-A.

The applicant has complied with Act 14 Notifications and no comments were received.

The applicant is currently enrolled in and will continue to use eDMR.

Sewage Sludge is treated using aerobic digestion, anaerobic digestion, and sludge thickening prior to being disposed of in the Monroeville Landfill.

The facility receives additional sludge from several sources.

There are no permitted stormwater outfalls at this facility.

Allegheny Valley Joint Sewer Authority is currently under a Consent Order and Agreement with DEP and Allegheny County Heath Department to expand the WWTP and pumping stations to eliminate existing SSO bypasses.

Approve	Deny	Signatures	Date
X		Stephanie Conrad / Environmental Engineering Specialist	June 2, 2021
X		James Vanek James M. Vanek, P.E. / Environmental Engineer Manager	June 16, 2021

Summary of Review
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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	5.5
Latitude	40º 31' 48"	Longitude	-79º 50' 53"
Quad Name	New Kensington West	Quad Code	
Wastewater Description:	Treated Sewage		

Receiving Waters	Allegheny River	Stream Code	42122
NHD Com ID	123972840	RMI	12.9
Drainage Area	11600	Yield (cfs/mi^2)	0.206
Q_{7-10} Flow (cfs)	2,390	Q_{7-10} Basis	US Army Corp of Engineers
Elevation (ft)	721	Slope (ft/ft)	0.001
Watershed No.	18-A	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	FLOW REGIME MODIFICATION, METALS, NUTRIENTS, SILTATION, TOTAL DISSOLVED SOLIDS (TDS), TOTAL DISSOLVED SOLIDS (TDS), TURBIDITY		
Source(s) of Impairment	ACID MINE DRAINAGE, CONSTRUCTION, SOURCE UNKNOWN, SUBSURFACE (HARDROCK) MINING		
TMDL Status		Name	

Background/Ambient Data		Data Source
pH (SU)		
Temperature (°F)		
Hardness (mg/L)		
Other:		

Nearest Downstream Public Water Supply Intake	Wilkinsburg-Penn Joint Water Authority		
PWS Waters	Allegheny River	Flow at Intake (cfs)	
PWS RMI	8.72	Distance from Outfall (mi)	4.18

Changes Since Last Permit Issuance: None

Other Comments:

Treatment Facility Summary

Treatment Facility Name: Allegheny Valley Joint Sewer Authority STP

WQM Permit No.	Issuance Date
0276461	05/12/1977

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge With Solids Removal	Chlorination	5.5

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
5.5	12100	Not Overloaded	Anaerobic and aerobic digestion	Disposed of in Monroeville Landfill

Changes Since Last Permit Issuance:

Other Comments:

Compliance History

DMR Data for Outfall 001 (from May 1, 2020 to April 30, 2021)

Parameter	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20
Flow (MGD) Average Monthly	3.805	5.627	4.714	4.908	5.159	3.387	3.111	2.903	2.931	2.895	3.026	4.277
Flow (MGD) Daily Maximum	6.636	15.094	8.498	10.333	14.372	4.566	6.788	4.862	7.365	4.249	3.620	9.798
pH (S.U.) Minimum	6.82	6.62	6.8	6.63	6.7	6.94	6.89	6.63	6.66	6.84	6.64	6.55
pH (S.U.) Maximum	7.12	7.16	7.07	7.04	7.18	7.23	7.2	7.17	7.31	7.16	7.24	7.16
DO (mg/L) Minimum	7.81	7.2	6.8	6.09	7.42	7.12	6.97	6.56	6.84	7.1	7.11	7.46
TRC (mg/L) Average Monthly	0.03	< 0.1	0.05	0.03	0.1	< 0.03	0.04	0.04	0.1	< 0.1	0.03	< 0.2
TRC (mg/L) Instantaneous Maximum	0.19	0.32	0.18	0.16	2.2	0.08	0.11	0.07	0.25	0.27	0.07	1.08
CBOD5 (lbs/day) Average Monthly	209	750	309	308	207	147	154	121	116	158	124	252
CBOD5 (lbs/day) Weekly Average	259	1308	477	383	520	223	205	144	140	178	143	289
CBOD5 (mg/L) Average Monthly	6	12	7	7	5	5	6	5	5	7	5	7
CBOD5 (mg/L) Weekly Average	7	15	10	8	8	7	6	6	5	8	6	8
BOD5 (mg/L) Raw Sewage Influent Average Monthly	407	225	300	302	253	357	427	401	413	365	403	271
TSS (lbs/day) Average Monthly	273	1321	465	552	518	213	230	402	153	214	189	345
TSS (lbs/day) Weekly Average	372	2546	812	802	1336	293	340	1012	251	261	200	484
TSS (mg/L) Average Monthly	8	18	11	11	9	7	9	17	6	9	8	9
TSS (mg/L) Raw Sewage Influent Average Monthly	328	218	250	252	234	374	351	415	389	359	361	283

TSS (mg/L) Weekly Average	9	27	16	13	16	9	10	43	6	12	8	12
Fecal Coliform (CFU/100 ml) Geometric Mean	6	27	8	< 8	27	14	7	8	9	9	8	6
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	235.9	1986.3	1413.6	344.8	727	686.7	231	1046.2	686.7	98.7	579.4	95.9
Total Nitrogen (mg/L) Daily Maximum		7.6			30.7			27.1			24.2	
Ammonia (mg/L) Average Monthly	19.42	13.55	16.7	13.84	16.69	21.8	22.1	16.49	22.2	17.88	17.23	19.82
Total Phosphorus (mg/L) Daily Maximum		2.4			1.1			1.8			2.9	

Compliance History	
Summary of DMRs:	**Between June 2016 and June 2021, the facility has complied with submittal of Discharge Maintenance Reports. In addition to the violations mentioned below, 58 effluent violations were noted in eDMR, six of which occurred in 2020. The majority of the violations were for load and effluent concentration of TSS or effluent concentration of fecal coliform. Exceedances for the last year are reported in the table below.**
Summary of Inspections:	**During this review period, 10 inspections resulted in 17 violations. Eight of these violations were for unauthorized bypasses while the remaining 9 were for exceedance of effluent limitations.**

Other Comments:

Compliance History

Effluent Violations for Outfall 001, from: June 1, 2020 To: April 30, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
TRC	12/31/20	IMAX	2.2	mg/L	1.6	mg/L
TSS	03/31/21	Wkly Avg	2546	lbs/day	2064	lbs/day
Fecal Coliform	09/30/20	IMAX	1046.2	CFU/100 ml	1000	CFU/100 ml

Other Comments:

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 5.5
Latitude 40º 31' 48.00" **Longitude** -79º 50' 53.00"
Wastewater Description: Effluent

Technology-Based Limitations

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

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

Comments:

Water Quality-Based Limitations

Water Quality Analysis Modeling for CBOD5, DO, and Ammonia-Nitrogen is not necessary, and Federal Minimum Secondary Effluent Limitations will again be imposed due to the large dilution available in the Allegheny River. Q7-10 flow of the Allegheny River at the point of discharge is 2,390 cfs. The instream to wasteflow dilution ration = total stream flow (2,390 cfs) / discharge flow (10.22 cfs) = 234/1.

WQBELs for DO, CBOD5, and Ammonia-Nitrogen will not be imposed on this facility during this permit cycle.

Total Residual Chlorine was modeled using the TRC Spreadsheet, which verified that the BAT limits are appropriate for this facility.

No limitations were determined through water quality modeling using the DEP toxics management spreadsheet (output file attached), and no WQBELs for toxics will be imposed on this facility during this permit cycle.

Best Professional Judgment (BPJ) Limitations

A Dissolved Oxygen minimum limitation of 4.0 mg/L will be implemented based on the standard in 25 PA Code Chapter 93 and best professional judgment.

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 **(l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.**

The facility is not seeking to revise the previously permitted effluent limits.

Additional Considerations:

Sewage discharges will include monitoring, at a minimum, for *E. coli*, in new and reissued permits, with a monitoring frequency of 1/month for design flows >= 1 MGD per Chapter 92.a.61.

For pH, Dissolved Oxygen (DO), CBOD5, Raw Sewage Influent BOD5, TSS, Raw Sewage Influent TSS, Fecal Coliform, and Ammonia-Nitrogen, a monitoring frequency 1/day has been imposed. In general, less frequent monitoring may be established only when the permittee demonstrates that there will be no discharge on days where monitoring is not required.

Nutrient monitoring is required to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). A 1/quarter monitor and report requirement for Total N & Total P has been added to the permit as per Chapter 92.a.61.

Due to the large dilution ration discussed above, it was assumed that a monthly warm period limit of 25 mg/L is acceptable for ammonia-nitrogen and a year-round monitoring requirement was imposed for ammonia-nitrogen that is consistent with Table 6-3 of the Permit Writers Manual. Application data for Outfall # 001 indicates that long-term average ammonia-nitrogen concentration in the discharge is 25.1mg/L.

For POTWs with design flows greater than 2,000 GPD influent BOD_5 and TSS monitoring must be established in the permit, and the monitoring should be consistent with the same frequency and sample type as is used for other effluent parameters.

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Departments Technical Guidance for the Development and Specification of Effluent Limitations. Please note that Monitoring Requirements were changed for Flow to 1/week Metered to be consistent with the guidance.

The permit application does not list any CIUs in the service area and there have been no compliance issues attributed to IW discharges causing NPDES permit effluent violations. Part C language, Pretreatment Program Development, has not been added to the permit. The EPA, in a letter dated March 27, 1992, has exempted the AVJSA from the requirement to develop and implement a pretreatment program.

Mass Loading

Mass loading limits are applicable for publicly owned treatment works. Current policy requires average monthly mass loading limits be established for CBOD5, TSS, and NH_3-N and average weekly mass loading limits be established for CBOD5 and TSS. Average monthly mass loading limits (lbs/day) are based on the formula: design flow (MGD) x concentration limit (mg/L) x conversion factor (8.34).

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	1/day	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.6	1/shift	Grab
CBOD5	1145	1830	XXX	25.0	40.0	50	1/day	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/day	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	1/day	24-Hr Composite
TSS	1375	2060	XXX	30.0	45.0	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	XXX	XXX	XXX	Report	XXX	XXX	1/day	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite

Compliance Sampling Location: Outfall #001

Other Comments:

Whole Effluent Toxicity (WET)

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

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

The dilution series used for the tests was: 100%, 60%, 30%, 2%, and 1%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 2%.

Summary of Four Most Recent Test Results

TST Data Analysis

(NOTE – In lieu of recording information below, the application manager may attach the DEP WET Analysis Spreadsheet).

Test Date	*Ceriodaphnia* Results (Pass/Fail)		*Pimephales* Results (Pass/Fail)	
	Survival	Reproduction	Survival	Growth
8/25-9/1/15	PASS	PASS	PASS	PASS
8/23-8/30/16	PASS	PASS	PASS	PASS
8/15-8/22/17	PASS	PASS	PASS	PASS
8/28-9/4/18	PASS	PASS	PASS	PASS

***** *A "passing" result is that in which the replicate data for the TIWC is not statistically significant from the control condition. This is exhibited when the calculated t value ("T-Test Result") is greater than the critical t value. A "failing" result is exhibited when the calculated t value ("T-Test Result") is less than the critical t 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): **0.088** Chronic Partial Mix Factor (PMFc): **0.607**

1. Determine IWC – Acute (IWCa):

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

[(5.5 MGD x 1.547) / ((2930 cfs x 0.088) + (5.5 MGD x 1.547))] x 100 = **13.01%**

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**

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

TIWCa = 0.0390/ 0.3 = 13.01**%**

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

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

[(5.5MGD x 1.547) / ((2390 cfs x 0.607) + (5.5 MGD x 1.547))] x 100 = **1%**

3. Determine Dilution Series

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

Dilution Series = 100%, 60%, 30%, 2%, and 1%.

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

Copy of TRC_CALC.xls

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

2390	= Q stream (cfs)	0.5	= CV Daily
5.5	= Q discharge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		=Decay Coefficient (K)

Source	Reference	AFC Calculations		Reference	CFC Calculations	
TRC	1.3.2.iii	WLA afc =	89.625	1.3.2.iii	WLA cfc =	87.370
PENTOXSD TRG	5.1a	LTAMULT afc =	0.373	5.1c	LTAMULT cfc =	0.581
PENTOXSD TRG	5.1b	LTA_afc=	33.396	5.1d	LTA_cfc =	50.793

Source		Effluent Limit Calculations		
PENTOXSD TRG	5.1f	AML MULT =	1.231	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) =	0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) =	1.635	

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Allegheny Valley JSA WWTP** NPDES Permit No.: **PA0026255** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Treated Effluent**

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
5.5	180.3	7.035						

					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		524									
	Chloride (PWS)	mg/L		163									
	Bromide	mg/L		0.133									
	Sulfate (PWS)	mg/L		80.3									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		26									
	Total Antimony	µg/L		0.36									
	Total Arsenic	µg/L		0.86									
	Total Barium	µg/L		67									
	Total Beryllium	µg/L	<	0.3									
	Total Boron	µg/L		304									
	Total Cadmium	µg/L	<	0.16									
	Total Chromium (III)	µg/L		1									
	Hexavalent Chromium	µg/L	<	5									
	Total Cobalt	µg/L		1									
	Total Copper	µg/L		23									
	Free Cyanide	µg/L		11									
	Total Cyanide	µg/L		9									
	Dissolved Iron	µg/L		107									
	Total Iron	µg/L		90									
	Total Lead	µg/L		0.45									
	Total Manganese	µg/L		118									
	Total Mercury	µg/L		0.04									
	Total Nickel	µg/L		4									
	Total Phenols (Phenolics) (PWS)	µg/L	<	2									
	Total Selenium	µg/L	<	0.66									
	Total Silver	µg/L	<	0.33									
	Total Thallium	µg/L	<	0.16									
	Total Zinc	µg/L		45									
	Total Molybdenum	µg/L		5									
	Acrolein	µg/L	<	1.9									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	1.2									
	Benzene	µg/L	<	0.23									
	Bromoform	µg/L	<	0.4									

Group 3	Carbon Tetrachloride	µg/L	<	0.31										
	Chlorobenzene	µg/L	<	0.19										
	Chlorodibromomethane	µg/L	<	0.45										
	Chloroethane	µg/L	<	0.33										
	2-Chloroethyl Vinyl Ether	µg/L	<	0.38										
	Chloroform	µg/L		1.6										
	Dichlorobromomethane	µg/L	<	0.27										
	1,1-Dichloroethane	µg/L	<	0.28										
	1,2-Dichloroethane	µg/L	<	0.32										
	1,1-Dichloroethylene	µg/L	<	0.29										
	1,2-Dichloropropane	µg/L	<	0.24										
	1,3-Dichloropropylene	µg/L	<	0.27										
	1,4-Dioxane	µg/L	<	58.9										
	Ethylbenzene	µg/L	<	0.34										
	Methyl Bromide	µg/L	<	0.39										
	Methyl Chloride	µg/L	<	0.31										
	Methylene Chloride	µg/L		1.5										
	1,1,2,2-Tetrachloroethane	µg/L	<	0.34										
	Tetrachloroethylene	µg/L	<	0.35										
	Toluene	µg/L	<	0.23										
	1,2-trans-Dichloroethylene	µg/L	<	0.26										
	1,1,1-Trichloroethane	µg/L	<	0.22										
	1,1,2-Trichloroethane	µg/L	<	0.33										
	Trichloroethylene	µg/L	<	0.33										
	Vinyl Chloride	µg/L	<	0.3										
Group 4	2-Chlorophenol	µg/L	<	0.32										
	2,4-Dichlorophenol	µg/L	<	0.31										
	2,4-Dimethylphenol	µg/L	<	0.2										
	4,6-Dinitro-o-Cresol	µg/L	<	0.32										
	2,4-Dinitrophenol	µg/L	<	2.4										
	2-Nitrophenol	µg/L	<	0.44										
	4-Nitrophenol	µg/L	<	1										
	p-Chloro-m-Cresol	µg/L	<	0.18										
	Pentachlorophenol	µg/L	<	1.2										
	Phenol	µg/L	<	0.22										
	2,4,6-Trichlorophenol	µg/L	<	0.55										
Group 5	Acenaphthene	µg/L	<	0.15										
	Acenaphthylene	µg/L	<	0.18										
	Anthracene	µg/L	<	0.15										
	Benzidine	µg/L	<	3										
	Benzo(a)Anthracene	µg/L	<	0.17										
	Benzo(a)Pyrene	µg/L	<	0.21										
	3,4-Benzofluoranthene	µg/L	<	0.13										
	Benzo(ghi)Perylene	µg/L	<	0.21										
	Benzo(k)Fluoranthene	µg/L	<	0.18										
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.2										
	Bis(2-Chloroethyl)Ether	µg/L	<	0.18										
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.27										
	Bis(2-Ethylhexyl)Phthalate	µg/L		1.2										
	4-Bromophenyl Phenyl Ether	µg/L	<	0.17										
	Butyl Benzyl Phthalate	µg/L	<	0.12										
	2-Chloronaphthalene	µg/L	<	0.17										
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.14										
	Chrysene	µg/L	<	0.115										
	Dibenzo(a,h)Anthrancene	µg/L	<	0.2										
	1,2-Dichlorobenzene	µg/L	<	0.38										
	1,3-Dichlorobenzene	µg/L	<	0.25										
	1,4-Dichlorobenzene	µg/L	<	0.27										
	3,3-Dichlorobenzidine	µg/L	<	0.47										
	Diethyl Phthalate	µg/L		25.2										
	Dimethyl Phthalate	µg/L	<	0.14										
	Di-n-Butyl Phthalate	µg/L		0.33										
	2,4-Dinitrotoluene	µg/L	<	0.13										

	2,6-Dinitrotoluene	µg/L	<	0.2										
	Di-n-Octyl Phthalate	µg/L	<	0.097										
	1,2-Diphenylhydrazine	µg/L	<	0.25										
	Fluoranthene	µg/L	<	0.17										
	Fluorene	µg/L	<	0.19										
	Hexachlorobenzene	µg/L	<	0.22										
	Hexachlorobutadiene	µg/L	<	0.18										
	Hexachlorocyclopentadiene	µg/L	<	0.17										
	Hexachloroethane	µg/L	<	0.29										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.12										
	Isophorone	µg/L	<	0.15										
	Naphthalene	µg/L	<	0.17										
	Nitrobenzene	µg/L	<	0.27										
	n-Nitrosodimethylamine	µg/L	<	0.62										
	n-Nitrosodi-n-Propylamine	µg/L	<	0.23										
	n-Nitrosodiphenylamine	µg/L	<	0.17										
	Phenanthrene	µg/L	<	0.13										
	Pyrene	µg/L	<	0.16										
	1,2,4-Trichlorobenzene	µg/L	<	0.16										
Group 6	Aldrin	µg/L	<	0.0048										
	alpha-BHC	µg/L	<	0.0019										
	beta-BHC	µg/L	<	0.0076										
	gamma-BHC	µg/L	<	0.0029										
	delta BHC	µg/L		0.0074										
	Chlordane	µg/L	<	0.033										
	4,4-DDT	µg/L	<	0.0057										
	4,4-DDE	µg/L	<	0.0067										
	4,4-DDD	µg/L	<	0.0067										
	Dieldrin	µg/L	<	0.0029										
	alpha-Endosulfan	µg/L	<	0.0029										
	beta-Endosulfan	µg/L	<	0.0057										
	Endosulfan Sulfate	µg/L	<	0.0038										
	Endrin	µg/L	<	0.0076										
	Endrin Aldehyde	µg/L	<	0.0095										
	Heptachlor	µg/L	<	0.0029										
	Heptachlor Epoxide	µg/L	<	0.0038										
	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	<	0.18										
	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

Allegheny Valley JSA WWTP, NPDES Permit No. PA0026255, Outfall 001

Instructions | Discharge | Stream

Receiving Surface Water Name: **Allegheny River**

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	042122	12.9	721	11600	0.001		Yes
End of Reach 1	042122	12.6	720	11601	0.001		Yes

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

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	12.9	0.1	2390			1372.8	12					100	7		
End of Reach 1	12.6	0.1	2390												

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	12.9														
End of Reach 1	12.6														

Model Results

Allegheny Valley JSA WWTP, NPDES Permit No. PA0026255, Outfall 001

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

☑ *Hydrodynamics*

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

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 (days)	Complete Mix Time (min)
12.9	2,390		2,390	8.509	0.001	12.	1372.8	114.4	0.146	0.126	1951.118
12.6	2,390		2,390								

Q_h

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 (days)	Complete Mix Time (min)
12.9	6663.59		6663.59	8.509	0.001	18.823	1372.8	72.933	0.258	0.071	997.722
12.6	6663.595		6663.59								

☑ *Wasteload Allocations*

Model Results

Allegheny Valley JSA WWTP, NPDES Permit No. PA0026255, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ *AFC* CCT (min): 15 PMF: 0.088 Analysis Hardness (mg/l): 103.13 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	19,222	
Total Antimony	0	0		0	1,100	1,100	28,192	
Total Arsenic	0	0		0	340	340	8,714	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	538,211	
Total Boron	0	0		0	8,100	8,100	207,596	
Total Cadmium	0	0		0	2.075	2.2	56.4	Chem Translator of 0.943 applied
Total Chromium (III)	0	0		0	584.343	1,849	47,393	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	418	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	2,435	
Total Copper	0	0		0	13.835	14.4	369	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	564	
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	66.786	84.9	2,176	Chem Translator of 0.787 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	42.2	Chem Translator of 0.85 applied
Total Nickel	0	0		0	480.617	482	12,342	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	3.392	3.99	102	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	1,666	
Total Zinc	0	0		0	120.284	123	3,152	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	76.9	

Acrylonitrile	0	0		0	650	650	16,659	
Benzene	0	0		0	640	640	16,403	
Bromoform	0	0		0	1,800	1,800	46,132	
Carbon Tetrachloride	0	0		0	2,800	2,800	71,762	
Chlorobenzene	0	0		0	1,200	1,200	30,755	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	461,324	
Chloroform	0	0		0	1,900	1,900	48,695	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	384,437	
1,1-Dichloroethylene	0	0		0	7,500	7,500	192,218	
1,2-Dichloropropane	0	0		0	11,000	11,000	281,920	
1,3-Dichloropropylene	0	0		0	310	310	7,945	
Ethylbenzene	0	0		0	2,900	2,900	74,324	
Methyl Bromide	0	0		0	550	550	14,096	
Methyl Chloride	0	0		0	28,000	28,000	717,615	
Methylene Chloride	0	0		0	12,000	12,000	307,549	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	25,629	
Tetrachloroethylene	0	0		0	700	700	17,940	
Toluene	0	0		0	1,700	1,700	43,569	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	174,278	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	76,887	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	87,139	
Trichloroethylene	0	0		0	2,300	2,300	58,947	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	14,352	
2,4-Dichlorophenol	0	0		0	1,700	1,700	43,569	
2,4-Dimethylphenol	0	0		0	660	660	16,915	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	2,050	
2,4-Dinitrophenol	0	0		0	660	660	16,915	
2-Nitrophenol	0	0		0	8,000	8,000	205,033	
4-Nitrophenol	0	0		0	2,300	2,300	58,947	
p-Chloro-m-Cresol	0	0		0	160	160	4,101	
Pentachlorophenol	0	0		0	8.735	8.73	224	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	11,789	
Acenaphthene	0	0		0	83	83.0	2,127	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	7,689	
Benzo(a)Anthracene	0	0		0	0.5	0.5	12.8	
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	768,873	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	115,331	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	6,920	
Butyl Benzyl Phthalate	0	0		0	140	140	3,588	

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	21,016	
1,3-Dichlorobenzene	0	0		0	350	350	8,970	
1,4-Dichlorobenzene	0	0		0	730	730	18,709	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	102,516	
Dimethyl Phthalate	0	0		0	2,500	2,500	64,073	
Di-n-Butyl Phthalate	0	0		0	110	110	2,819	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	41,007	
2,6-Dinitrotoluene	0	0		0	990	990	25,373	
1,2-Diphenylhydrazine	0	0		0	15	15.0	384	
Fluoranthene	0	0		0	200	200	5,126	
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	256	
Hexachlorocyclopentadiene	0	0		0	5	5.0	128	
Hexachloroethane	0	0		0	60	60.0	1,538	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	256,291	
Naphthalene	0	0		0	140	140	3,588	
Nitrobenzene	0	0		0	4,000	4,000	102,516	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	435,695	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	7,689	
Phenanthrene	0	0		0	5	5.0	128	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	3,332	
Aldrin	0	0		0	3	3.0	76.9	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	0.95	0.95	24.3	
Chlordane	0	0		0	2.4	2.4	61.5	
4,4-DDT	0	0		0	1.1	1.1	28.2	
4,4-DDE	0	0		0	1.1	1.1	28.2	
4,4-DDD	0	0		0	1.1	1.1	28.2	
Dieldrin	0	0		0	0.24	0.24	6.15	
alpha-Endosulfan	0	0		0	0.22	0.22	5.64	
beta-Endosulfan	0	0		0	0.22	0.22	5.64	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.086	0.086	2.2	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.52	0.52	13.3	
Heptachlor Epoxide	0	0		0	0.5	0.5	12.8	
Toxaphene	0	0		0	0.73	0.73	18.7	

☑ *CFC* CCT (min): 720 PMF: 0.607 Analysis Hardness (mg/l): 100.47 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	37,760	
Total Arsenic	0	0		0	150	150	25,745	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	703,706	
Total Boron	0	0		0	1,600	1,600	274,617	
Total Cadmium	0	0		0	0.247	0.27	46.6	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.398	86.5	14,848	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	1,784	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	3,261	
Total Copper	0	0		0	8.992	9.37	1,608	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	893	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	422,843	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.529	3.2	549	Chem Translator of 0.79 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	155	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.212	52.4	8,988	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	856	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	2,231	
Total Zinc	0	0		0	118.607	120	20,646	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	515	
Acrylonitrile	0	0		0	130	130	22,313	
Benzene	0	0		0	130	130	22,313	
Bromoform	0	0		0	370	370	63,505	
Carbon Tetrachloride	0	0		0	560	560	96,116	
Chlorobenzene	0	0		0	240	240	41,193	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	600,724	
Chloroform	0	0		0	390	390	66,938	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	532,070	
1,1-Dichloroethylene	0	0		0	1,500	1,500	257,453	
1,2-Dichloropropane	0	0		0	2,200	2,200	377,598	
1,3-Dichloropropylene	0	0		0	61	61.0	10,470	
Ethylbenzene	0	0		0	580	580	99,549	
Methyl Bromide	0	0		0	110	110	18,880	
Methyl Chloride	0	0		0	5,500	5,500	943,995	

Methylene Chloride	0	0		0	2,400	2,400	411,925	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	36,043	
Tetrachloroethylene	0	0		0	140	140	24,029	
Toluene	0	0		0	330	330	56,640	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	240,290	
1,1,1-Trichloroethane	0	0		0	610	610	104,698	
1,1,2-Trichloroethane	0	0		0	680	680	116,712	
Trichloroethylene	0	0		0	450	450	77,236	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	18,880	
2,4-Dichlorophenol	0	0		0	340	340	58,356	
2,4-Dimethylphenol	0	0		0	130	130	22,313	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	2,746	
2,4-Dinitrophenol	0	0		0	130	130	22,313	
2-Nitrophenol	0	0		0	1,600	1,600	274,617	
4-Nitrophenol	0	0		0	470	470	80,669	
p-Chloro-m-Cresol	0	0		0	500	500	85,818	
Pentachlorophenol	0	0		0	6.701	6.7	1,150	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	15,619	
Acenaphthene	0	0		0	17	17.0	2,918	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	10,126	
Benzo(a)Anthracene	0	0		0	0.1	0.1	17.2	
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	1,029,813	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	156,188	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	9,268	
Butyl Benzyl Phthalate	0	0		0	35	35.0	6,007	
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	27,462	
1,3-Dichlorobenzene	0	0		0	69	69.0	11,843	
1,4-Dichlorobenzene	0	0		0	150	150	25,745	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	137,308	
Dimethyl Phthalate	0	0		0	500	500	85,818	
Di-n-Butyl Phthalate	0	0		0	21	21.0	3,604	
2,4-Dinitrotoluene	0	0		0	320	320	54,923	
2,6-Dinitrotoluene	0	0		0	200	200	34,327	
1,2-Diphenylhydrazine	0	0		0	3	3.0	515	

Fluoranthene	0	0		0	40	40.0	6,865	
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	343	
Hexachlorocyclopentadiene	0	0		0	1	1.0	172	
Hexachloroethane	0	0		0	12	12.0	2,060	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	360,435	
Naphthalene	0	0		0	43	43.0	7,380	
Nitrobenzene	0	0		0	810	810	139,025	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	583,561	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	10,126	
Phenanthrene	0	0		0	1	1.0	172	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	4,463	
Aldrin	0	0		0	0.1	0.1	17.2	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0043	0.004	0.74	
4,4-DDT	0	0		0	0.001	0.001	0.17	
4,4-DDE	0	0		0	0.001	0.001	0.17	
4,4-DDD	0	0		0	0.001	0.001	0.17	
Dieldrin	0	0		0	0.056	0.056	9.61	
alpha-Endosulfan	0	0		0	0.056	0.056	9.61	
beta-Endosulfan	0	0		0	0.056	0.056	9.61	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	6.18	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.65	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.65	
Toxaphene	0	0		0	0.0002	0.0002	0.034	

☑ ***THH*** CCT (min): 720 PMF: 0.607 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	961	
Total Arsenic	0	0		0	10	10.0	1,716	
Total Barium	0	0		0	2,400	2,400	411,925	

Total Boron	0	0		0	3,100	3,100	532,070	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	4	4.0	687	
Dissolved Iron	0	0		0	300	300	51,491	
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	171,635	
Total Mercury	0	0		0	0.050	0.05	8.58	
Total Nickel	0	0		0	610	610	104,698	
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	41.2	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	515	
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	17,164	
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	N/A	N/A	N/A	
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	5,664	
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	11,671	
Methyl Bromide	0	0		0	100	100.0	17,164	
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	9,783	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	17,164	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	1,716,355	
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	5,149	

2,4-Dichlorophenol	0	0		0	10	10.0	1,716	
2,4-Dimethylphenol	0	0		0	100	100.0	17,164	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	343	
2,4-Dinitrophenol	0	0		0	10	10.0	1,716	
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	686,542	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	12,014	
Anthracene	0	0		0	300	300	51,491	
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	34,327	
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	17.2	
2-Chloronaphthalene	0	0		0	800	800	137,308	
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	171,635	
1,3-Dichlorobenzene	0	0		0	7	7.0	1,201	
1,4-Dichlorobenzene	0	0		0	300	300	51,491	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	102,981	
Dimethyl Phthalate	0	0		0	2,000	2,000	343,271	
Di-n-Butyl Phthalate	0	0		0	20	20.0	3,433	
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	3,433	
Fluorene	0	0		0	50	50.0	8,582	
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	687	
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	5,836	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	1,716	

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	3,433	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	12.0	
Aldrin	0	0		0	N/A	N/A	N/A	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	4.2	4.2	721	
Chlordane	0	0		0	N/A	N/A	N/A	
4,4-DDT	0	0		0	N/A	N/A	N/A	
4,4-DDE	0	0		0	N/A	N/A	N/A	
4,4-DDD	0	0		0	N/A	N/A	N/A	
Dieldrin	0	0		0	N/A	N/A	N/A	
alpha-Endosulfan	0	0		0	20	20.0	3,433	
beta-Endosulfan	0	0		0	20	20.0	3,433	
Endosulfan Sulfate	0	0		0	20	20.0	3,433	
Endrin	0	0		0	0.03	0.03	5.15	
Endrin Aldehyde	0	0		0	1	1.0	172	
Heptachlor	0	0		0	N/A	N/A	N/A	
Heptachlor Epoxide	0	0		0	N/A	N/A	N/A	
Toxaphene	0	0		0	N/A	N/A	N/A	

☑ *CRL* CCT (min): 720 PMF: 0.849 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	

Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	0.06	0.06	40.0	
Benzene	0	0		0	0.58	0.58	386	
Bromoform	0	0		0	7	7.0	4,664	
Carbon Tetrachloride	0	0		0	0.4	0.4	267	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	533	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	3,798	
Dichlorobromomethane	0	0		0	0.95	0.95	633	
1,2-Dichloroethane	0	0		0	9.9	9.9	6,596	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	600	
1,3-Dichloropropylene	0	0		0	0.27	0.27	180	
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	13,326	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	133	
Tetrachloroethylene	0	0		0	10	10.0	6,663	
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	366	
Trichloroethylene	0	0		0	0.6	0.6	400	
Vinyl Chloride	0	0		0	0.02	0.02	13.3	
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	20.0	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	999	

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	0.067	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.67	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.067	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.67	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	6.66	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	20.0	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	213	
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	80.0	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.067	
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	33.3	
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	33.3	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	33.3	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	20.0	
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	0.053	
Hexachlorobutadiene	0	0		0	0.01	0.01	6.66	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	66.6	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.67	
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	0.47	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	3.33	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	2,199	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	
Aldrin	0	0		0	0.0000008	8.00E-07	0.0005	
alpha-BHC	0	0		0	0.0004	0.0004	0.27	
beta-BHC	0	0		0	0.008	0.008	5.33	
gamma-BHC	0	0		0	N/A	N/A	N/A	

Chlordane	0	0		0	0.0003	0.0003	0.2	
4,4-DDT	0	0		0	0.00003	0.00003	0.02	
4,4-DDE	0	0		0	0.00002	0.00002	0.013	
4,4-DDD	0	0		0	0.0001	0.0001	0.067	
Dieldrin	0	0		0	0.000001	0.000001	0.0007	
alpha-Endosulfan	0	0		0	N/A	N/A	N/A	
beta-Endosulfan	0	0		0	N/A	N/A	N/A	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	N/A	N/A	N/A	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.000006	0.000006	0.004	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.02	
Toxaphene	0	0		0	0.0007	0.0007	0.47	

☑ ***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

☑ ***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	12,320	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	961	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	1,716	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	344,972	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	133,061	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	36.2	µg/L	Discharge Conc < TQL
Total Chromium (III)	14,848	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	268	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	1,561	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	237	µg/L	Discharge Conc ≤ 10% WQBEL
Free Cyanide	361	µg/L	Discharge Conc ≤ 25% WQBEL

Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	51,491	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	422,843	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	549	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	171,635	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	8.58	µg/L	Discharge Conc ≤ 10% WQBEL
Total Nickel	7,911	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	856	µg/L	Discharge Conc < TQL
Total Silver	65.6	µg/L	Discharge Conc < TQL
Total Thallium	41.2	µg/L	Discharge Conc < TQL
Total Zinc	2,020	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	49.3	µg/L	Discharge Conc < TQL
Acrylonitrile	40.0	µg/L	Discharge Conc < TQL
Benzene	386	µg/L	Discharge Conc < TQL
Bromoform	4,664	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	267	µg/L	Discharge Conc < TQL
Chlorobenzene	17,164	µg/L	Discharge Conc < TQL
Chlorodibromomethane	533	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	295,690	µg/L	Discharge Conc < TQL
Chloroform	3,798	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	633	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	6,596	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	5,664	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	600	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	180	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	11,671	µg/L	Discharge Conc < TQL
Methyl Bromide	9,035	µg/L	Discharge Conc < TQL
Methyl Chloride	459,962	µg/L	Discharge Conc < TQL
Methylene Chloride	13,326	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	133	µg/L	Discharge Conc < TQL
Tetrachloroethylene	6,663	µg/L	Discharge Conc < TQL
Toluene	9,783	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	17,164	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	49,282	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	366	µg/L	Discharge Conc < TQL
Trichloroethylene	400	µg/L	Discharge Conc < TQL
Vinyl Chloride	13.3	µg/L	Discharge Conc < TQL
2-Chlorophenol	5,149	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	1,716	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	10,842	µg/L	Discharge Conc < TQL

4,6-Dinitro-o-Cresol	343	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	1,716	µg/L	Discharge Conc < TQL
2-Nitrophenol	131,418	µg/L	Discharge Conc < TQL
4-Nitrophenol	37,783	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	2,628	µg/L	Discharge Conc < TQL
Pentachlorophenol	20.0	µg/L	Discharge Conc < TQL
Phenol	686,542	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	999	µg/L	Discharge Conc < TQL
Acenaphthene	1,363	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	51,491	µg/L	Discharge Conc < TQL
Benzidine	0.067	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.67	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.067	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.67	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	6.66	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	20.0	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	34,327	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	213	µg/L	Discharge Conc ≤ 25% WQBEL
4-Bromophenyl Phenyl Ether	4,435	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	17.2	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	137,308	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	80.0	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.067	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	13,470	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	1,201	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	11,992	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	33.3	µg/L	Discharge Conc < TQL
Diethyl Phthalate	65,709	µg/L	Discharge Conc ≤ 25% WQBEL
Dimethyl Phthalate	41,068	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	1,807	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	33.3	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	33.3	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	20.0	µg/L	Discharge Conc < TQL
Fluoranthene	3,285	µg/L	Discharge Conc < TQL
Fluorene	8,582	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.053	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	6.66	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	82.1	µg/L	Discharge Conc < TQL
Hexachloroethane	66.6	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.67	µg/L	Discharge Conc < TQL

Isophorone	5,836	µg/L	Discharge Conc < TQL
Naphthalene	2,300	µg/L	Discharge Conc < TQL
Nitrobenzene	1,716	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.47	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	3.33	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	2,199	µg/L	Discharge Conc < TQL
Phenanthrene	82.1	µg/L	Discharge Conc < TQL
Pyrene	3,433	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	12.0	µg/L	Discharge Conc < TQL
Aldrin	0.0005	µg/L	Discharge Conc < TQL
alpha-BHC	0.27	µg/L	Discharge Conc < TQL
beta-BHC	5.33	µg/L	Discharge Conc < TQL
gamma-BHC	15.6	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.2	µg/L	Discharge Conc < TQL
4,4-DDT	0.02	µg/L	Discharge Conc < TQL
4,4-DDE	0.013	µg/L	Discharge Conc < TQL
4,4-DDD	0.067	µg/L	Discharge Conc < TQL
Dieldrin	0.0007	µg/L	Discharge Conc < TQL
alpha-Endosulfan	3.61	µg/L	Discharge Conc < TQL
beta-Endosulfan	3.61	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	3,433	µg/L	Discharge Conc < TQL
Endrin	1.41	µg/L	Discharge Conc < TQL
Endrin Aldehyde	172	µg/L	Discharge Conc < TQL
Heptachlor	0.004	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.02	µg/L	Discharge Conc < TQL
Toxaphene	0.034	µg/L	Discharge Conc < TQL

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.02
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name: AVJSA

Permit No.: PA0026255

Replicate No.	Test Completion Date 8/31/2015 Control	TIWC	Test Completion Date 8/30/2016 Control	TIWC
1	1	1	1	1
2	1	1	1	1
3	1	1	1	1
4	1	1	1	1
5	1	1	1	1
6	1	1	1	1
7	1	1	1	1
8	1	1	1	1
9	1	1	1	1
10	1	1	1	1
11				
12				
13				
14				
15				
Mean	1.000	1.000	1.000	1.000
Std Dev.	0.000	0.000	0.000	0.000
# Replicates	10	10	10	10
T-Test Result				
Deg. of Freedom				
Critical T Value				
Pass or Fail	PASS		PASS	

Replicate No.	Test Completion Date 8/22/2017 Control	TIWC	Test Completion Date 9/4/2018 Control	TIWC
1	1	1	1	1
2	1	1	1	1
3	1	1	1	1
4	1	1	1	1
5	1	1	1	1
6	1	1	1	1
7	1	1	1	1
8	1	1	1	1
9	1	1	1	1
10	1	1	1	1
11				
12				
13				
14				
15				
Mean	1.000	1.000	1.000	1.000
Std Dev.	0.000	0.000	0.000	0.000
# Replicates	10	10	10	10
T-Test Result				
Deg. of Freedom				
Critical T Value				
Pass or Fail	PASS		PASS	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Reproduction
TIWC (decimal)	0.02
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name: AVJSA

Permit No.: PA0026255

Replicate No.	Test Completion Date 8/31/2015 Control	TIWC
1	37	5
2	25	16
3	18	29
4	30	33
5	25	37
6	33	31
7	29	33
8	29	30
9	4	32
10	34	43
11		
12		
13		
14		
15		
Mean	26.400	28.900
Std Dev.	9.524	10.806
# Replicates	10	10

T-Test Result	2.2216
Deg. of Freedom	16
Critical T Value	0.8647
Pass or Fail	PASS

Replicate No.	Test Completion Date 8/30/2016 Control	TIWC
1	38	29
2	35	25
3	31	27
4	30	19
5	32	30
6	36	30
7	36	25
8	37	33
9	41	34
10	37	33
11		
12		
13		
14		
15		
Mean	35.300	28.500
Std Dev.	3.401	4.625
# Replicates	10	10

T-Test Result	1.2124
Deg. of Freedom	15
Critical T Value	0.8662
Pass or Fail	PASS

Replicate No.	Test Completion Date 8/22/2017 Control	TIWC
1	24	29
2	33	30
3	33	33
4	30	27
5	33	33
6	29	32
7	30	36
8	31	30
9	31	32
10	30	34
11		
12		
13		
14		
15		
Mean	30.400	31.600
Std Dev.	2.675	2.633
# Replicates	10	10

T-Test Result	8.4064
Deg. of Freedom	16
Critical T Value	0.8647
Pass or Fail	PASS

Replicate No.	Test Completion Date 9/4/2018 Control	TIWC
1	34	30
2	29	29
3	35	26
4	26	30
5	28	28
6	27	32
7	33	15
8	30	33
9	25	22
10	21	17
11		
12		
13		
14		
15		
Mean	28.800	26.200
Std Dev.	4.367	6.215
# Replicates	10	10

T-Test Result	2.0707
Deg. of Freedom	15
Critical T Value	0.8662
Pass or Fail	PASS

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	0.02
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: AVJSA

Permit No.: PA0026255

Replicate No.	Test Completion Date: 9/1/2015 Control	TIWC
1	1	0.9
2	0.9	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.975	0.975
Std Dev.	0.050	0.050
# Replicates	4	4

T-Test Result	14.8898
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

Replicate No.	Test Completion Date: 8/30/2016 Control	TIWC
1	1	0.9
2	0.9	1
3	1	1
4	0.8	0.9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.950
Std Dev.	0.096	0.058
# Replicates	4	4

T-Test Result	10.2456
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

Replicate No.	Test Completion Date: 8/22/2017 Control	TIWC
1	0.8	0.9
2	1	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	0.975
Std Dev.	0.100	0.050
# Replicates	4	4

T-Test Result	10.5725
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

Replicate No.	Test Completion Date: 9/4/2018 Control	TIWC
1	1	1
2	1	0.9
3	1	0.9
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.950
Std Dev.	0.000	0.058
# Replicates	4	4

T-Test Result	14.6031
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	PASS

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Growth
TIWC (decimal)	0.02
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: AVJSA

Permit No.: PA0026255

Test Completion Date: 9/1/2015

Replicate No.	Control	TIWC
1	0.352	0.304
2	0.296	0.385
3	0.356	0.386
4	0.356	0.351
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.340	0.357
Std Dev.	0.029	0.039
# Replicates	4	4
T-Test Result	4.5671	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	PASS	

Test Completion Date: 8/30/2016

Replicate No.	Control	TIWC
1	0.427	0.387
2	0.397	0.401
3	0.459	0.478
4	0.451	0.48
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.434	0.437
Std Dev.	0.028	0.049
# Replicates	4	4
T-Test Result	4.1516	
Deg. of Freedom	4	
Critical T Value	0.7407	
Pass or Fail	PASS	

Test Completion Date: 8/22/2017

Replicate No.	Control	TIWC
1	0.322	0.253
2	0.342	0.301
3	0.384	0.315
4	0.38	0.3278
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.357	0.299
Std Dev.	0.030	0.033
# Replicates	4	4
T-Test Result	1.5843	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	PASS	

Test Completion Date: 9/4/2018

Replicate No.	Control	TIWC
1	0.284	0.25
2	0.261	0.238
3	0.236	0.23
4	0.222	0.212
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.251	0.233
Std Dev.	0.027	0.016
# Replicates	4	4
T-Test Result	3.4155	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	PASS	

WET Summary and Evaluation

Facility Name	AVJSA STP
Permit No.	PA0026255
Design Flow (MGD)	5.5
Q_{7-10} Flow (cfs)	2390
PMF_a	0.088
PMF_c	0.607

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	8/31/15	8/30/16	8/22/17	9/4/18
Ceriodaphnia	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	8/31/15	8/30/16	8/22/17	9/4/18
Ceriodaphnia	Reproduction	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/1/15	8/30/16	8/22/17	9/4/18
Pimephales	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/1/15	8/30/16	8/22/17	9/4/18
Pimephales	Growth	PASS	PASS	PASS	PASS

Reasonable Potential? NO

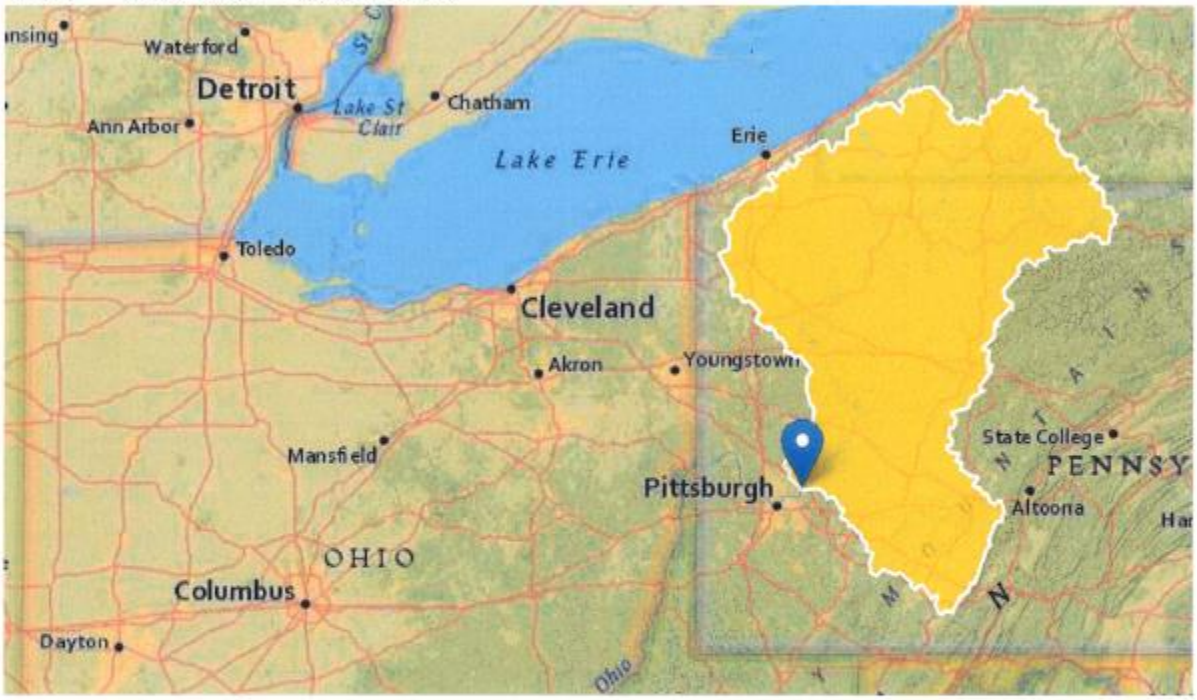
Permit Recommendations

Test Type	**Chronic**
TIWC	**1** % Effluent
Dilution Series	**1, 2, 30, 60, 100** % Effluent
Permit Limit	**None**
Permit Limit Species	

StreamStats Report

At discharge

Region ID: PA
Workspace ID: PA20210521155250187000
Clicked Point (Latitude, Longitude): 40.52737, -79.84610
Time: 2021-05-21 11:53:12 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	11600	square miles
ELEV	Mean Basin Elevation	1596	feet
PRECIP	Mean Annual Precipitation	44	inches