pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0038237**
Facility Type	**Municipal**	APS ID	**724106**
Major / Minor	**Major**	Authorization ID	**1212368**

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Rostraver Township Sewer Authority**	Facility Name	**Pollock Run WPCP**
Applicant Address	1744 Rostraver Road	Facility Address	1411 Coal Hollow Road
	Rostraver Township, PA 15012		West Newton, PA 15089
Applicant Contact	Ms. Ann C. Scott	Facility Contact	Same as Applicant
Applicant Phone	(724) 930-7667	Facility Phone	Same as Applicant
Client ID	78919	Site ID	251186
Ch 94 Load Status	Not Overloaded	Municipality	Rostraver Township
Connection Status	No Limitations	County	Westmoreland
Date Application Received	December 29, 2017	EPA Waived?	No
Date Application Accepted	January 4, 2018	If No, Reason	Major Facility

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

Summary of Review

The applicant has applied for a renewal of an existing NPDES Permit, Permit No. PA0038237, which was previously issued by the Department on June 11, 2013. That permit expired on June 30, 2018.

WQM Permit 6570407 A-4, issued on August 4, 2000, approved construction of a STP with a hydraulic design capacity of 1.50 MGD and organic capacity of 2778 lbs/day. The existing treatment process consists of 4 SBRs, 2 aerobic digester, chlorine gas disinfection and a belt filter press for the dewatering of digested sludge. Dewatered biosolids are disposed of at a Landfill.

The receiving stream, Youghiogheny River, is classified as a WWF and is located in State Watershed No. 19-D.

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

The application states there are no stormwater related outfalls located at the STP. Part C will not contain language titled "Requirements Applicable to Stormwater Outfalls".

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

Approve	Deny	Signatures	Date
X		William C. Mitchell, E.I.T. / Environmental Engineering Specialist	February 8, 2021
X		Christopher Kriley, P.E. / Clean Water Program Manager	February 9, 2021

Summary of Review
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)	1.5
Latitude	40º 13' 39.00"	Longitude	-79º 47' 15.00"
Quad Name	Donora	Quad Code	1707
Wastewater Description:	Sewage Effluent		
Receiving Waters	Youghiogheny River (WWF)	Stream Code	37456
NHD Com ID	69913403	RMI	16.6
Drainage Area	1700	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	510	Q_{7-10} Basis	US Army Corp of Engineers USGS StreamStats
Elevation (ft)	738	Slope (ft/ft)	0.001
Watershed No.	19-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	SILTATION & METALS		
Source(s) of Impairment	URBAN RUNOFF/STORM SEWERS & SOURCE UNKNOWN		
TMDL Status		Name	

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

Nearest Downstream Public Water Supply Intake	Westmoreland County Municipal Authority		
PWS Waters	Youghiogheny River	Flow at Intake (cfs)	
PWS RMI	1.6	Distance from Outfall (mi)	15.0

Changes Since Last Permit Issuance: NONE

Treatment Facility Summary

Treatment Facility Name: Pollock Run WPCP

WQM Permit No.	Issuance Date
6570407 A-4	08/04/2000

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	SRBs	Gas Chlorine	0.787

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
1.5	2778	Not Overloaded	Belt Filter Press	Landfill

Changes Since Last Permit Issuance: NONE

Compliance History

Operations Compliance Check Summary Report

Facility: Pollock_Run_STP

NPDES Permit No.: PA0038237

Compliance Review Period: 12/22/2015 – 12/22/2020

Open Violations by Client Summary

None.

Inspection Summary

INSP ID	INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC	# OF VIOLATIONS
3089908	10/06/2020	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	0
2905636	07/10/2019	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	0
2745412	06/25/2018	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	0
2610274	06/29/2017	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	0
2608134	09/09/2016	Complaint Inspection	PA Dept of Environmental Protection	No Violations Noted	0
2504160	07/06/2016	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	0

Violation Summary

No violations in eFACTS.

Enforcement Summary

No enforcement actions.

DMR Violation Summary

Current eDMR user.

Effluent limit violation summary 12/22/2015 – 12/22/2020:

No violations reported in eDMR.

Compliance Status:

Facility has no compliance issues.

Completed by: David Roote

Completed date: 12/22/2020

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 1.5
Latitude 40º 13' 39.00" **Longitude** -79º 47' 15.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
$CBOD_5$	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
Total Suspended Solids	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 Analysis Modeling for CBOD5, DO and Ammonia-Nitrogen is not necessary, and we will again re-impose Federal Minimum Secondary Effluent Limitations due to the large dilution available in the Youghiogheny River. Q7-10 flow of the Youghiogheny River at the point of discharge is 510 cfs. The instream to wasteflow dilution ration = total stream flow (512.3208 cfs) / discharge flow (2.3208 cfs) = 220/1.

For existing discharges (NPDES Renewal Applications), if WQM7.0 modeling results for summer indicates that an average monthly warm period limit of 25 mg/L (default in model) is acceptable for ammonia-nitrogen, a year-round monitoring requirement, at a minimum should be established. Due to the large dilution ration discussed above, assume that a monthly warm period limit of 25 mg/L is acceptable for ammonia-nitrogen and impose a year-round monitoring requirement 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 19.1 mg/L.

Water Quality-Based Limitations

A "Reasonable Potential Analysis" (Attachment Toxic Management Spreadsheet) was conducted. No limitations were determined through water quality modeling, using DEPs Toxic Management Spreadsheet Version 1.1, and no WQBELs will be imposed on this facility during this permit cycle. For modeling purposes, the river width is 351 ft. (measured from Google Earth Pro) and an assumed river depth of 10 ft.

Best Professional Judgment (BPJ) Limitations

Comments: 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:

For pH, DO and TRC, 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.

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).

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 2/week Metered to be consistent with the guidance.

Total Dissolved Solids (TDS) and its Major Constituents

Total Dissolved Solids (TDS) and its major constituents including sulfate, chloride, and bromide have emerged as pollutants of concern in several major watersheds in the Commonwealth. The conservative nature of these solids allows them to accumulate in surface waters and they may remain a concern even if the immediate downstream public water supply is not directly impacted. Bromide has been linked to formation of disinfection byproducts at increased levels in public water systems.

Based on these concerns and under the authority of §92a.61, DEP has determined it should implement increased monitoring in NPDES permits for these parameters: TDS, sulfate, chloride, bromide, and 1,4-dioxane.

Increased monitoring in NPDES permits will only occur when the following conditions are met:

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

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

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

Monitoring is not required for TDS, sulfate, chloride, bromide & 1,4-dioxane. Concentrations of bromide is less than 1 mg/L (application reports 0.573 mg/L), TDS is less than 1000 mg/L (application reports 426 mg/L) & 1,4-dioxane is less than 10 ug/L (application reports 0.3).

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: 0.02 or 2%.

Summary of Four Most Recent Test Results

TST Data Analysis

(Please see the attached DEP WET Analysis Spreadsheet).

Test Date	*Ceriodaphnia* Results (Pass/Fail)		*Pimephales* Results (Pass/Fail)	
	Survival	Reproduction	Survival	Growth
08/08/2017	PASS	PASS	PASS	PASS
09/12/2017	PASS	PASS	PASS	PASS
10/10/2017	PASS	PASS	PASS	PASS
11/14/2017	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: Part C.III, Whole Effluent Toxicity (WET), has been added to the permit and requires annual testing in conformance with the Federal Regulations.

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

Acute Partial Mix Factor (PMFa): **0.299** Chronic Partial Mix Factor (PMFc): **1.0**

1. Determine IWC – Acute (IWCa):

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

[(1.5 MGD x 1.547) / ((510 cfs x 0.299) + (1.5 MGD x 1.547))] x 100 = **1.5%**

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

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

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

TIWCa = 1.5% / 0.3 = 4.99**%**

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

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

[(1.5 MGD x 1.547) / ((510 cfs x 1) + (1.5 MGD x 1.547))] x 100 = **1 %**

3. Determine Dilution Series

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

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	2/week	Metered
pH (S.U.)	XXX	XXX	6.0 Avg Mo	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/day	Grab
CBOD5	310	475	XXX	25.0	38.0	50	2/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TSS	375	560	XXX	30.0	45.0	60	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	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
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Ammonia-Nitrogen	Report	XXX	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite

Compliance Sampling Location: Outfall # 001.

Copy of TRC_CALC

TRC EVALUATION

510	= Q stream (cfs)	0.5	= CV Daily
1.5	= Q discharge (MGD)	0.5	= CV Hourly
4	= no. samples	0.299	= 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)
	= % Factor of Safety (FOS)		=Decay Coefficient (K)

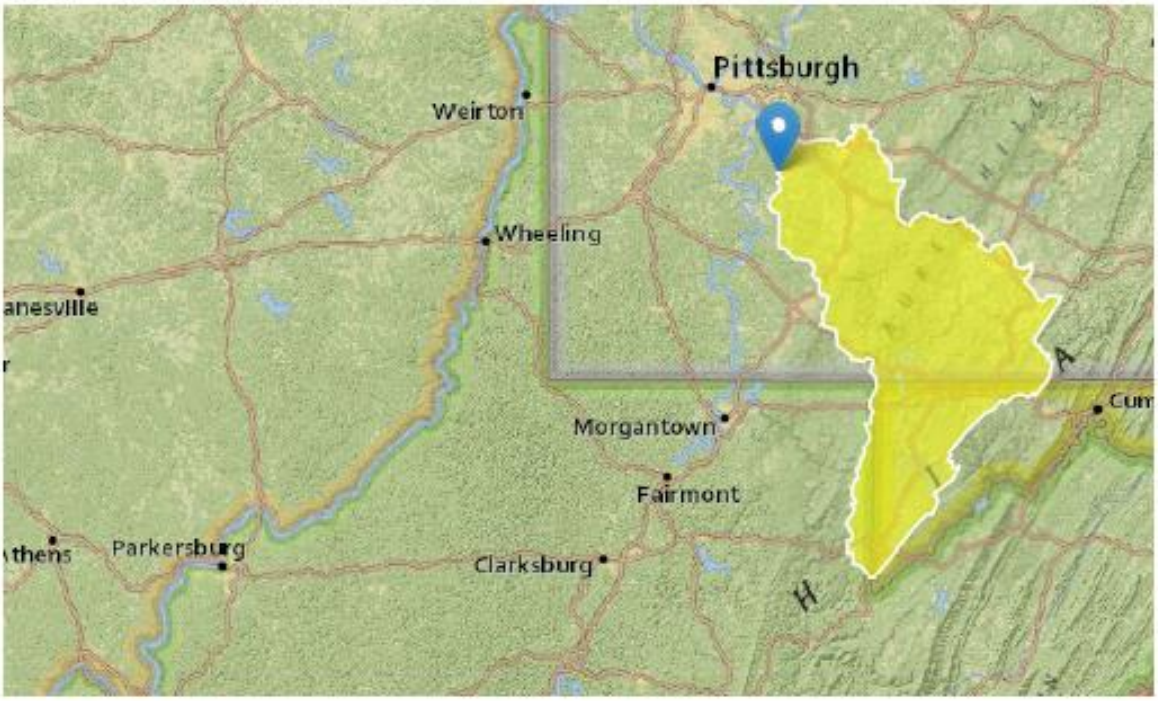
Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 20.982	1.3.2.iii	WLA cfc = 68.363
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 7.818	5.1d	LTA_cfc = 39.743

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.720	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.170	

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)**

StreamStats Report

Region ID: PA
Workspace ID: PA20201222171546331000
Clicked Point (Latitude, Longitude): 40.22824, -79.78748
Time: 2020-12-22 12:16:10 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1700	square miles
ELEV	Mean Basin Elevation	2026	feet

Low-Flow Statistics Parameters[100 Percent (1700 square miles) Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1700	square miles	2.26	1400

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

Discharge Information

Instructions | Discharge | Stream

Facility: **Pollock Run WPCP** NPDES Permit No.: **PA0038237** 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
1.5	183	7						

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		426									
	Chloride (PWS)	mg/L		86									
	Bromide	mg/L		0.573									
	Sulfate (PWS)	mg/L		48.1									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		100									
	Total Antimony	µg/L		5									
	Total Arsenic	µg/L		5									
	Total Barium	µg/L		100									
	Total Beryllium	µg/L		2									
	Total Boron	µg/L		250									
	Total Cadmium	µg/L		2									
	Total Chromium (III)	µg/L		20									
	Hexavalent Chromium	µg/L		5									
	Total Cobalt	µg/L		5									
	Total Copper	µg/L		20									
	Free Cyanide	µg/L		24									
	Total Cyanide	µg/L		15									
	Dissolved Iron	µg/L		120									
	Total Iron	µg/L		130									
	Total Lead	µg/L		5									
	Total Manganese	µg/L		50									
	Total Mercury	µg/L		1									
	Total Nickel	µg/L		20									
	Total Phenols (Phenolics) (PWS)	µg/L		10									
	Total Selenium	µg/L		5									
	Total Silver	µg/L		5									
	Total Thallium	µg/L		2									
	Total Zinc	µg/L		70									
	Total Molybdenum	µg/L		5									
	Acrolein	µg/L	<	5									
	Acrylamide	µg/L	<	1									
	Acrylonitrile	µg/L	<	1									
	Benzene	µg/L	<	1									
	Bromoform	µg/L	<	1									

Group 3	Carbon Tetrachloride	µg/L	<	1									
	Chlorobenzene	µg/L	<	1									
	Chlorodibromomethane	µg/L	<	1									
	Chloroethane	µg/L	<	1									
	2-Chloroethyl Vinyl Ether	µg/L	<	1									
	Chloroform	µg/L		1.8									
	Dichlorobromomethane	µg/L	<	1									
	1,1-Dichloroethane	µg/L	<	1									
	1,2-Dichloroethane	µg/L	<	1									
	1,1-Dichloroethylene	µg/L	<	1									
	1,2-Dichloropropane	µg/L	<	1									
	1,3-Dichloropropylene	µg/L	<	2									
	1,4-Dioxane	µg/L		0.3									
	Ethylbenzene	µg/L	<	1									
	Methyl Bromide	µg/L	<	1									
	Methyl Chloride	µg/L	<	1									
	Methylene Chloride	µg/L	<	1									
	1,1,2,2-Tetrachloroethane	µg/L	<	1									
	Tetrachloroethylene	µg/L	<	1									
	Toluene	µg/L	<	1									
	1,2-trans-Dichloroethylene	µg/L	<	1									
	1,1,1-Trichloroethane	µg/L	<	1									
	1,1,2-Trichloroethane	µg/L	<	1									
	Trichloroethylene	µg/L	<	1									
	Vinyl Chloride	µg/L	<	1									
Group 4	2-Chlorophenol	µg/L	<	1									
	2,4-Dichlorophenol	µg/L	<	1									
	2,4-Dimethylphenol	µg/L	<	1									
	4,6-Dinitro-o-Cresol	µg/L	<	1									
	2,4-Dinitrophenol	µg/L	<	1									
	2-Nitrophenol	µg/L	<	1									
	4-Nitrophenol	µg/L	<	1									
	p-Chloro-m-Cresol	µg/L	<	1									
	Pentachlorophenol	µg/L	<	1									
	Phenol	µg/L	<	1									
	2,4,6-Trichlorophenol	µg/L	<	1									
Group 5	Acenaphthene	µg/L	<	1									
	Acenaphthylene	µg/L	<	1									
	Anthracene	µg/L	<	1									
	Benzidine	µg/L	<	1									
	Benzo(a)Anthracene	µg/L	<	1									
	Benzo(a)Pyrene	µg/L	<	1									
	3,4-Benzofluoranthene	µg/L	<	1									
	Benzo(ghi)Perylene	µg/L	<	1									
	Benzo(k)Fluoranthene	µg/L	<	1									
	Bis(2-Chloroethoxy)Methane	µg/L	<	1									
	Bis(2-Chloroethyl)Ether	µg/L	<	1									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	1									
	Bis(2-Ethylhexyl)Phthalate	µg/L		11.7									
	4-Bromophenyl Phenyl Ether	µg/L	<	1									
	Butyl Benzyl Phthalate	µg/L	<	1									
	2-Chloronaphthalene	µg/L	<	1									
	4-Chlorophenyl Phenyl Ether	µg/L	<	1									
	Chrysene	µg/L	<	1									
	Dibenzo(a,h)Anthrancene	µg/L	<	1									
	1,2-Dichlorobenzene	µg/L	<	1									
	1,3-Dichlorobenzene	µg/L	<	1									
	1,4-Dichlorobenzene	µg/L	<	1									
	3,3-Dichlorobenzidine	µg/L	<	1									
	Diethyl Phthalate	µg/L	<	1									
	Dimethyl Phthalate	µg/L	<	1									
	Di-n-Butyl Phthalate	µg/L	<	1									
	2,4-Dinitrotoluene	µg/L	<	1									

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

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

Stream / Surface Water Information

Pollock Run WPCP, NPDES Permit No. PA0038237, Outfall 001

Instructions | Discharge | Stream

Receiving Surface Water Name: **Youghiogheny River**

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	037456	16.6	738	1700	0.001		Yes
End of Reach 1	037456	16	737.9	1710	0.001		Yes

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

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	16.6	0.1	510			351	10					100	7		
End of Reach 1	16	0.1													

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	16.6														
End of Reach 1	16														

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

Model Results

Pollock Run WPCP, NPDES Permit No. PA0038237, 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)
16.6	510		510	2.321	0.001	10.	351.	35.1	0.146	0.251	167.34
16	511		511								

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)
16.6	1727.45		1727.45	2.321	0.001	17.081	351.	20.549	0.289	0.127	75.44
16	1730.409		1730.41								

☑ ***Wasteload Allocations***

☑ *AFC* CCT (min): 15 PMF: 0.299 Analysis Hardness (mg/l): 101.24 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	50,101	
Total Antimony	0	0		0	1,100	1,100	73,481	
Total Arsenic	0	0		0	340	340	22,712	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	1,402,829	
Total Boron	0	0		0	8,100	8,100	541,091	
Total Cadmium	0	0		0	2.038	2.16	144	Chem Translator of 0.943 applied
Total Chromium (III)	0	0		0	575.555	1,821	121,670	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	1,088	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	6,346	
Total Copper	0	0		0	13.596	14.2	946	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	1,470	

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	65.455	82.9	5,540	Chem Translator of 0.789 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	110	Chem Translator of 0.85 applied
Total Nickel	0	0		0	473.153	474	31,671	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	3.286	3.87	258	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	4,342	
Total Zinc	0	0		0	118.413	121	8,088	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	200	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	650	650	43,421	
Benzene	0	0		0	640	640	42,753	
Bromoform	0	0		0	1,800	1,800	120,242	
Carbon Tetrachloride	0	0		0	2,800	2,800	187,044	
Chlorobenzene	0	0		0	1,200	1,200	80,162	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	1,202,424	
Chloroform	0	0		0	1,900	1,900	126,923	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	1,002,020	
1,1-Dichloroethylene	0	0		0	7,500	7,500	501,010	
1,2-Dichloropropane	0	0		0	11,000	11,000	734,815	
1,3-Dichloropropylene	0	0		0	310	310	20,708	
Ethylbenzene	0	0		0	2,900	2,900	193,724	
Methyl Bromide	0	0		0	550	550	36,741	
Methyl Chloride	0	0		0	28,000	28,000	1,870,438	
Methylene Chloride	0	0		0	12,000	12,000	801,616	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	66,801	
Tetrachloroethylene	0	0		0	700	700	46,761	
Toluene	0	0		0	1,700	1,700	113,562	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	454,249	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	200,404	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	227,125	
Trichloroethylene	0	0		0	2,300	2,300	153,643	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	37,409	
2,4-Dichlorophenol	0	0		0	1,700	1,700	113,562	
2,4-Dimethylphenol	0	0		0	660	660	44,089	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	5,344	
2,4-Dinitrophenol	0	0		0	660	660	44,089	
2-Nitrophenol	0	0		0	8,000	8,000	534,411	
4-Nitrophenol	0	0		0	2,300	2,300	153,643	
p-Chloro-m-Cresol	0	0		0	160	160	10,688	
Pentachlorophenol	0	0		0	8.723	8.72	583	
Phenol	0	0		0	N/A	N/A	N/A	

2,4,6-Trichlorophenol	0	0		0	460	460	30,729	
Acenaphthene	0	0		0	83	83.0	5,545	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	20,040	
Benzo(a)Anthracene	0	0		0	0.5	0.5	33.4	
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	2,004,041	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	300,606	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	18,036	
Butyl Benzyl Phthalate	0	0		0	140	140	9,352	
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	54,777	
1,3-Dichlorobenzene	0	0		0	350	350	23,380	
1,4-Dichlorobenzene	0	0		0	730	730	48,765	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	267,205	
Dimethyl Phthalate	0	0		0	2,500	2,500	167,003	
Di-n-Butyl Phthalate	0	0		0	110	110	7,348	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	106,882	
2,6-Dinitrotoluene	0	0		0	990	990	66,133	
1,2-Diphenylhydrazine	0	0		0	15	15.0	1,002	
Fluoranthene	0	0		0	200	200	13,360	
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	668	
Hexachlorocyclopentadiene	0	0		0	5	5.0	334	
Hexachloroethane	0	0		0	60	60.0	4,008	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	668,014	
Naphthalene	0	0		0	140	140	9,352	
Nitrobenzene	0	0		0	4,000	4,000	267,205	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	1,135,623	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	20,040	
Phenanthrene	0	0		0	5	5.0	334	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	8,684	

☑ *CFC* CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): 100.38 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	48,572	
Total Arsenic	0	0		0	150	150	33,117	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	905,199	
Total Boron	0	0		0	1,600	1,600	353,248	
Total Cadmium	0	0		0	0.247	0.27	59.9	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.343	86.4	19,085	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	2,295	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	4,195	
Total Copper	0	0		0	8.985	9.36	2,066	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	1,148	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	331,170	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.527	3.2	706	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	200	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.172	52.3	11,553	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	1,102	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	2,870	
Total Zinc	0	0		0	118.515	120	26,537	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	662	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	130	130	28,701	
Benzene	0	0		0	130	130	28,701	
Bromoform	0	0		0	370	370	81,689	
Carbon Tetrachloride	0	0		0	560	560	123,637	
Chlorobenzene	0	0		0	240	240	52,987	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	772,731	
Chloroform	0	0		0	390	390	86,104	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	684,419	
1,1-Dichloroethylene	0	0		0	1,500	1,500	331,170	
1,2-Dichloropropane	0	0		0	2,200	2,200	485,716	
1,3-Dichloropropylene	0	0		0	61	61.0	13,468	
Ethylbenzene	0	0		0	580	580	128,053	
Methyl Bromide	0	0		0	110	110	24,286	
Methyl Chloride	0	0		0	5,500	5,500	1,214,291	
Methylene Chloride	0	0		0	2,400	2,400	529,873	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	46,364	
Tetrachloroethylene	0	0		0	140	140	30,909	

Toluene	0	0		0	330	330	72,857	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	309,092	
1,1,1-Trichloroethane	0	0		0	610	610	134,676	
1,1,2-Trichloroethane	0	0		0	680	680	150,131	
Trichloroethylene	0	0		0	450	450	99,351	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	24,286	
2,4-Dichlorophenol	0	0		0	340	340	75,065	
2,4-Dimethylphenol	0	0		0	130	130	28,701	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	3,532	
2,4-Dinitrophenol	0	0		0	130	130	28,701	
2-Nitrophenol	0	0		0	1,600	1,600	353,248	
4-Nitrophenol	0	0		0	470	470	103,767	
p-Chloro-m-Cresol	0	0		0	30	30.0	6,623	
Pentachlorophenol	0	0		0	6.693	6.69	1,478	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	20,091	
Acenaphthene	0	0		0	17	17.0	3,753	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	13,026	
Benzo(a)Anthracene	0	0		0	0.1	0.1	22.1	
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	1,324,681	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	200,910	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	11,922	
Butyl Benzyl Phthalate	0	0		0	35	35.0	7,727	
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	35,325	
1,3-Dichlorobenzene	0	0		0	69	69.0	15,234	
1,4-Dichlorobenzene	0	0		0	150	150	33,117	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	176,624	
Dimethyl Phthalate	0	0		0	500	500	110,390	
Di-n-Butyl Phthalate	0	0		0	21	21.0	4,636	
2,4-Dinitrotoluene	0	0		0	320	320	70,650	
2,6-Dinitrotoluene	0	0		0	200	200	44,156	
1,2-Diphenylhydrazine	0	0		0	3	3.0	662	
Fluoranthene	0	0		0	40	40.0	8,831	
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	442	
Hexachlorocyclopentadiene	0	0		0	1	1.0	221	
Hexachloroethane	0	0		0	12	12.0	2,649	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	463,638	
Naphthalene	0	0		0	43	43.0	9,494	
Nitrobenzene	0	0		0	810	810	178,832	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	750,653	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	13,026	
Phenanthrene	0	0		0	1	1.0	221	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	5,740	

☑ ***THH*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	1,236	
Total Arsenic	0	0		0	10	10.0	2,208	
Total Barium	0	0		0	2,400	2,400	529,873	
Total Boron	0	0		0	3,100	3,100	684,419	
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	140	140	30,909	
Dissolved Iron	0	0		0	300	300	66,234	
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	220,780	
Total Mercury	0	0		0	0.050	0.05	11.0	
Total Nickel	0	0		0	610	610	134,676	
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	53.0	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	6	6.0	1,325	
Acrylamide	0	0		0	N/A	N/A	N/A	

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	130	130	28,701	
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	7,286	
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	530	530	117,014	
Methyl Bromide	0	0		0	47	47.0	10,377	
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	1,300	1,300	287,014	
1,2-trans-Dichloroethylene	0	0		0	140	140	30,909	
1,1,1-Trichloroethane	0	0		0	N/A	N/A	N/A	
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	81	81.0	17,883	
2,4-Dichlorophenol	0	0		0	77	77.0	17,000	
2,4-Dimethylphenol	0	0		0	380	380	83,896	
4,6-Dinitro-o-Cresol	0	0		0	13	13.0	2,870	
2,4-Dinitrophenol	0	0		0	69	69.0	15,234	
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	10,400	10,400	2,296,114	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	670	670	147,923	
Anthracene	0	0		0	8,300	8,300	1,832,476	
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	1,400	1,400	309,092	

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	150	150	33,117	
2-Chloronaphthalene	0	0		0	1,000	1,000	220,780	
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	420	420	92,728	
1,3-Dichlorobenzene	0	0		0	420	420	92,728	
1,4-Dichlorobenzene	0	0		0	420	420	92,728	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	17,000	17,000	3,753,264	
Dimethyl Phthalate	0	0		0	270,000	270,000	59,610,659	
Di-n-Butyl Phthalate	0	0		0	2,000	2,000	441,560	
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	130	130	28,701	
Fluorene	0	0		0	1,100	1,100	242,858	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0		0	40	40.0	8,831	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.0038	0.004	0.84	
Isophorone	0	0		0	35	35.0	7,727	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	17	17.0	3,753	
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	830	830	183,248	
1,2,4-Trichlorobenzene	0	0		0	35	35.0	7,727	

☑ *CRL* CCT (min): 75.440 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	

Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylamide	0	0		0	0.07	0.07	52.2	
Acrylonitrile	0	0		0	0.051	0.051	38.0	
Benzene	0	0		0	1.2	1.2	895	
Bromoform	0	0		0	4.3	4.3	3,205	
Carbon Tetrachloride	0	0		0	0.23	0.23	171	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.4	0.4	298	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	4,249	
Dichlorobromomethane	0	0		0	0.55	0.55	410	
1,2-Dichloroethane	0	0		0	0.38	0.38	283	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0		0	0.34	0.34	253	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Methyl Bromide	0	0		0	N/A	N/A	N/A	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	4.6	4.6	3,429	
1,1,2,2-Tetrachloroethane	0	0		0	0.17	0.17	127	
Tetrachloroethylene	0	0		0	0.69	0.69	514	
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	0.59	0.59	440	
Trichloroethylene	0	0		0	2.5	2.5	1,864	
Vinyl Chloride	0	0		0	0.025	0.025	18.6	
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	0.270	0.27	201	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.4	1.4	1,044	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.000086	0.00009	0.064	
Benzo(a)Anthracene	0	0		0	0.0038	0.004	2.83	
Benzo(a)Pyrene	0	0		0	0.0038	0.004	2.83	
3,4-Benzofluoranthene	0	0		0	0.0038	0.004	2.83	
Benzo(k)Fluoranthene	0	0		0	0.0038	0.004	2.83	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	22.4	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	1.2	1.2	895	
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	0.0038	0.004	2.83	
Dibenzo(a,h)Anthrancene	0	0		0	0.0038	0.004	2.83	
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	0.021	0.021	15.7	
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	37.3	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	37.3	
1,2-Diphenylhydrazine	0	0		0	0.036	0.036	26.8	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00028	0.0003	0.21	
Hexachlorobutadiene	0	0		0	0.44	0.44	328	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	1.4	1.4	1,044	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
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	0.00069	0.0007	0.51	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	3.73	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	2,460	
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

☑ ***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	32,113	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	1,236	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	2,208	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	529,873	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	346,818	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	59.9	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	19,085	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	698	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	4,068	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	606	µg/L	Discharge Conc ≤ 10% WQBEL
Free Cyanide	942	µg/L	Discharge Conc ≤ 25% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	66,234	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	331,170	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	706	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	220,780	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	11.0	µg/L	Discharge Conc ≤ 10% WQBEL
Total Nickel	11,553	µg/L	Discharge Conc ≤ 10% WQBEL

Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	1,102	µg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	166	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	53.0	µg/L	Discharge Conc ≤ 10% WQBEL
Total Zinc	5,184	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	128	µg/L	Discharge Conc ≤ 25% WQBEL
Acrylamide	52.2	µg/L	Discharge Conc ≤ 25% WQBEL
Acrylonitrile	38.0	µg/L	Discharge Conc < TQL
Benzene	895	µg/L	Discharge Conc ≤ 25% WQBEL
Bromoform	3,205	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	171	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorobenzene	28,701	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	298	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	770,706	µg/L	Discharge Conc < TQL
Chloroform	4,249	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	410	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	283	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethylene	7,286	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-Dichloropropane	470,987	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichloropropylene	253	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	117,014	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	10,377	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	1,198,875	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	3,429	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	127	µg/L	Discharge Conc ≤ 25% WQBEL
Tetrachloroethylene	514	µg/L	Discharge Conc ≤ 25% WQBEL
Toluene	72,789	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	30,909	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	128,451	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2-Trichloroethane	440	µg/L	Discharge Conc ≤ 25% WQBEL
Trichloroethylene	1,864	µg/L	Discharge Conc ≤ 25% WQBEL
Vinyl Chloride	18.6	µg/L	Discharge Conc ≤ 25% WQBEL
2-Chlorophenol	17,883	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	17,000	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	28,259	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2,870	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	15,234	µg/L	Discharge Conc < TQL
2-Nitrophenol	342,536	µg/L	Discharge Conc < TQL
4-Nitrophenol	98,479	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	6,623	µg/L	Discharge Conc < TQL
Pentachlorophenol	201	µg/L	Discharge Conc < TQL

Phenol	2,296,114	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	1,044	µg/L	Discharge Conc < TQL
Acenaphthene	3,554	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	1,832,476	µg/L	Discharge Conc < TQL
Benzidine	0.064	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	2.83	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	2.83	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	2.83	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	2.83	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	22.4	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	309,092	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	895	µg/L	Discharge Conc ≤ 25% WQBEL
4-Bromophenyl Phenyl Ether	11,561	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	5,994	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	220,780	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	2.83	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	2.83	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	35,110	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	14,986	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	31,256	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	15.7	µg/L	Discharge Conc < TQL
Diethyl Phthalate	171,268	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	107,042	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	4,636	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	37.3	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	37.3	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	26.8	µg/L	Discharge Conc < TQL
Fluoranthene	8,563	µg/L	Discharge Conc < TQL
Fluorene	242,858	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.21	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	328	µg/L	Discharge Conc ≤ 25% WQBEL
Hexachlorocyclopentadiene	214	µg/L	Discharge Conc < TQL
Hexachloroethane	1,044	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.84	µg/L	Discharge Conc < TQL
Isophorone	7,727	µg/L	Discharge Conc < TQL
Naphthalene	5,994	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	3,753	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.51	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	3.73	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	2,460	µg/L	Discharge Conc < TQL

Phenanthrene	214	µg/L	Discharge Conc < TQL
Pyrene	183,248	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	5,566	µg/L	Discharge Conc ≤ 25% WQBEL

Applicant:	Rostraver Township SA
Name of plant:	Pollock Run WPCP
Permit Number:	PA0038237
Municipality:	Rostraver Township
County:	Westmoreland County
Receiving stream:	Youghiogheny River

The following program will calulate partial mix factors for acute and chronic conditions:

calculated fields

net stream flow (Qs cfs)=	**510**
discharge flow (Qd mgd)=	**1.5**
velocity (fps)=	**0.146**
width (feet) =	**351**
depth (feet) =	**10**
slope (ft/ft) =	**0.001**

complete mix time (min) = **167.34**

FOR ACUTE CONDIT IONS: IF COMPLETE MIX TIME < 15 MINUTES
THEN PMF = 1, IF > 15 MINUTES CALCULATE PMFa

PMFa = **0.299**
or **29.94 %**

FOR CHRONIC CONDITIONS: IF COMPLETE MIX TIME < 720 MINUTES
THEN PMF = 1, IF > 720 MINUTES CALCULATE PMFc

PMFc = **1.000**
or **100.00 %**

IWCc=[Qd * 1.547] / [(Qs*PMFc) + (Qd * 1.547)] = **0.0045**

Target IWCc=IWCc/1= **0.005** **0.45 %**

IWCa=[Qd * 1.547] / [(Qs*PMFa) + (Qd * 1.547)] = **0.0150**

Target IWCa=IWCa/0.3= **0.050** **or** **4.99 %**

WET tests should pass if percentage for C.dubia LC50 and P.promelas LC50 are greater than the target IWCa (acute) or NOEC > target IWCc (chronic).

Program written by David Ponchione on April 8, 1999

Program run by : **on** **December 23, 2020**

For Department use only

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: Pollock Run WPCP

Permit No.: PA0038237

Replicate No.	Test Completion Date 8/8/2017 Control	TIWC
1	23	22
2	18	26
3	20	17
4	18	30
5	0	26
6	22	25
7	24	29
8	13	28
9	20	30
10	17	29
11		
12		
13		
14		
15		
Mean	17.500	26.200
Std Dev.	6.932	4.104
# Replicates	10	10
T-Test Result	6.2421	
Deg. of Freedom	17	
Critical T Value	0.8633	
Pass or Fail	PASS	

Replicate No.	Test Completion Date 9/12/2017 Control	TIWC
1	37	33
2	32	15
3	36	34
4	39	35
5	33	34
6	38	39
7	35	34
8	35	38
9	32	31
10	31	36
11		
12		
13		
14		
15		
Mean	34.800	32.900
Std Dev.	2.741	6.707
# Replicates	10	10
T-Test Result	3.0652	
Deg. of Freedom	12	
Critical T Value	0.8726	
Pass or Fail	PASS	

Replicate No.	Test Completion Date 10/10/2017 Control	TIWC
1	24	31
2	19	30
3	20	31
4	22	29
5	29	32
6	31	28
7	18	30
8	29	33
9	25	28
10	25	13
11		
12		
13		
14		
15		
Mean	24.200	28.500
Std Dev.	4.492	5.681
# Replicates	10	10
T-Test Result	4.9552	
Deg. of Freedom	15	
Critical T Value	0.8662	
Pass or Fail	PASS	

Replicate No.	Test Completion Date 11/14/2017 Control	TIWC
1	30	28
2	27	25
3	26	30
4	27	19
5	26	24
6	26	25
7	21	29
8	24	29
9	23	26
10	26	30
11		
12		
13		
14		
15		
Mean	25.600	26.500
Std Dev.	2.459	3.440
# Replicates	10	10
T-Test Result	5.9146	
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	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.02
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name: Pollock Run WPCP

Permit No.: PA0038237

Test Completion Date: 8/8/2017

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	0	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	0.900	1.000
Std Dev.	0.316	0.000
# Replicates	10	10

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

Test Completion Date: 9/12/2017

Replicate No.	Control	TIWC
1	1	1
2	1	0
3	1	1
4	1	1
5	1	1
6	1	1
7	1	1
8	1	1
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	1.000	0.900
Std Dev.	0.000	0.316
# Replicates	10	10

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

Test Completion Date: 10/10/2017

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

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

Test Completion Date: 11/14/2017

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

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

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: Pollock Run WPCP

Permit No.: PA0038237

Replicate No.	Test Completion Date: 8/8/2017 Control	TIWC
1	0.7	0.9
2	1	1
3	0.5	0.7
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.800	0.900
Std Dev.	0.245	0.141
# Replicates	4	4
T-Test Result	4.1980	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

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

Replicate No.	Test Completion Date: 10/10/2017 Control	TIWC
1	1	0.9
2	1	1
3	1	1
4	0.9	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: 11/14/2017 Control	TIWC
1	1	1
2	1	0.8
3	0.9	0.9
4	0.9	0.7
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	0.850
Std Dev.	0.058	0.129
# Replicates	4	4
T-Test Result	4.9492	
Deg. of Freedom	4	
Critical T Value	0.7407	
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: Pollock Run WPCP

Permit No.: PA0038237

Replicate No.	Test Completion Date: 8/8/2017 Control	TIWC
1	0.212	0.3778
2	0.338	0.408
3	0.142	0.174
4	0.37	0.339
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.266	0.325
Std Dev.	0.107	0.104
# Replicates	4	4
T-Test Result	1.9083	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	PASS	

Replicate No.	Test Completion Date: 9/12/2017 Control	TIWC
1	0.334	0.319
2	0.295	0.323
3	0.417	0.368
4	0.375	0.354
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.355	0.341
Std Dev.	0.053	0.024
# Replicates	4	4
T-Test Result	3.2372	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	PASS	

Replicate No.	Test Completion Date: 10/10/2017 Control	TIWC
1	0.494	0.446
2	0.464	0.445
3	0.476	0.496
4	0.443	0.523
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.469	0.478
Std Dev.	0.021	0.039
# Replicates	4	4
T-Test Result	6.0120	
Deg. of Freedom	4	
Critical T Value	0.7407	
Pass or Fail	PASS	

Replicate No.	Test Completion Date: 11/14/2017 Control	TIWC
1	0.257	0.346
2	0.313	0.198
3	0.328	0.414
4	0.315	0.184
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.303	0.286
Std Dev.	0.032	0.113
# Replicates	4	4
T-Test Result	1.0081	
Deg. of Freedom	3	
Critical T Value	0.7649	
Pass or Fail	PASS	

WET Summary and Evaluation

Facility Name	Pollock Run WPCP
Permit No.	PA0038237
Design Flow (MGD)	1.5
Q_{7-10} Flow (cfs)	510
PMF_a	0.299
PMF_c	1

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	8/8/17	9/12/17	10/10/17	11/14/17
Ceriodaphnia	Reproduction	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	8/8/17	9/12/17	10/10/17	11/14/17
Ceriodaphnia	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	8/8/17	9/12/17	10/10/17	11/14/17
Pimephales	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	8/8/17	9/12/17	10/10/17	11/14/17
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	