pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0027430**
Facility Type	**Municipal**	APS ID	**930459**
Major / Minor	**Major**	Authorization ID	**1164427**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Municipal Authority of Westmoreland County**	Facility Name	**Jeannette STP**
Applicant Address	124 Park & Pool Road, PO Box 730	Facility Address	1000 S Railroad Street
	Greensburg, PA 15601-0730		Penn, PA 15675
Applicant Contact	John Ashton	Facility Contact	Katelyn Warheit
Applicant Phone	(724) 755-5800	Facility Phone	724-454-0233
Client ID	64197	Site ID	738018
Ch 94 Load Status	Not Overloaded	Municipality	Penn Borough
Connection Status	No Limitations	County	Westmoreland
Date Application Received	December 29, 2016	EPA Waived?	No
Date Application Accepted	December 31, 2016	If No, Reason	Major Facility

Purpose of Application: Renewal of an existing NPDES permit for the discharge of treated sewage

Summary of Review

Introduction

The applicant has applied for the renewal of existing NPDES Permit No. PA0027430, which was previously issued on June 26, 2012 and expired on June 30, 2017. That permit was transferred to the current owner on September 9, 2016.

Facility Overview

Sewage from this plant is treated either with activated sludge units or Sequential Batch Reactors (SBRs). About 60% of the flow is routed to the SBRs and the remaining 40% is routed through the activated sludge units. The resulting effluent is disinfected via UV light and discharges to Brush Creek which is designated as Trout Stock Fishery (TSF) per 25 Pa. Chapter 93 Designated Use and located in State Watershed 19-A. A comprehensive listing of outfalls can be found below.

Outfall Number	Outfall Name	Outfall Type
001	—	Treated Sewage
003	12th Street	CSO
004	Orange Avenue	CSO
006	Lincoln Avenue	CSO
008	13th Street	CSO
009	Western Avenue	CSO
010	Western Avenue	CSO
020	—	Stormwater

Approve	Deny	Signatures	Date
X		Grace Polakoski Grace Polakoski, E.I.T. / Environmental Engineering Specialist	August 31, 2022
X		Mahbuba Iasmin Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineer Manager	November 28, 2022

Summary of Review

021	—	Stormwater
022	—	Stormwater

Combined Sewer Overflow (CSO) Outfalls 003, 006, 008, 009, and 010 will again be permitted. In a letter from Municipal Authority of Westmoreland County (MAWC) dated June 13, 2017 (Attachment A), the Department was informed that CSO Outfall 004 had not been included in the active NPDES Permit. It appears that this was an oversight. Therefore, CSO Outfall 004 will be added into this permit. CSO 004 has previously been included in compliance inspection reports. These outfalls serve as CSOs necessitated by stormwater entering the sewer system and exceeding the hydraulic capacity of the sewers and/or the treatment plant and are permitted to discharge only for this reason. Under the previously-approved Long-Term Control Plan (LTCP), CSO Outfalls 003 and 008 will eventually be consolidated into Outfall 008A, CSO Outfalls 009 and 010 will eventually be consolidated into Outfall 009A, and CSO Outfall 006 will be reconstructed. Constructions related to the consolidations are expected to be completed by XXX.

The Department previously approved the NMC and LTCP Reports. After acquiring Jeannette STP, Municipal Authority of Westmoreland County (MAWC) submitted a revised LTCP in 2018. MAWC requested an update to the LTCP schedule in their 3rd Quarter 2021 Progress Report and their 4th Quarter 2021 Progress Report for their existing Consent Order and Agreement (COA). The LTCP schedule update was added into the existing COA on January 14, 2022. The LTCP Schedule update was approved on March 10, 2022 (Attachment B) and the new schedule will be included in the permit.

The Department and the City of Jeannette Municipal Authority (COJMA) originally entered into a COA on June 21, 2012 to eliminate Sanitary Sewer Overflows (SSOs) that were occurring from its Sanitary Sewer System. The 2012 version of the COA required COJMA to eliminate SSOs by constructing a new SBR at the sewage treatment plant and a pump station expansion by December 31, 2013 and to fully eliminate all SSOs by July 31, 2017. The First Amendment to the COA was executed on February 24, 2014 to extend construction deadlines due to issues discovered during excavation for the SBR. The Second Amendment to the COA was executed on January 30, 2015 to further extend the construction deadlines from the First Amendment. Per the Second Amendment, all activities related to the construction/installation of the SBR were to be completed by June 30, 2015 and all SSOs were to be eliminated by July 31, 2019. MAWC acquired ownership and operation of Jeannette STP in 2015 and therefore, became the legal successor in interest to COJMA and assumed all duties and obligations of the 2012 COA and the First and Second Amendments. The Third Amendment to the COA was executed on February 8, 2017 to extend construction deadlines once again due to issues discovered during construction/installation of the SBR and processing delays associated with MAWC's assumption of control of Jeannette STP and the associated sewer system. The Fourth Amendment to the COA was executed on February 16, 2022 to modify the LTCP schedule as discussed above. The modified LTCP schedule can be found in Part C.II(C)(3) of the NPDES Permit. The COA can be terminated after MAWC achieves the last milestone as identified in the Fourth Amendment.

Stormwater Outfalls 020, 021, 022 will again be permitted for the discharge of uncontaminated stormwater runoff from the areas in and around the treatment plant. Part C. VII, Requirements Applicable to Stormwater Outfalls, has been added to the permit.

EPA-Administered Pretreatment Program Requirements

The EPA Administers a National Pretreatment Program as part of the National Pollutant Discharge Elimination System (NPDES) administration. The goal of the National Pretreatment Program is to prevent the introduction of pollutants to Publicly Owned Treatment Works (POTWs) that will interfere with the operation of the POTW, pass through the POTW untreated, thereby improving opportunities to recycle and reclaim municipal and industrial wastewaters and sludges. The general pretreatment regulations that require certain POTWs to establish a local pretreatment program can be found at 40 CFR Part 403.8(a).

MAWC owns and operates a variety of facilities that total to an overall flow of greater than 5.0 MGD. As such, the facility is required to develop and implement an EPA-approved Pretreatment Program. Since Jeannette STP has not been a part of this program before, Part C.III condition "POTW Pretreatment Program Development and Implementation" has been added to this permit. During the effective dates of this permit cycle, MAWC must begin to develop a pretreatment program for

Summary of Review

Jeannette STP, the details of which can be found in the permit. During the next permit cycle, the Part C condition "Pretreatment Program Implementation" will be included. The industrial users reported on the 2016 application include: a cardboard box manufacturer, a borosilicate glass manufacturer, and a plastic sheeting manufacturer.

Summary of Whole Effluent Toxicity (WET) Tests

For the permit renewal, MAWC performed 4 chronic WET Tests at a TIWC of 93% and a dilution series of 23%, 47%, 93%, 97%, and 100%. Based on the WET Test Evaluation (Attachment J), Reasonable Potential (RP) was not established therefore no WET limits will be included in this permit. For the next permit cycle, MAWC should perform the chronic WET Tests at a TIWC of 94% and a dilution series of 24%, 47%, 94%, 97%, and 100%.

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. However, in the process of review, DEP determined that water quality based effluent limit (WQBEL) for Free Cyanide was imposed based on outdated in-stream criterion. Monitoring, instead of WQBEL, will be imposed in the current cycle based on reasonable potential analysis. Details of the justification can be found in Development of Effluent Limitations section.

Below is a summary of changes that have been made to this permit:

- All instances of 8-hr composite sampling have been changed to 24-hour composite sampling
- pH and DO monitoring have been changed from 2/week to 1/day monitoring
- *E. Coli* monitoring was imposed
- Annual monitoring for total aluminum, total iron, and total manganese was imposed
- Annual monitoring for total nitrogen and total phosphorus was imposed
- Stricter effluent limitations for total copper and new WQBEL for acrolein and Bis(2-Ethylhexyl)Phthalate have been imposed. Both mass and concentration based limits for Trichloroethylene have been updated.
- Weekly average concentration and mass loading limits for ammonia-nitrogen were removed from the permit
- Monitoring for Free Cyanide was imposed instead of WQBEL imposed in the previous cycle
- For Whole Effluent Toxicity (WET) Testing, TIWC is now 94% and the dilution series will be 24%, 47%, 94%, 97%, 100%

The Act 14-PL 834 Municipal Notification was provided by the November 23, 2016 letters and no comments were received.

Sludge use and disposal description and location(s): landfill at Greenridge Reclamation Landfill (Permit No. 100281)

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)	3.3
Latitude	40º 19' 40.85"	Longitude	-79º 38' 55.81"
Quad Name	Irwin	Quad Code	1608
Wastewater Description:	Sewage Effluent		
Receiving Waters	Brush Creek (TSF)	Stream Code	37246
NHD Com ID	99408098	RMI	14.33
Drainage Area	18.7 sq. mi.	Yield (cfs/mi^2)	0.0163
Q_{7-10} Flow (cfs)	0.305	Q_{7-10} Basis	USGS StreamStats (Attachment C)
Elevation (ft)	955	Slope (ft/ft)	
Watershed No.	19-A	Chapter 93 Class.	TSF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	METALS		
Source(s) of Impairment	ACID MINE DRAINAGE		
TMDL Status	Final, Final	Name	Brush Creek (Westmoreland), Turtle Creek Watershed

Background/Ambient Data		Data Source
pH (SU)	7.2	NPDES application
Temperature (°F)	20/15	PA Code
Hardness (mg/L)	144	NPDES application
Other:		

Nearest Downstream Public Water Supply Intake		PA American Water Co - Pittsburgh	
PWS Waters	Monongahela River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	27.63

Changes Since Last Permit Issuance:

Other Comments:

Treatment Facility Summary

Treatment Facility Name: Jeannette STP

WQM Permit No.	Issuance Date	Purpose
9084-S A-5	12/12/2019	Expansion of an existing pump station to eliminate SSOs and consolidation of CSOs 003 and 008
6519403	3/24/2020	Consolidation of CSOs 009 and 010, flow redirection pertaining to the relocation and partial separation of CSO 006, realign existing sewers to newly construction CSO 009

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary With Ammonia Reduction	Activated Sludge + SBR	Ultraviolet	3.3

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
3.3	3605	Not Overloaded	N/A	Combination of methods

Changes Since Last Permit Issuance: N/A

Compliance History

Facility: Jeannette STP
NPDES Permit No.: PA0027430
Compliance Review Period: 8/2017 – 8/2022

Inspection Summary:

INSP ID	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC
3165704	03/16/2021	Compliance Evaluation	No Violations Noted
3162435	03/16/2021	Administrative/File Review	No Violations Noted
2934531	08/08/2019	Routine/Partial Inspection	No Violations Noted
2909508	07/09/2019	Compliance Evaluation	No Violations Noted
2909509	07/09/2019	Administrative/File Review	No Violations Noted
2909510	07/09/2019	Combined Sewer Overflow-Non-Sampling	No Violations Noted
2766842	07/20/2018	Compliance Evaluation	No Violations Noted
2766840	06/20/2018	Routine/Partial Inspection	No Violations Noted

Violation Summary:

No Violations

Open Violations by Client ID:

No open CW violations for client ID 64197

Enforcement Summary:

ENF ID	ENF TYPE	ENF CREATION DATE	EXECUTED DATE	ENF COMMENT
401690	COA	03/10/2022	02/16/2022	Fourth Amendment to June 2012 COA.

DMR Violation Summary:

BEGIN	END	PARAMETER	SAMPLE	PERMIT	UNIT	STAT_BASE_CODE
4/1/21	4/30/21	Cyanide, Free	< 0.006	0.005	mg/L	Average Monthly
4/1/21	4/30/21	Cyanide, Free	< 0.010	0.008	mg/L	Daily Maximum
8/1/20	8/31/20	Fecal Coliform	2420	1000	CFU/100 ml	Instantaneous Maximum
7/1/20	7/31/20	Fecal Coliform	1120	1000	CFU/100 ml	Instantaneous Maximum
2/1/19	2/28/19	Total Suspended Solids	1319.9	1238	lbs/day	Weekly Average
8/1/18	8/31/18	Fecal Coliform	1046	1000	CFU/100 ml	Instantaneous Maximum
6/1/18	6/30/18	Fecal Coliform	> 2420	1000	CFU/100 ml	Instantaneous Maximum
3/1/18	3/31/18	Cyanide, Free	0.007	0.005	mg/L	Average Monthly
3/1/18	3/31/18	Cyanide, Free	0.009	0.008	mg/L	Daily Maximum
3/1/18	3/31/18	Cyanide, Free	0.2	0.138	lbs/day	Average Monthly
8/1/17	8/31/17	Fecal Coliform	1553	1000	CFU/100 ml	Instantaneous Maximum

Compliance Status:

Permittee is currently working under a 4th amendment COA to alleviate hydraulic overload conditions and is paying stipulated penalties for bypasses and DMR exceedances.

Completed by: John Murphy
Completed date: 8/12/2022

Compliance History

DMR Data for Outfall 001 (from November 1, 2020 to October 31, 2021)

Parameter	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20
Flow (MGD) Average Monthly	2.258	2.471	2.501	2.102	2.042	2.896	2.22	3.02	3.155	2.335	2.823	1.889
Flow (MGD) Daily Maximum	5.891	9.779	8.656	5.472	6.424	8.169	3.983	8.832	9.656	7.236	9.048	5.474
pH (S.U.) Minimum	6.9	6.88	6.94	6.93	7.03	7.12	7.04	6.85	6.93	6.98	6.84	7.08
pH (S.U.) Maximum	7.2	7.35	7.75	7.4	7.17	7.42	7.37	7.26	7.14	7.15	7.35	7.42
DO (mg/L) Minimum	7.4	6.9	6.50	6.7	7.1	7.9	9.1	8.1	9.6	8.90	8.5	8.9
CBOD5 (lbs/day) Average Monthly	< 33.8	< 66.7	140.1	66.7	< 72.6	127.5	< 60.1	< 121.4	< 147.4	< 56.5	< 68.3	< 68.6
CBOD5 (lbs/day) Weekly Average	< 44.8	127.0	270.1	89.1	156.0	287.5	67.4	< 196.6	301.5	< 69.8	< 102.0	< 143.2
CBOD5 (mg/L) Average Monthly	< 2	< 3	5	4	< 4	5	< 4	< 6	< 5	< 3.0	< 3.0	< 5.0
CBOD5 (mg/L) Weekly Average	< 3.1	5.8	5.6	5.2	6.38	7.0	4.8	< 9.5	7.2	< 4.1	< 3.3	< 9.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	2197	3017	4323	2831	3241	3160	2235	< 2242	3077	2348	2757	2861
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	4150	5079	11912	4112	8182	5130	3813	5128	4516	3097	3780	5599
BOD5 (mg/L) Raw Sewage Influent Average Monthly	150.8	140.9	153.2	188	185.6	133.3	144.7	< 102.6	121.2	130.8	138.9	226
TSS (lbs/day) Average Monthly	< 75.5	< 105.5	< 151.1	< 76.9	< 95.5	158.7	< 80.9	112.1	168.4	< 90.7	< 119.7	< 65.5
TSS (lbs/day) Raw Sewage Influent Average Monthly	892	1916	3730	1224	1520	1642	1336	1663	1683	1823	1236	922

TSS (lbs/day) Raw Sewage Influent Daily Maximum	1291	3227	13861	1746	3961	3154	2319	2699	1962	6989	1683	1152
TSS (lbs/day) Weekly Average	< 111.9	< 145.3	< 215.5	84.2	< 167.5	333.1	< 90.7	158.7	273.0	< 116.3	< 187.6	< 77.2
TSS (mg/L) Average Monthly	< 5	< 5	< 6	< 5	< 5	< 6	< 5	< 5	< 5	< 5.0	< 5.0	< 5
TSS (mg/L) Raw Sewage Influent Average Monthly	60	88	123	82.2	89	68	85	75	66	95	61	71
TSS (mg/L) Weekly Average	< 5	< 5	< 9.0	< 5	< 6	8	< 5	< 5	< 5	< 5.0	< 6.0	< 5
Fecal Coliform (CFU/100 ml) Geometric Mean	< 6.0	< 8	< 9	< 9	< 7	3	< 1	3	< 9	< 2	< 4.0	< 3
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	16	20	32	32	26	32	2	129	816	16	32	39
Ammonia (lbs/day) Average Monthly	< 9.5	< 13.3	< 20.0	< 9.5	< 11.2	< 15.6	< 7.6	7.0	14.2	5.1	5.6	4.7
Ammonia (lbs/day) Weekly Average	< 14.1	< 18.3	< 27.2	10.6	< 16.9	24.3	< 9.5	10.4	27.6	7.1	11.8	10.5
Ammonia (mg/L) Average Monthly	< 0.6	< 0.6	< 0.8	< 0.63	< 0.6	< 0.6	< 0.5	0.3	0.4	0.3	0.2	0.3
Ammonia (mg/L) Weekly Average	< 0.6	< 0.6	< 0.6	< 0.63	< 0.6	< 0.6	< 0.6	0.3	0.7	0.3	0.4	0.7
Total Copper (lbs/day) Average Monthly	0.070	0.200	0.200	0.090	0.090	< 0.100	0.070	0.100	0.200	0.080	0.100	0.100
Total Copper (mg/L) Average Monthly	0.005	0.007	0.006	0.006	0.005	< 0.005	0.004	0.005	0.008	0.005	0.006	0.008
Total Copper (mg/L) Daily Maximum	0.008	0.009	0.007	0.008	0.007	0.007	0.007	0.006	0.013	0.006	0.009	0.009
Free Cyanide (lbs/day) Average Monthly	0.020	0.070	< 0.060	0.020	0.100	< 0.100	< 0.090	0.090	0.100	0.080	0.070	< 0.040
Free Cyanide (mg/L) Average Monthly	< 0.002	0.002	< 0.002	< 0.002	0.005	< 0.004	< 0.006	0.005	0.0004	0.0050	< 0.0040	< 0.003
Free Cyanide (mg/L) Daily Maximum	0.004	0.005	0.005	0.004	0.008	0.006	< 0.010	0.0052	0.0054	0.0056	0.0055	< 0.0028

Compliance History

Effluent Violations for Outfall 001, from: December 1, 2020 To: October 31, 2021

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
Free Cyanide	04/30/21	Avg Mo	< 0.006	mg/L	0.005	mg/L
Free Cyanide	04/30/21	Daily Max	< 0.010	mg/L	0.008	mg/L

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 3.3
Latitude 40º 19' 40.85" **Longitude** -79º 38' 55.81"
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
Flow (MGD)	Report	Average Monthly	-	92a.27, 92a.61
	Report Max Daily	Average Weekly	-	92a.27, 92a.61
$CBOD_5$	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 (TSS)	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
Total Residual Chlorine (TRC)	0.5	Average Monthly	-	92a.48(b)(2)
Ammonia-Nitrogen (NH_3-N)	25	Average Monthly	-	92a.61
	50	IMAX	-	92a.61
Dissolved Oxygen (DO)	4.0	Instantaneous Minimum	-	93.6, 92a.61
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Total N	Report	Average Monthly	-	92a.61
Total P	Report	Average Monthly	-	92a.61
Fecal Coliform (No./100mL) (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (No./100mL) (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (No./100mL) (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (No./100mL) (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
E. Coli (No./100mL)	Report	IMAX	-	92a.61

Water Quality-Based Limitations

WQM7.0

WQM7.0 is a water quality modeling program for Windows that determines Waste Load Allocations ("WLAs") and effluent limitations for carbonaceous biochemical oxygen demand ("CBOD5"), ammonia-nitrogen, and dissolved oxygen for single and multiple point-source discharge scenarios. To accomplish this, the model simulates two basic processes. In the ammonia-nitrogen module, the model simulates the mixing and degradation of ammonia-nitrogen in the stream and compares calculated instream ammonia-nitrogen concentrations to ammonia-nitrogen water quality criteria. In the dissolved oxygen module, the model simulates the mixing and consumption of dissolved oxygen in the stream due to the degradation of CBOD5 and ammonia-nitrogen and compares calculated instream dissolved oxygen concentrations to dissolved oxygen water quality criteria. WQM 7.0 then determines the highest pollutant loadings that the stream can assimilate while still meeting water quality criteria under design conditions.

DEP's modeling for sewage discharges is a two-step process. First, a discharge is modeled for the summer period (May through October) using warm temperatures for the discharge and the receiving stream. Modeling for the summer period is done first because allowable ammonia-nitrogen concentrations in a discharge are lower at higher temperatures (i.e., warm

temperatures are more likely to result in critical loading conditions). Reduced dissolved oxygen levels also appear to increase ammonia toxicity and the maximum concentration of dissolved oxygen in water is lower at higher temperatures. The second step is to evaluate WQBELs for the winter period, but only if modeling shows that WQBELs are needed for the summer period.

The model inputs used to model the discharge from Jeannette STP are shown below:

Stream Parameters			
Reach 1		**Reach 2**	
Stream Code	37246	Stream Code	37246
RMI	14.33	RMI	12.06
Elevation (ft)	955	Elevation (ft)	926
Drainage Area (mi^2)	18.7	Drainage Area (mi^2)	20.9
Q_{7-10} Flow (cfs)	0.31	Q_{7-10} Flow (cfs)	0.35

Facility/Design Parameters	
Discharge Flow (MGD)	3.3
LFY (cfs/mi^2) [for use in summer modeling]	0.016
2*LFY (cfs/mi^2) [for use in winter modeling]	0.033

Summer Modeling Inputs			
Tributary		**Discharge**	
Temperature (°C)	25	Temperature (°C)	20
pH (S.U.)	7	pH (S.U.)	7
DO (mg/L)	8.24	DO (mg/L)	4
$CBOD_5$ (mg/L)	2	$CBOD_5$ (mg/L)	25
NH_3-N (mg/L)	0	NH_3-N (mg/L)	25
DO Goal (mg/L)	6	DO Goal (mg/L)	6
Winter Modeling Inputs			
Tributary		**Discharge**	
Temperature (°C)	5	Temperature (°C)	15
pH (S.U.)	7	pH (S.U.)	7
DO (mg/L)	12.51	DO (mg/L)	4
$CBOD_5$ (mg/L)	2	$CBOD_5$ (mg/L)	25
NH_3-N (mg/L)	0	NH_3-N (mg/L)	25
DO Goal (mg/L)	6	DO Goal (mg/L)	6

The modeling results (output files can be found in Attachments D and E) show that water-quality based effluent limitations for these parameters are appropriate. Based on a review of past eDMR data, Jeannette STP should immediately be able to comply with the more stringent $CBOD_5$ limits as their reported values are below the recommended WQBELs below.

Parameter	Limit (mg/l)	SBC	Model
Dissolved Oxygen	6	Minimum	WQM7.0
$CBOD_5$ (Nov 1 – Apr 30)	17.31	Average Monthly	WQM7.0
$CBOD_5$ (May 1 – Oct 31)	12.53	Average Monthly	WQM7.0
Ammonia Nitrogen (Nov 1 – Apr 30)	2.96	Average Monthly	WQM7.0
Ammonia Nitrogen (May 1 – Oct 31)	1.99	Average Monthly	WQM7.0

Toxics Management Spreadsheet (TMS)

WQBELs are developed pursuant to Section 301(b)(1)(C) of the Clean Water Act and, per 40 CFR § 122.44(d)(1)(i), are imposed to "control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) that are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above

any state water quality standard, including state narrative criteria for water quality." The Department of Environmental Protection developed the Toxics Management Spreadsheet (TMS) to facilitate calculations necessary to complete a reasonable potential (RP) analysis and determine WQBELs for discharges of toxic and some nonconventional pollutants.

The TMS is a single discharge, mass-balance water quality modeling program for Microsoft Excel® that considers mixing, first-order decay, and other factors to determine WQBELs for toxic and nonconventional pollutants. Required input data including stream code, river mile index, elevation, drainage area, discharge flow rate, low-flow yield, and the hardness and pH of both the discharge and the receiving stream are entered into the TMS to establish site-specific discharge conditions. Other data such as reach dimensions, partial mix factors, and the background concentrations of pollutants in the stream also may be entered to further characterize the discharge and receiving stream. The pollutants to be analyzed by the model are identified by inputting the maximum concentration reported in the permit application or Discharge Monitoring Reports, or by inputting an Average Monthly Effluent Concentration (AMEC) calculated using DEP's TOXCONC.xls spreadsheet for datasets of 10 or more effluent samples. Pollutants with no entered concentration data and pollutants for which numeric water quality criteria in 25 Pa. Code Chapter 93 have not been promulgated are excluded from the modeling.

The TMS evaluates each pollutant by computing a Wasteload Allocation for each applicable criterion, determining the most stringent governing WQBEL, and comparing that governing WQBEL to the input discharge concentration to determine whether permit requirements apply in accordance with the following RP thresholds:

- Establish limits in the permit where the maximum reported effluent concentration or calculated AMEC equals or exceeds 50% of the WQBEL. Use the average monthly, maximum daily, and instantaneous maximum (IMAX) limits for the permit as recommended by the TMS (or, if appropriate, use a multiplier of 2 times the average monthly limit for the maximum daily limit and 2.5 times the average monthly limit for IMAX).
- For non-conservative pollutants, establish monitoring requirements where the maximum reported effluent concentration or calculated AMEC is between 25% - 50% of the WQBEL.
- For conservative pollutants, establish monitoring requirements where the maximum reported effluent concentration or calculated AMEC is between 10% - 50% of the WQBEL.

In most cases, pollutants with effluent concentrations that are not detectable at the level of DEP's Target Quantitation Limits are eliminated as candidates for WQBELs and water quality-based monitoring.

The original NPDES application for Jeanette STP was received by the Department on December 29, 2016. The TMS was run using the sampling data provided on the 2016 application. Results from the first TMS run and the associated Pre-Draft Letter can be found in Attachments F and G. Some of the original laboratory results did not satisfy the current DEP Quantitation Limits (QLs). Due to the age of the originally-submitted data and the QL issues, the permittee decided to resample for the pollutants listed in the original Pre-Draft Survey (Attachment H). 2,3,7,8-TCDD is listed in the Pre-Draft survey but sampling for this pollutant no longer required as a part of a current NPDES Permit Application. After internal discussions, DEP Staff determined that MAWC would not be required to test for 2,3,7,8-TCDD as part of their resampling efforts. The original results for 2,3,7,8-TCDD are not included in the next TMS run. The resampling results were provided to the DEP on May 24, 2022 and these results were once again run through TMS (Attachment I) as part of a RP Analysis. The following WQBELs were recommended for this facility as a result of the RP Analysis:

Pollutant	Average Monthly (µg/L)	Maximum Daily (µg/L)	IMAX (µg/L)
Total Antimony	Report	Report	Report
Total Arsenic	Report	Report	Report
Total Copper	13.3	20.6	20.6
Free Cyanide	Report	Report	Report
Total Zinc	Report	Report	Report
Acrolein	3.0	3.18	3.18
Chloroform	Report	Report	Report
Dichlorobromomethane	Report	Report	Report
Trichloroethylene	0.9	1.41	2.26
Bis(2-Ethylhexyl)Phthalate	0.48	0.75	1.21

The effluent limitations for total copper have become more stringent than the last permit cycle. During the compliance period, the permittee will be required to continue to comply with their previous effluent limit for copper. Once the

compliance period has ended, the permittee will be expected to achieve the new, more stringent effluent limitation for copper.

In the prior permit, a WQBEL for free cyanide was imposed at Outfall 001. This WQBEL was based on now-outdated stream data, the PENTOXSD model, outdated in-stream criteria for free cyanide. The WQBEL for free cyanide will be removed from the renewed permit pursuant to the exceptions to anti-backsliding given in Section 303(d)(4)(B) of the Clean Water Act. The existing WQBEL for free cyanide was established pursuant to section 301(b)(1)(C) of the Clean Water Act because the WQBEL was based on state water quality standards. Based on DEP's water quality analysis, free cyanide does not have the reasonable potential to cause or contribute to an excursion above water quality criteria at the reported effluent concentrations. According to DEP SOP "Establishing Water Quality-Based Effluent Limitations (WQBELs) and Permit Conditions for Toxic Pollutants in NPDES Permits for Existing Dischargers" (SOP No. BCW-PMT-037), reasonable potential is demonstrated if the effluent concentration equals or exceeds 50% of the WQBEL. Given that the reported effluent concentrations for free cyanide are less than 25% of the WQBEL, reasonable potential does not exist; monitoring for free cyanide shall be imposed.

Best Professional Judgment (BPJ) Limitations

Based on best professional judgment and the standard in 25 PA Code Chapter 93, a dissolved oxygen minimum limitation of 4.0 mg/L would normally be implemented. However, WQM7.0 modeling results indicate that a dissolved oxygen minimum limitation of 6.0 mg/L is appropriate. The more stringent of the two values will be imposed during this permit cycle.

Mass Loading Limitations

Per Department SOP "Establishing Effluent Limitations for Individual Sewage Permits" (BCW-PMT-033), mass loading limits will be established for POTWs for $CBOD_5$, TSS, ammonia nitrogen. Average monthly mass loading limits will be established for $CBOD_5$, TSS, and ammonia nitrogen. Average weekly mass loading limits will be established for $CBOD_5$ and TSS. Mass loading limits will be calculated according to the formula below:

$$average\ annual\ design\ flow\ (MGD) \times concentration\ limit\ \left(\frac{mg}{L}\right) \times 8.34\ (converstion\ factor)$$
$$= mass\ loading\ limit\ (\frac{lbs}{day})$$

The following mass loading limitations were calculated:

Parameter	Average Monthly (lbs/day)	Average Weekly (lbs/day)
$CBOD_5$ (Nov 1 – Apr 30)	**476**	**716**
$CBOD_5$ (May 1 – Oct 31)	**344**	**523**
TSS	**826**	**1238**
Ammonia Nitrogen (Nov 1 – Apr 30)	**81.5**	**----**
Ammonia Nitrogen (May 1 – Oct 31)	**54.8**	**----**

In the previous permit, there were average weekly concentration and mass loading limits for ammonia nitrogen. According to DEP SOP "Establishing Effluent Limitations for Individual Sewage Permits" (BCW-PMT-033, Rev. March 24, 2021), ammonia nitrogen is only subject to average monthly concentration and mass loading limits. Therefore, the average weekly limits have been removed.

Total Maximum Daily Load (TMDL) Considerations

Brush Creek Watershed TMDL (Westmoreland County)

A TMDL for the Clearfield Creek Watershed was approved on March 17, 2005 for the control of acid mine drainage pollutants: pH, iron, aluminum, and metals. In accordance with 40 CFR § 122.44(d)(1)(vii)(B), when developing WQBELs, the permitting authority shall ensure that effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload

allocation (WLA) for the discharge prepared by the State and approved by the EPA pursuant to 40 CFR § 130.7. Jeanette STP was not assigned wasteload allocations for iron, aluminum, and manganese by the Brush Creek Watershed TMDL, therefore the Department will impose annual monitoring for iron, aluminum, and manganese for the first time for this facility.

Turtle Creek Watershed

A TMDL for the Turtle Creek Watershed was approved on July 7, 2009 for the control of acid mine drainage pollutants: pH, iron, and aluminum. The TMDL does not address manganese since the potable water supply use for manganese in this watershed has been deleted. In accordance with 40 CFR § 122.44(d)(1)(vii)(B), when developing WQBELs, the permitting authority shall ensure that effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available wasteload allocation (WLA) for the discharge prepared by the State and approved by the EPA pursuant to 40 CFR § 130.7 Jeanette STP was not assigned wasteload allocations for iron or aluminum, therefore the Department will impose annual monitoring for iron and aluminum for the first time for this facility.

Influent Monitoring

Per Department SOP “New and Reissuance Sewage Individual NPDES Permit Applications” (BCW-PMT-002), POTWs with design flows greater than 2,000 GPD, influent BOD_5 and TSS monitoring will be established in the permit. The influent monitoring will be established with the same frequency and sample type as the effluent sampling.

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.

The receiving stream is not impaired for nutrients, therefore, annual sampling for nitrogen and phosphorus will be imposed per 25 PA Code §92.61b.

Monitoring frequency for the proposed effluent limits are based upon Table 6-3 “Self-Monitoring Requirements for Sewage Dischargers” and Table 6-4 “Self-Monitoring Requirements for Industrial Dischargers”, from the Departments Technical Guidance for the Development and Specification of Effluent Limitations.

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 End of Third Year from Permit Effective Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Copper, Total (ug/L)	0.467	XXX	XXX	17.0	27.0	42	1/week	24-Hr Composite
Acrolein (ug/L)	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Bis(2-Ethylhexyl)Phthalate (ug/L)	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Trichloroethylene (ug/L)	Report	Report	XXX	Report	Report	2.26	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001

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: Start Fourth Year from Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Copper, Total (ug/L)	0.37	0.57	XXX	13.3	20.6	20.6	1/week	24-Hr Composite
Acrolein (ug/L)	0.083	0.087	XXX	3.0	3.18	3.18	1/week	24-Hr Composite
Bis(2-Ethylhexyl)Phthalate (ug/L)	0.013	0.021	XXX	0.48	0.75	1.21	1/week	24-Hr Composite
Trichloroethylene (ug/L)	0.025	0.039	XXX	0.9	1.41	2.26	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001

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	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	6.0 Inst Min	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) Nov 1 - Apr 30	465.0	700.0	XXX	17.0	25.5 Wkly Avg	34	2/week	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) May 1 - Oct 31	340.0	510.0	XXX	12.5	18.7 Wkly Avg	25	2/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Suspended Solids	825.0	1235.0	XXX	30.0	45.0 Wkly Avg	60	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Ammonia-Nitrogen Nov 1 - Apr 30	81.5	XXX	XXX	2.96	XXX	5.92	2/week	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	54.8	XXX	XXX	1.99	XXX	3.98	2/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	XXX	Report	1/year	Grab
Aluminum, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	24-Hr Composite
Antimony, Total (ug/L)	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Arsenic, Total (ug/L)	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Cyanide, Free (ug/L)	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Iron, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	24-Hr Composite
Manganese, Total	XXX	XXX	XXX	XXX	Report	XXX	1/year	24-Hr Composite
Zinc, Total (ug/L)	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Dichlorobromomethane (ug/L)	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Chloroform (ug/L)	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001

ATTACHMENT A:
CSO 004 CORRESPONDENCE

An Equal Opportunity Employer 124 Park and Pool Road
New Stanton, PA 15672
Phone: 724.755.5800
1.800.442.6829

"Regional Water & Wastewater Service"

Mailing Address
P.O. Box 730
Greensburg, PA 15601

www.mawc.org
mawc@mawc.org

June 13, 2017

Mr. Dan Counahan
PA DEP Clean Water Program
400 Waterfront Drive
Pittsburgh, PA 15222

Re: Jeannette WWTP (PA0027430)

Dear Mr. Counahan:

It has come to the attention of MAWC that one of the CSOs located in the collection system of Jeannette WWTP is not included in the list of CSOs in the NPDES permit (PA0027430). This CSO has always been referred to as "CSO 004." CSO 004 has been in place since the initial construction of the interceptor over 40 years ago. It is located just upstream of a siphon and was designed to be the diversion structure for the portion of the Jeannette system that is combined but does not have stream access. Plant personnel have shown CSO 004, along with all of the other CSOs, to the Department during past inspections.

In accordance with the Jeannette WWTP Consent Order & Agreement (CO&A), MAWC conducted a flow monitoring study from June 1, 2016 to April 30, 2017. The flow monitoring plan, which included CSO 004 as a diversion structure, was reviewed and approved by the Department. When the flow data for all of the CSOs was compiled at the completion of the flow monitoring study, it was noted that six CSOs had been equipped with a flow meter, but only five CSOs were listed in the existing NPDES permit. CSO 004 was determined to be the one that was not listed.

During this 11-month flow monitoring study, CSO 004 only overflowed twice: 138,000 gallons on December 18, 2016 due to 2.64 inches of rain over 21 hours and 23,000 gallons on April 6, 2017 due to 1.38 inches of rain over 8.5 hours.

Gibson-Thomas Engineering is currently in the process of revising the Long Term Control Plan (LTCP), which will be submitted to the Department by 2-1-2018 in accordance with the CO&A. CSO 004 will be addressed in the revised LTCP.

MAWC would like to respectfully request that CSO 004 be added to the list of CSOs upon reissuance of the NPDES permit and include the following information:

Outfall No.	Name of Outfall and/or Street Location	Receiving Stream Name	Location	
			Latitude	Longitude
004	Orange Avenue	Brush Creek	40° 19' 31.9"	-79° 37' 35.5"

Jeannette WWTP's NPDES permit is currently under administrative extension during the application review process.

If you have any questions or require any additional information, please contact me at mkenney@mawc.org or 724-984-7543.

Sincerely,

Michael Kenney
Operations Manager – Wastewater
Municipal Authority of Westmoreland County

cc: Ken Orie, Gibson-Thomas Engineering

ATTACHMENT B:
LTCP SCHEDULE UPDATE APPROVAL

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

March 10, 2022

VIA ELECTRONIC MAIL:

John Ashton
Municipal Authority of Westmoreland County
PO Box 730
Greensburg, PA 15601-0730

Re: LTCP Update - Sewage
Jeannette STP
Permit No. PA0027430
Authorization ID No. 1164427
Penn Borough, Westmoreland County

Dear John Ashton,

On October 13, 2021, the Department received a Quarterly Report for Q3 of 2021 with a deadline extension request for the LTCP/CO&A. The LTCP Update still proposes to comply with the Presumption Approach of the EPA's CSO Policy by capture for treatment 94% by volume of combined sewage collected in the combined sewer system during precipitation events on a system-wide annual average basis.

The system improvement projects were defined as follows in a letter to MAWC from Paul Eiswerth, dated February 7, 2019:

Option 1 (revised): Upgrade main pump station at a Peak Design Flow of 10.25 MGD;
Option 4a/9a: Consolidation/Reconstruction of CSO regulators at Outfalls 3 and 8 and partial separation of Basin 6 (CSO 3);
Option 4b: Consolidation/Reconstruction of CSO regulators at Outfalls 9 and 10;
Option 4c/9c: Reconstruction of CSO regulator at Outfall CSO 6 and partial separation of Basins 16 and 29 (CSO 6);
Option 7: Increase conveyance for Chambers Avenue sewer system;
Option 8: I&I flow reduction projects in Basins 17, 20, 21, 23, 24, and 26.

The Following LTCP Plan Implementation Schedule is approved:

Milestone	Date
Begin Construction of Option 4a/9a as authorized by WQM Part II Permit	March 1, 2023
Complete Construction of Option 4a/9a as authorized by WQM Part II Permit	July 1, 2024
Begin Construction of Remaining Projects as authorized by the WQM Part II Permit	March 1, 2023

Southwest Regional Office
400 Waterfront Drive | Pittsburgh, PA 15222-4745 | 412.442.4000 | Fax 412.442.5885
www.dep.pa.gov

Complete Construction of Remaining Projects as Authorized by the WQM Part II Permit	July 1, 2024
Submit a complete and accurate Post-Construction Compliance Monitoring Plan (PCCMP)	December 31, 2024
Begin PCCMP Implementation	Within 90 days of the Department's approval of the PCCMP
Complete PCCMP Implementation	Within 365 days of commencement of the Department-approved PCCMP

This LTCP Update Approval is not an authorization to construct facilities. Appropriate permit applications and approvals are required before MAWC may construct the above proposed facilities.

The NPDES Permit establishes specific reporting requirements regarding progress toward compliance with CSO Policy Obligations including submission of an Annual CSO Status Report as an addendum to the annual "Municipal Wasteload Management Report" required by 25 Pa. Code § 94. 12. Each Annual CSO Status Report must detail efforts undertaken to implement the Nine Minimum Controls, efforts taken to prioritize and afford protection to environmentally Sensitive Areas, actions taken to implement the LTCP, and MAWC's adherence to the LTCP Implementation Schedule. Please ensure the annual report is submitted in a timely fashion and includes sufficient detail and documentation to measure LTCP compliance progress.

Any person aggrieved by this action may appeal the action to the Environmental Hearing Board (Board), pursuant to Section 4 of the Environmental Hearing Board Act, 35 P.S. § 7514, and the Administrative Agency Law, 2 Pa.C.S. Chapter 5A. The Board's address is:

Environmental Hearing Board
Rachel Carson State Office Building, Second Floor
400 Market Street
P.O. Box 8457
Harrisburg, PA 17105-8457

TDD users may contact the Environmental Hearing Board through the Pennsylvania Relay Service, 800-654-5984.

Appeals must be filed with the Board within 30 days of receipt of notice of this action unless the appropriate statute provides a different time. This paragraph does not, in and of itself, create any right of appeal beyond that permitted by applicable statutes and decisional law.

A Notice of Appeal form and the Board's rules of practice and procedure may be obtained

online at http://ehb.courtapps.com or by contacting the Secretary to the Board at 717-787-3483. The Notice of Appeal form and the Board's rules are also available in braille and on audiotape from the Secretary to the Board.

IMPORTANT LEGAL RIGHTS ARE AT STAKE. YOU SHOULD SHOW THIS DOCUMENT TO A LAWYER AT ONCE. IF YOU CANNOT AFFORD A LAWYER, YOU MAY QUALIFY FOR FREE PRO BONO REPRESENTATION. CALL THE SECRETARY TO THE BOARD AT 717-787-3483 FOR MORE INFORMATION. YOU DO NOT NEED A LAWYER TO FILE A NOTICE OF APPEAL WITH THE BOARD.

IF YOU WANT TO CHALLENGE THIS ACTION, YOUR APPEAL MUST BE FILED WITH AND RECEIVED BY THE BOARD WITHIN 30 DAYS OF RECEIPT OF NOTICE OF THIS ACTION.

If you have any questions, please contact me at 412-442-4068 or grpolakosk@pa.gov.

Sincerely,

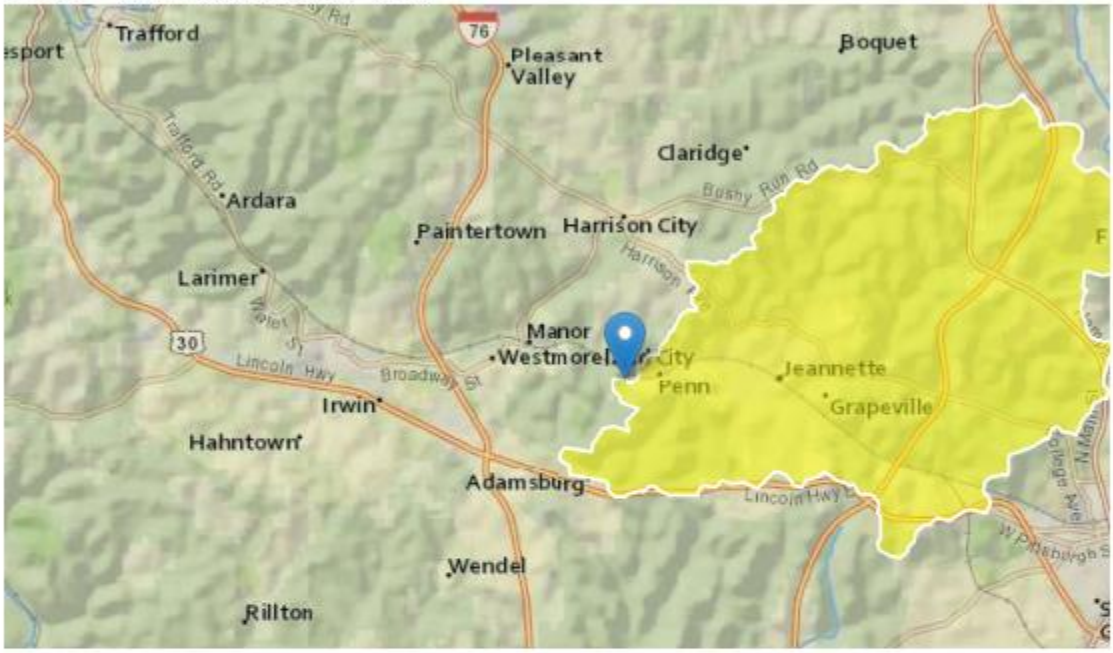
Grace Polakoski, E.I.T.
Environmental Engineering Specialist
Clean Water Program

cc: Katelyn Warheit - MAWC
Michele Cannone – Gibson-Thomas Engineering
Southwest Regional Office
Central Office
Department of Operations

ATTACHMENT C:
USGS STREAMSTATS REPORT

StreamStats Report

Region ID: PA
Workspace ID: PA20211230135036137000
Clicked Point (Latitude, Longitude): 40.32800, -79.64880
Time: 2021-12-30 08:50:55 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	18.7	square miles
ELEV	Mean Basin Elevation	1204	feet

Low-Flow Statistics Parameters [100.0 Percent (18.7 square miles) Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	18.7	square miles	2.26	1400

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
ELEV	Mean Basin Elevation	1204	feet	1050	2580

Low-Flow Statistics Flow Report [100.0 Percent (18.7 square miles) Low Flow Region 4]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	0.792	ft^3/s	43	43
30 Day 2 Year Low Flow	1.33	ft^3/s	38	38
7 Day 10 Year Low Flow	0.305	ft^3/s	66	66
30 Day 10 Year Low Flow	0.524	ft^3/s	54	54
90 Day 10 Year Low Flow	0.93	ft^3/s	41	41

Low-Flow Statistics Citations

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

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

ATTACHMENT D:
WQM7.0 MODELING RESULTS (SUMMER)

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19A	37246	BRUSH CREEK	**14.330**	955.00	18.70	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.016	0.31	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Jeanette STP	PA0027430	0.0000	0.0000	3.3000	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19A	37246	BRUSH CREEK	**12.060**	926.00	20.90	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.017	0.35	0.00	0.000	0.000	0.0	0.00	0.00	25.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

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

Parameter Data

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

WQM 7.0 Modeling Specifications

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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19A	37246	BRUSH CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
14.330	0.31	0.00	0.31	5.1051	0.00242	.664	30.5	45.96	0.27	0.519	20.28	7.00
Q1-10 Flow												
14.330	0.20	0.00	0.20	5.1051	0.00242	NA	NA	NA	0.26	0.525	20.18	7.00
Q30-10 Flow												
14.330	0.41	0.00	0.41	5.1051	0.00242	NA	NA	NA	0.27	0.513	20.38	7.00

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19A	37246	BRUSH CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
14.330	3.300	20.282	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
30.498	0.664	45.959	0.267
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
11.94	0.743	1.88	0.715
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.126	6.187	Tsivoglou	6
Reach Travel Time (days)			
0.519			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.052	11.48	1.81	6.09
0.104	11.04	1.74	6.10
0.156	10.62	1.68	6.14
0.208	10.21	1.62	6.19
0.259	9.82	1.56	6.26
0.311	9.44	1.50	6.34
0.363	9.08	1.45	6.42
0.415	8.73	1.40	6.51
0.467	8.40	1.35	6.60
0.519	8.08	1.30	6.68

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19A	37246	BRUSH CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
14.330	Jeanette STP	16.51	17.14	16.51	17.14	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
14.330	Jeanette STP	1.84	1.99	1.84	1.99	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
14.33	Jeanette STP	12.53	12.53	1.99	1.99	6	6	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19A	37246	BRUSH CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
14.330	Jeanette STP	PA0027430	0.000	CBOD5	12.53		
				NH3-N	1.99	3.98	
				Dissolved Oxygen			6

ATTACHMENT E:
WQM7.0 MODELING RESULTS (WINTER)

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19A	37246	BRUSH CREEK	**14.330**	955.00	18.70	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.033	0.31	0.00	0.000	0.000	0.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Jeanette STP	PA0027430	0.0000	0.0000	3.3000	0.000	15.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	12.51	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
19A	37246	BRUSH CREEK	**12.060**	926.00	20.90	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.033	0.35	0.00	0.000	0.000	0.0	0.00	0.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

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

Parameter Data

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

WQM 7.0 Modeling Specifications

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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19A	37246	BRUSH CREEK

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
14.330	0.31	0.00	0.31	5.1051	0.00242	.664	30.5	45.96	0.27	0.519	14.44	7.00
Q1-10 Flow												
14.330	0.20	0.00	0.20	5.1051	0.00242	NA	NA	NA	0.26	0.525	14.63	7.00
Q30-10 Flow												
14.330	0.41	0.00	0.41	5.1051	0.00242	NA	NA	NA	0.27	0.513	14.25	7.00

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19A	37246	BRUSH CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
14.330	3.300	14.436	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
30.498	0.664	45.959	0.267
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
16.44	1.030	2.79	0.456
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.367	5.386	Tsivoglou	6
Reach Travel Time (days)			
0.519			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.052	15.78	2.72	6.18
0.104	15.14	2.66	6.07
0.156	14.52	2.60	6.03
0.208	13.94	2.54	6.04
0.259	13.37	2.48	6.09
0.311	12.83	2.42	6.16
0.363	12.31	2.36	6.24
0.415	11.81	2.31	6.34
0.467	11.33	2.25	6.45
0.519	10.87	2.20	6.56

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19A	37246	BRUSH CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
14.330	Jeanette STP	24.1	25.02	24.1	25.02	1	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
14.330	Jeanette STP	2.73	2.96	2.73	2.96	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
14.33	Jeanette STP	17.31	17.31	2.96	2.96	6	6	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19A	37246	BRUSH CREEK

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
14.330	Jeanette STP	PA0027430	0.000	CBOD5	17.31		
				NH3-N	2.96	5.92	
				Dissolved Oxygen			6

ATTACHMENT F:
TMS RESULTS (ORIGINAL DATA)

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Jeanette STP** NPDES Permit No.: **PA0027430** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **sewage**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
3.3	144	7.2						

					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		587									
	Chloride (PWS)	mg/L		217									
	Bromide	mg/L		0.41									
	Sulfate (PWS)	mg/L		45									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		3									
	Total Antimony	µg/L		3.4									
	Total Arsenic	µg/L		1.9									
	Total Barium	µg/L		35									
	Total Beryllium	µg/L	<	0.3									
	Total Boron	µg/L		351									
	Total Cadmium	µg/L	<	0.33									
	Total Chromium (III)	µg/L	<	1									
	Hexavalent Chromium	µg/L	<	4.1									
	Total Cobalt	µg/L		0.7									
	Total Copper	µg/L		10									
	Free Cyanide	µg/L		2.5									
	Total Cyanide	µg/L	<	5									
	Dissolved Iron	µg/L		20									
	Total Iron	µg/L		52									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		14									
	Total Mercury	µg/L		0.04									
	Total Nickel	µg/L		8									
	Total Phenols (Phenolics) (PWS)	µg/L		125									
	Total Selenium	µg/L	<	3.3									
	Total Silver	µg/L	<	0.66									
	Total Thallium	µg/L	<	3.3									
	Total Zinc	µg/L		19									
	Total Molybdenum	µg/L		16									
	Acrolein	µg/L	<	9.5									
	Acrylamide	µg/L											
	Acrylonitrile	µg/L	<	6									
	Benzene	µg/L	<	1.2									
	Bromoform	µg/L	<	2									

Group 3	Carbon Tetrachloride	µg/L	<	1.6									
	Chlorobenzene	µg/L	<	0.95									
	Chlorodibromomethane	µg/L	<	2.3									
	Chloroethane	µg/L	<	1.7									
	2-Chloroethyl Vinyl Ether	µg/L	<	1.9									
	Chloroform	µg/L		2.5									
	Dichlorobromomethane	µg/L	<	1.4									
	1,1-Dichloroethane	µg/L	<	1.4									
	1,2-Dichloroethane	µg/L	<	1.6									
	1,1-Dichloroethylene	µg/L	<	1.5									
	1,2-Dichloropropane	µg/L	<	1.2									
	1,3-Dichloropropylene	µg/L	<	2.4									
	1,4-Dioxane	µg/L	<	0.77									
	Ethylbenzene	µg/L	<	1.7									
	Methyl Bromide	µg/L		2.4									
	Methyl Chloride	µg/L		8.4									
	Methylene Chloride	µg/L		9									
	1,1,2,2-Tetrachloroethane	µg/L	<	1.8									
	Tetrachloroethylene	µg/L	<	1.8									
	Toluene	µg/L	<	1.2									
	1,2-trans-Dichloroethylene	µg/L	<	1.3									
	1,1,1-Trichloroethane	µg/L	<	1.1									
	1,1,2-Trichloroethane	µg/L	<	1.7									
	Trichloroethylene	µg/L	<	1.7									
	Vinyl Chloride	µg/L	<	1.5									
Group 4	2-Chlorophenol	µg/L	<	0.37									
	2,4-Dichlorophenol	µg/L	<	0.36									
	2,4-Dimethylphenol	µg/L	<	0.23									
	4,6-Dinitro-o-Cresol	µg/L	<	0.37									
	2,4-Dinitrophenol	µg/L	<	2									
	2-Nitrophenol	µg/L	<	0.5									
	4-Nitrophenol	µg/L	<	1.2									
	p-Chloro-m-Cresol	µg/L	<	0.21									
	Pentachlorophenol	µg/L	<	1.2									
	Phenol	µg/L		0.4									
	2,4,6-Trichlorophenol	µg/L	<	0.63									
Group 5	Acenaphthene	µg/L	<	0.17									
	Acenaphthylene	µg/L	<	0.21									
	Anthracene	µg/L	<	0.17									
	Benzidine	µg/L	<	3.4									
	Benzo(a)Anthracene	µg/L	<	0.14									
	Benzo(a)Pyrene	µg/L	<	0.24									
	3,4-Benzofluoranthene	µg/L	<	0.12									
	Benzo(ghi)Perylene	µg/L	<	0.24									
	Benzo(k)Fluoranthene	µg/L	<	0.21									
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.23									
	Bis(2-Chloroethyl)Ether	µg/L	<	0.19									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.31									
	Bis(2-Ethylhexyl)Phthalate	µg/L		10.4									
	4-Bromophenyl Phenyl Ether	µg/L	<	0.19									
	Butyl Benzyl Phthalate	µg/L		0.18									
	2-Chloronaphthalene	µg/L	<	0.2									
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.16									
	Chrysene	µg/L	<	0.13									
	Dibenzo(a,h)Anthrancene	µg/L	<	0.23									
	1,2-Dichlorobenzene	µg/L	<	1.9									
	1,3-Dichlorobenzene	µg/L	<	1.3									
	1,4-Dichlorobenzene	µg/L	<	1.4									
	3,3-Dichlorobenzidine	µg/L	<	0.53									
	Diethyl Phthalate	µg/L	<	0.2									
	Dimethyl Phthalate	µg/L	<	0.16									
	Di-n-Butyl Phthalate	µg/L		0.16									
	2,4-Dinitrotoluene	µg/L	<	0.13									

	2,6-Dinitrotoluene	µg/L	<	0.23									
	Di-n-Octyl Phthalate	µg/L	<	0.11									
	1,2-Diphenylhydrazine	µg/L	<	0.29									
	Fluoranthene	µg/L	<	0.19									
	Fluorene	µg/L	<	0.22									
	Hexachlorobenzene	µg/L	<	0.26									
	Hexachlorobutadiene	µg/L	<	0.21									
	Hexachlorocyclopentadiene	µg/L	<	0.19									
	Hexachloroethane	µg/L	<	0.33									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.11									
	Isophorone	µg/L	<	0.17									
	Naphthalene	µg/L	<	0.13									
	Nitrobenzene	µg/L	<	0.31									
	n-Nitrosodimethylamine	µg/L	<	0.71									
	n-Nitrosodi-n-Propylamine	µg/L	<	0.27									
	n-Nitrosodiphenylamine	µg/L	<	0.27									
	Phenanthrene	µg/L	<	0.14									
	Pyrene	µg/L	<	0.18									
	1,2,4-Trichlorobenzene	µg/L	<	0.14									
Group 6	Aldrin	µg/L	<	0.0052									
	alpha-BHC	µg/L		0.0033									
	beta-BHC	µg/L	<	0.0082									
	gamma-BHC	µg/L	<	0.0031									
	delta BHC	µg/L	<	0.0031									
	Chlordane	µg/L	<	0.036									
	4,4-DDT	µg/L	<	0.0062									
	4,4-DDE	µg/L	<	0.0072									
	4,4-DDD	µg/L	<	0.0072									
	Dieldrin	µg/L	<	0.0031									
	alpha-Endosulfan	µg/L	<	0.0031									
	beta-Endosulfan	µg/L	<	0.0062									
	Endosulfan Sulfate	µg/L	<	0.0041									
	Endrin	µg/L	<	0.0082									
	Endrin Aldehyde	µg/L	<	0.01									
	Heptachlor	µg/L	<	0.0031									
	Heptachlor Epoxide	µg/L	<	0.0041									
	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	<	0.2									
	2,3,7,8-TCDD	ng/L	<	0.22									
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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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Jeannette STP, NPDES Permit No. PA0027430, Outfall 001

Instructions | Discharge | Stream

Receiving Surface Water Name: **Brush Creek**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	037246	14.33	955	18.7			Yes
End of Reach 1	037246	12.06	926	20.9			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	14.33	0.016										100	7		
End of Reach 1	12.06	0.017													

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	14.33														
End of Reach 1	12.06														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Jeanette STP, NPDES Permit No. PA0027430, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.147 PMF: 1 Analysis Hardness (mg/l): 141.56 Analysis pH: 7.19

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	794	
Total Antimony	0	0		0	1,100	1,100	1,164	
Total Arsenic	0	0		0	340	340	360	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	22,231	
Total Boron	0	0		0	8,100	8,100	8,575	
Total Cadmium	0	0		0	2.823	3.04	3.22	Chem Translator of 0.929 applied
Total Chromium (III)	0	0		0	757.399	2,397	2,537	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	17.2	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	101	
Total Copper	0	0		0	18.647	19.4	20.6	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	23.3	
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	94.088	127	135	Chem Translator of 0.74 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	1.74	Chem Translator of 0.85 applied
Total Nickel	0	0		0	628.305	630	666	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	5.849	6.88	7.28	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	68.8	
Total Zinc	0	0		0	157.310	161	170	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	3.18	

Acrylonitrile	0	0		0	650	650	688	
Benzene	0	0		0	640	640	678	
Bromoform	0	0		0	1,800	1,800	1,905	
Carbon Tetrachloride	0	0		0	2,800	2,800	2,964	
Chlorobenzene	0	0		0	1,200	1,200	1,270	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	19,055	
Chloroform	0	0		0	1,900	1,900	2,011	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	15,879	
1,1-Dichloroethylene	0	0		0	7,500	7,500	7,940	
1,2-Dichloropropane	0	0		0	11,000	11,000	11,645	
1,3-Dichloropropylene	0	0		0	310	310	328	
Ethylbenzene	0	0		0	2,900	2,900	3,070	
Methyl Bromide	0	0		0	550	550	582	
Methyl Chloride	0	0		0	28,000	28,000	29,641	
Methylene Chloride	0	0		0	12,000	12,000	12,703	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	1,059	
Tetrachloroethylene	0	0		0	700	700	741	
Toluene	0	0		0	1,700	1,700	1,800	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	7,199	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	3,176	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	3,599	
Trichloroethylene	0	0		0	2,300	2,300	2,435	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	593	
2,4-Dichlorophenol	0	0		0	1,700	1,700	1,800	
2,4-Dimethylphenol	0	0		0	660	660	699	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	84.7	
2,4-Dinitrophenol	0	0		0	660	660	699	
2-Nitrophenol	0	0		0	8,000	8,000	8,469	
4-Nitrophenol	0	0		0	2,300	2,300	2,435	
p-Chloro-m-Cresol	0	0		0	160	160	169	
Pentachlorophenol	0	0		0	10.518	10.5	11.1	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	487	
Acenaphthene	0	0		0	83	83.0	87.9	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	318	
Benzo(a)Anthracene	0	0		0	0.5	0.5	0.53	
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	31,758	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	4,764	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	286	
Butyl Benzyl Phthalate	0	0		0	140	140	148	

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	868	
1,3-Dichlorobenzene	0	0		0	350	350	371	
1,4-Dichlorobenzene	0	0		0	730	730	773	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	4,234	
Dimethyl Phthalate	0	0		0	2,500	2,500	2,647	
Di-n-Butyl Phthalate	0	0		0	110	110	116	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	1,694	
2,6-Dinitrotoluene	0	0		0	990	990	1,048	
1,2-Diphenylhydrazine	0	0		0	15	15.0	15.9	
Fluoranthene	0	0		0	200	200	212	
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	10.6	
Hexachlorocyclopentadiene	0	0		0	5	5.0	5.29	
Hexachloroethane	0	0		0	60	60.0	63.5	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	10,586	
Naphthalene	0	0		0	140	140	148	
Nitrobenzene	0	0		0	4,000	4,000	4,234	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	17,996	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	318	
Phenanthrene	0	0		0	5	5.0	5.29	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	138	
Aldrin	0	0		0	3	3.0	3.18	
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	1.01	
Chlordane	0	0		0	2.4	2.4	2.54	
4,4-DDT	0	0		0	1.1	1.1	1.16	
4,4-DDE	0	0		0	1.1	1.1	1.16	
4,4-DDD	0	0		0	1.1	1.1	1.16	
Dieldrin	0	0		0	0.24	0.24	0.25	
alpha-Endosulfan	0	0		0	0.22	0.22	0.23	
beta-Endosulfan	0	0		0	0.22	0.22	0.23	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.086	0.086	0.091	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.52	0.52	0.55	
Heptachlor Epoxide	0	0		0	0.5	0.5	0.53	
Toxaphene	0	0		0	0.73	0.73	0.77	
2,3,7,8-TCDD	0	0		0	N/A	N/A	N/A	

☑ *CFC* CCT (min): 0.147 PMF: 1 Analysis Hardness (mg/l): 141.56 Analysis pH: 7.19

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	233	
Total Arsenic	0	0		0	150	150	159	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	4,340	
Total Boron	0	0		0	1,600	1,600	1,694	
Total Cadmium	0	0		0	0.313	0.35	0.37	Chem Translator of 0.894 applied
Total Chromium (III)	0	0		0	98.522	115	121	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	11.0	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	20.1	
Total Copper	0	0		0	12.053	12.6	13.3	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	5.5	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	1,588	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	3.666	4.95	5.24	Chem Translator of 0.74 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	0.96	Chem Translator of 0.85 applied
Total Nickel	0	0		0	69.785	70.0	74.1	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	5.28	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	13.8	
Total Zinc	0	0		0	158.597	161	170	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	3.18	
Acrylonitrile	0	0		0	130	130	138	
Benzene	0	0		0	130	130	138	
Bromoform	0	0		0	370	370	392	
Carbon Tetrachloride	0	0		0	560	560	593	
Chlorobenzene	0	0		0	240	240	254	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	3,705	
Chloroform	0	0		0	390	390	413	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	3,282	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,588	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,329	
1,3-Dichloropropylene	0	0		0	61	61.0	64.6	
Ethylbenzene	0	0		0	580	580	614	
Methyl Bromide	0	0		0	110	110	116	

Methyl Chloride	0	0		0	5,500	5,500	5,822	
Methylene Chloride	0	0		0	2,400	2,400	2,541	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	222	
Tetrachloroethylene	0	0		0	140	140	148	
Toluene	0	0		0	330	330	349	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	1,482	
1,1,1-Trichloroethane	0	0		0	610	610	646	
1,1,2-Trichloroethane	0	0		0	680	680	720	
Trichloroethylene	0	0		0	450	450	476	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	116	
2,4-Dichlorophenol	0	0		0	340	340	360	
2,4-Dimethylphenol	0	0		0	130	130	138	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	16.9	
2,4-Dinitrophenol	0	0		0	130	130	138	
2-Nitrophenol	0	0		0	1,600	1,600	1,694	
4-Nitrophenol	0	0		0	470	470	498	
p-Chloro-m-Cresol	0	0		0	500	500	529	
Pentachlorophenol	0	0		0	8.069	8.07	8.54	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	96.3	
Acenaphthene	0	0		0	17	17.0	18.0	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	62.5	
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.11	
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	6,352	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	963	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	57.2	
Butyl Benzyl Phthalate	0	0		0	35	35.0	37.1	
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	169	
1,3-Dichlorobenzene	0	0		0	69	69.0	73.0	
1,4-Dichlorobenzene	0	0		0	150	150	159	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	847	
Dimethyl Phthalate	0	0		0	500	500	529	
Di-n-Butyl Phthalate	0	0		0	21	21.0	22.2	
2,4-Dinitrotoluene	0	0		0	320	320	339	
2,6-Dinitrotoluene	0	0		0	200	200	212	

1,2-Diphenylhydrazine	0	0		0	3	3.0	3.18	
Fluoranthene	0	0		0	40	40.0	42.3	
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	2.12	
Hexachlorocyclopentadiene	0	0		0	1	1.0	1.06	
Hexachloroethane	0	0		0	12	12.0	12.7	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	2,223	
Naphthalene	0	0		0	43	43.0	45.5	
Nitrobenzene	0	0		0	810	810	857	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	3,599	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	62.5	
Phenanthrene	0	0		0	1	1.0	1.06	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	27.5	
Aldrin	0	0		0	0.1	0.1	0.11	
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	0.005	
4,4-DDT	0	0		0	0.001	0.001	0.001	
4,4-DDE	0	0		0	0.001	0.001	0.001	
4,4-DDD	0	0		0	0.001	0.001	0.001	
Dieldrin	0	0		0	0.056	0.056	0.059	
alpha-Endosulfan	0	0		0	0.056	0.056	0.059	
beta-Endosulfan	0	0		0	0.056	0.056	0.059	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	0.038	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.004	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.004	
Toxaphene	0	0		0	0.0002	0.0002	0.0002	
2,3,7,8-TCDD	0	0		0	N/A	N/A	N/A	

☑ ***THH*** CCT (min): 0.147 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	5.93	

Total Arsenic	0	0		0	10	10.0	10.6	
Total Barium	0	0		0	2,400	2,400	2,541	
Total Boron	0	0		0	3,100	3,100	3,282	
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	4.23	
Dissolved Iron	0	0		0	300	300	318	
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	1,059	
Total Mercury	0	0		0	0.050	0.05	0.053	
Total Nickel	0	0		0	610	610	646	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	0.25	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	3.18	
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	106	
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	34.9	
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	72.0	
Methyl Bromide	0	0		0	100	100.0	106	
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	60.3	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	106	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	10,586	
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	31.8	
2,4-Dichlorophenol	0	0		0	10	10.0	10.6	
2,4-Dimethylphenol	0	0		0	100	100.0	106	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	2.12	
2,4-Dinitrophenol	0	0		0	10	10.0	10.6	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	N/A	N/A	N/A	
Phenol	0	0		0	4,000	4,000	4,234	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	74.1	
Anthracene	0	0		0	300	300	318	
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	212	
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	0.1	0.1	0.11	
2-Chloronaphthalene	0	0		0	800	800	847	
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	1,059	
1,3-Dichlorobenzene	0	0		0	7	7.0	7.41	
1,4-Dichlorobenzene	0	0		0	300	300	318	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	635	
Dimethyl Phthalate	0	0		0	2,000	2,000	2,117	
Di-n-Butyl Phthalate	0	0		0	20	20.0	21.2	
2,4-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
1,2-Diphenylhydrazine	0	0		0	N/A	N/A	N/A	
Fluoranthene	0	0		0	20	20.0	21.2	
Fluorene	0	0		0	50	50.0	52.9	
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	4.23	
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	36.0	

Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	10.6	
n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	20	20.0	21.2	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.074	
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	4.45	
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	21.2	
beta-Endosulfan	0	0		0	20	20.0	21.2	
Endosulfan Sulfate	0	0		0	20	20.0	21.2	
Endrin	0	0		0	0.03	0.03	0.032	
Endrin Aldehyde	0	0		0	1	1.0	1.06	
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	
2,3,7,8-TCDD	0	0		0	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): 4.296 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

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

Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	0.06	0.06	0.09	
Benzene	0	0		0	0.58	0.58	0.87	
Bromoform	0	0		0	7	7.0	10.5	
Carbon Tetrachloride	0	0		0	0.4	0.4	0.6	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	1.21	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	8.59	
Dichlorobromomethane	0	0		0	0.95	0.95	1.43	
1,2-Dichloroethane	0	0		0	9.9	9.9	14.9	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	1.36	
1,3-Dichloropropylene	0	0		0	0.27	0.27	0.41	
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	30.1	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	0.3	
Tetrachloroethylene	0	0		0	10	10.0	15.1	
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	0.83	
Trichloroethylene	0	0		0	0.6	0.6	0.9	
Vinyl Chloride	0	0		0	0.02	0.02	0.03	
2-Chlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0		0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0		0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0		0	N/A	N/A	N/A	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	

Pentachlorophenol	0	0		0	0.030	0.03	0.045	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	2.26	
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	0.0002	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.002	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.0002	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.002	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.015	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.045	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	0.48	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.12	0.12	0.18	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.0002	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.05	0.05	0.075	
Diethyl Phthalate	0	0		0	N/A	N/A	N/A	
Dimethyl Phthalate	0	0		0	N/A	N/A	N/A	
Di-n-Butyl Phthalate	0	0		0	N/A	N/A	N/A	
2,4-Dinitrotoluene	0	0		0	0.05	0.05	0.075	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.075	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.045	
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	0.0001	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.015	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	0.15	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.002	
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	0.001	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.008	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	4.97	
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	0.000001	

alpha-BHC	0	0		0	0.0004	0.0004	0.0006	
beta-BHC	0	0		0	0.008	0.008	0.012	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0003	0.0003	0.0005	
4,4-DDT	0	0		0	0.00003	0.00003	0.00005	
4,4-DDE	0	0		0	0.00002	0.00002	0.00003	
4,4-DDD	0	0		0	0.0001	0.0001	0.0002	
Dieldrin	0	0		0	0.000001	0.000001	0.000002	
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	0.000009	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.00005	
Toxaphene	0	0		0	0.0007	0.0007	0.001	
2,3,7,8-TCDD	0	0		0	5E-09	5.00E-09	7.53E-09	

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Antimony	0.16	0.25	5.93	9.25	14.8	µg/L	5.93	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Arsenic	Report	Report	Report	Report	Report	µg/L	10.6	THH	Discharge Conc > 10% WQBEL (no RP)
Total Boron	Report	Report	Report	Report	Report	µg/L	1,694	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Cadmium	0.01	0.016	0.37	0.58	0.93	µg/L	0.37	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Hexavalent Chromium	Report	Report	Report	Report	Report	µg/L	11.0	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	0.37	0.57	13.3	20.6	20.6	µg/L	13.3	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	0.12	0.18	4.23	6.61	10.6	µg/L	4.23	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Mercury	0.001	0.002	0.053	0.083	0.13	µg/L	0.053	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Nickel	Report	Report	Report	Report	Report	µg/L	74.1	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Thallium	0.007	0.011	0.25	0.4	0.64	µg/L	0.25	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	161	AFC	Discharge Conc > 10% WQBEL (no RP)
Acrolein	0.083	0.087	3.0	3.18	3.18	µg/L	3.0	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Acrylonitrile	0.002	0.004	0.09	0.14	0.23	µg/L	0.09	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Benzene	0.024	0.038	0.87	1.36	2.19	µg/L	0.87	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Carbon Tetrachloride	0.017	0.026	0.6	0.94	1.51	µg/L	0.6	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Chlorodibromomethane	0.033	0.052	1.21	1.88	3.01	µg/L	1.21	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Chloroform	Report	Report	Report	Report	Report	µg/L	8.59	CRL	Discharge Conc > 25% WQBEL (no RP)
Dichlorobromomethane	0.039	0.061	1.43	2.23	3.58	µg/L	1.43	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,2-Dichloropropane	0.037	0.058	1.36	2.12	3.39	µg/L	1.36	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,3-Dichloropropylene	0.011	0.017	0.41	0.63	1.02	µg/L	0.41	CRL	Discharge Conc ≥ 50% WQBEL (RP)

Methylene Chloride	Report	Report	Report	Report	Report	µg/L	30.1	CRL	Discharge Conc > 25% WQBEL (no RP)
1,1,2,2-Tetrachloroethane	0.008	0.013	0.3	0.47	0.75	µg/L	0.3	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,1,2-Trichloroethane	0.023	0.036	0.83	1.29	2.07	µg/L	0.83	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Trichloroethylene	0.025	0.039	0.9	1.41	2.26	µg/L	0.9	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Vinyl Chloride	0.0008	0.001	0.03	0.047	0.075	µg/L	0.03	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Bis(2-Ethylhexyl)Phthalate	0.013	0.021	0.48	0.75	1.21	µg/L	0.48	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Butyl Benzyl Phthalate	0.003	0.005	0.11	0.17	0.26	µg/L	0.11	THH	Discharge Conc ≥ 50% WQBEL (RP)
alpha-BHC	0.00002	0.00003	0.0006	0.0009	0.002	µg/L	0.0006	CRL	Discharge Conc ≥ 50% WQBEL (RP)
2,3,7,8-TCDD	2.07E-10	3.24E-10	0.000008	0.00001	0.00002	ng/L	0.000008	CRL	Discharge Conc ≥ 50% WQBEL (RP)

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	750	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	2,541	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Chromium (III)	N/A	N/A	Discharge Conc < TQL
Total Cobalt	20.1	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	318	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	1,588	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	5.24	µg/L	Discharge Conc < TQL
Total Manganese	1,059	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	5.28	µg/L	Discharge Conc < TQL
Total Silver	6.88	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Bromoform	10.5	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorobenzene	106	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	3,705	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	14.9	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethylene	34.9	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	72.0	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	106	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	5,822	µg/L	Discharge Conc ≤ 25% WQBEL

Tetrachloroethylene	15.1	µg/L	Discharge Conc ≤ 25% WQBEL
Toluene	60.3	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	106	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	646	µg/L	Discharge Conc ≤ 25% WQBEL
2-Chlorophenol	31.8	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	10.6	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	106	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2.12	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	10.6	µg/L	Discharge Conc < TQL
2-Nitrophenol	1,694	µg/L	Discharge Conc < TQL
4-Nitrophenol	498	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.045	µg/L	Discharge Conc < TQL
Phenol	4,234	µg/L	Discharge Conc ≤ 25% WQBEL
2,4,6-Trichlorophenol	2.26	µg/L	Discharge Conc < TQL
Acenaphthene	18.0	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	318	µg/L	Discharge Conc < TQL
Benzidine	0.0002	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.002	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.0002	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.002	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.015	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.045	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	212	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	57.2	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	847	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.18	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.0002	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	169	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	7.41	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	159	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	0.075	µg/L	Discharge Conc < TQL
Diethyl Phthalate	635	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	529	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	21.2	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	0.075	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.075	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.045	µg/L	Discharge Conc < TQL
Fluoranthene	21.2	µg/L	Discharge Conc < TQL
Fluorene	52.9	µg/L	Discharge Conc < TQL

Hexachlorobenzene	0.0001	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.015	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.06	µg/L	Discharge Conc < TQL
Hexachloroethane	0.15	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.002	µg/L	Discharge Conc < TQL
Isophorone	36.0	µg/L	Discharge Conc < TQL
Naphthalene	45.5	µg/L	Discharge Conc < TQL
Nitrobenzene	10.6	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.001	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.008	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	4.97	µg/L	Discharge Conc < TQL
Phenanthrene	1.06	µg/L	Discharge Conc < TQL
Pyrene	21.2	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.074	µg/L	Discharge Conc < TQL
Aldrin	0.000001	µg/L	Discharge Conc < TQL
beta-BHC	0.012	µg/L	Discharge Conc < TQL
gamma-BHC	0.95	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.0005	µg/L	Discharge Conc < TQL
4,4-DDT	0.00005	µg/L	Discharge Conc < TQL
4,4-DDE	0.00003	µg/L	Discharge Conc < TQL
4,4-DDD	0.0002	µg/L	Discharge Conc < TQL
Dieldrin	0.000002	µg/L	Discharge Conc < TQL
alpha-Endosulfan	0.059	µg/L	Discharge Conc < TQL
beta-Endosulfan	0.059	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	21.2	µg/L	Discharge Conc < TQL
Endrin	0.032	µg/L	Discharge Conc < TQL
Endrin Aldehyde	1.06	µg/L	Discharge Conc < TQL
Heptachlor	0.000009	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.00005	µg/L	Discharge Conc < TQL
Toxaphene	0.0002	µg/L	Discharge Conc < TQL

ATTACHMENT G:
PRE-DRAFT LETTER (JANUARY 25, 2022)

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

January 25, 2022

VIA ELECTRONIC MAIL:

John Ashton
Municipal Authority of Westmoreland County
124 Park and Pool Road
New Stanton, PA 15672

Dear John Ashton:

The Department of Environmental Protection (DEP) has reviewed your NPDES permit application and has reached a preliminary finding that new or more stringent water quality-based effluent limitations (WQBELs) for toxic pollutant(s) should be established in the permit. This finding is based on DEP's assessment that reasonable potential exists to exceed water quality criteria under Chapter 93 in the receiving waters during design flow conditions. The following WQBELs are anticipated based on the information available to DEP during its review:

Outfall No.	Pollutant	Average Monthly (µg/L)	Maximum Daily (µg/L)	IMAX (µg/L)
001	Total Antimony	5.93	9.25	14.8
001	Total Arsenic	Report	Report	Report
001	Total Boron	Report	Report	Report
001	Total Cadmium	0.37	0.58	0.93
001	Hexavalent Chromium	Report	Report	Report
001	Total Copper	13.3	20.6	20.6
001	Free Cyanide	4.23	6.61	10.6
001	Total Mercuy	0.053	0.083	0.13
001	Total Nickel	Report	Report	Report
001	Total Zinc	Report	Report	Report
001	Acrolein	3.0	3.18	3.18
001	Acrylonitrile	0.09	0.14	0.23

001	Benzene	0.87	1.36	2.19
001	Carbon Tetrachloride	0.6	0.94	1.51
001	Chlorodibromomethane	1.21	1.88	3.01
001	Chloroform	Report	Report	Report
001	Dichlorobromomethane	1.43	2.23	3.58
001	1,2-Dichloropropane	1.36	2.12	3.39
001	1,3-Dichloropropylene	0.41	0.63	1.02
001	Methylene Chloride	Report	Report	Report
001	1,2,2-Tetrachloroethane	0.3	0.47	0.75
001	1,1,2-Trichloroethane	0.83	1.29	2.07
001	Trichloroethylene	0.9	1.41	2.26
001	Vinyl Chloride	0.03	0.037	0.075
001	Bis(2-Ethylhexyl)Phthalate	0.11	0.17	0.26
001	Butyl Benzyl Phthalate	0.11	0.17	0.26
001	Alpha-BHC	0.0006	0.0009	0.002
001	2,3,7,8-TCDD	7.53E-09	1.18E-08	1.88E-08

Attached is a survey that DEP requests that you complete and return to DEP in 30 days. Completion of this survey will help DEP understand your current capabilities or plans to treat or control these pollutant(s). Your response to this notice does not constitute an official comment for DEP response but will be taken under consideration. When the draft NPDES permit is formally noticed in the *Pennsylvania Bulletin*, you may make official comments for DEP's further consideration and response.

In addition to completion of the survey, you may elect to collect a minimum of four (4) additional effluent samples, as 24-hour composites, and have the samples analyzed for the pollutant(s) identified above, using a quantitation limit (QL) that is no greater than the Target QLs identified in the permit application. The samples should be collected at least one week apart. If you elect this option, please check the appropriate box on the survey and return the survey to DEP. Review of your application will remain on hold until the additional sampling results are provided to DEP.

Please contact me if you have any questions about this information or the attached survey.

Sincerely,

Grace Polakoski

Grace Polakoski, E.I.T.
Environmental Engineering Specialist
Clean Water Program

Enclosures

cc: Katie Warheit – MAWC
Michele Cannone – Gibson-Thomas Engineering
US EPA Region III
Southwest Regional Office

ATTACHMENT H:
PRE-DRAFT SURVEY

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Bureau of Clean Water

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: **Westmoreland County Municipal Authority** Permit No.: **PA0027430**

Pollutant(s) identified by DEP that may require WQBELs: 28 pollutants

Is the permittee aware of the source(s) of the pollutant(s)? ☐ Yes ☑ No ☐ Suspected

If Yes or Suspected, describe the known or suspected source(s) of pollutant(s) in the effluent.

Has the permittee completed any studies in the past to control or treat the pollutant(s)? ☐ Yes ☑ No

If Yes, describe prior studies and results:

Does the permittee believe it can achieve the proposed WQBELs now? ☐ Yes ☐ No ☑ Uncertain

If No, describe the activities, upgrades or process changes that would be necessary to achieve the WQBELs, if known.

Estimated date by which the permittee could achieve the proposed WQBELs: _____ ☑ Uncertain

Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? ☑ Yes ☐ No

Check the appropriate box(es) below to indicate site-specific data that have been collected by the permittee in the past. If any of these data have not been submitted to DEP, please attach to this survey.

☐ Discharge pollutant concentration coefficient(s) of variability	Year(s) Studied:
☐ Discharge and background Total Hardness concentrations (metals)	Year(s) Studied:
☐ Background / ambient pollutant concentrations	Year(s) Studied:
☐ Chemical translator(s) (metals)	Year(s) Studied:
☐ Slope and width of receiving waters	Year(s) Studied:
☐ Velocity of receiving waters at design conditions	Year(s) Studied:
☐ Acute and/or chronic partial mix factors (mixing at design conditions)	Year(s) Studied:
☐ Volatilization rates (highly volatile organics)	Year(s) Studied:
☐ Site-specific criteria (e.g., Water Effect Ratio or related study)	Year(s) Studied:

Please submit this survey to the DEP regional office that is reviewing the permit application within 30 days of receipt.

ATTACHMENT I:
TMS RESULTS (RESAMPLING DATA)

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Jeanette STP** NPDES Permit No.: **PA0027430** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **sewage**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
3.3	144	7.2						

	Discharge Pollutant	Units	Max Discharge Conc		0 if left blank: Trib Conc	0 if left blank: Stream Conc	0.5 if left blank: Daily CV	0.5 if left blank: Hourly CV	0 if left blank: Stream CV	0 if left blank: Fate Coeff	0 if left blank: FOS	1 if left blank: Criteria Mod	1 if left blank: Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		587									
	Chloride (PWS)	mg/L		217									
	Bromide	mg/L		0.41									
	Sulfate (PWS)	mg/L		45									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		3									
	Total Antimony	µg/L		0.8									
	Total Arsenic	µg/L		1.9									
	Total Barium	µg/L		35									
	Total Beryllium	µg/L	<	0.3									
	Total Boron	µg/L		133									
	Total Cadmium	µg/L	<	0.1									
	Total Chromium (III)	µg/L	<	1									
	Hexavalent Chromium	µg/L	<	0.1									
	Total Cobalt	µg/L		0.7									
	Total Copper	µg/L		8									
	Free Cyanide	µg/L		2									
	Total Cyanide	µg/L	<	6									
	Dissolved Iron	µg/L		20									
	Total Iron	µg/L		52									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		14									
	Total Mercury	µg/L	<	0.1									
	Total Nickel	µg/L		6									
	Total Phenols (Phenolics) (PWS)	µg/L		125									
	Total Selenium	µg/L	<	3.3									
	Total Silver	µg/L	<	0.66									
	Total Thallium	µg/L	<	0.33									
	Total Zinc	µg/L		20									
	Total Molybdenum	µg/L		16									
	Acrolein	µg/L	<	9.4									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	2.7									
	Benzene	µg/L	<	0.04									
	Bromoform	µg/L	<	2									

Group 3	Carbon Tetrachloride	µg/L	<	0.1									
	Chlorobenzene	µg/L	<	0.95									
	Chlorodibromomethane	µg/L	<	0.3									
	Chloroethane	µg/L	<	1.7									
	2-Chloroethyl Vinyl Ether	µg/L	<	1.9									
	Chloroform	µg/L		2.8									
	Dichlorobromomethane	µg/L		0.5									
	1,1-Dichloroethane	µg/L	<	1.4									
	1,2-Dichloroethane	µg/L	<	1.6									
	1,1-Dichloroethylene	µg/L	<	1.5									
	1,2-Dichloropropane	µg/L	<	0.1									
	1,3-Dichloropropylene	µg/L	<	0.06									
	1,4-Dioxane	µg/L	<	0.77									
	Ethylbenzene	µg/L	<	1.7									
	Methyl Bromide	µg/L	<	2.4									
	Methyl Chloride	µg/L	<	8.4									
	Methylene Chloride	µg/L	<	0.1									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.1									
	Tetrachloroethylene	µg/L	<	1.8									
	Toluene	µg/L	<	1.2									
	1,2-trans-Dichloroethylene	µg/L	<	1.3									
	1,1,1-Trichloroethane	µg/L	<	1.1									
	1,1,2-Trichloroethane	µg/L	<	0.08									
	Trichloroethylene	µg/L	<	1.7									
	Vinyl Chloride	µg/L	<	0.1									
Group 4	2-Chlorophenol	µg/L	<	0.37									
	2,4-Dichlorophenol	µg/L	<	0.36									
	2,4-Dimethylphenol	µg/L	<	0.23									
	4,6-Dinitro-o-Cresol	µg/L	<	0.37									
	2,4-Dinitrophenol	µg/L	<	2									
	2-Nitrophenol	µg/L	<	0.5									
	4-Nitrophenol	µg/L	<	1.2									
	p-Chloro-m-Cresol	µg/L	<	0.21									
	Pentachlorophenol	µg/L	<	1.2									
	Phenol	µg/L		0.4									
	2,4,6-Trichlorophenol	µg/L	<	0.63									
Group 5	Acenaphthene	µg/L	<	0.17									
	Acenaphthylene	µg/L	<	0.21									
	Anthracene	µg/L	<	0.17									
	Benzidine	µg/L	<	3.4									
	Benzo(a)Anthracene	µg/L	<	0.14									
	Benzo(a)Pyrene	µg/L	<	0.24									
	3,4-Benzofluoranthene	µg/L	<	0.12									
	Benzo(ghi)Perylene	µg/L	<	0.24									
	Benzo(k)Fluoranthene	µg/L	<	0.21									
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.23									
	Bis(2-Chloroethyl)Ether	µg/L	<	0.19									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.31									
	Bis(2-Ethylhexyl)Phthalate	µg/L		3.39									
	4-Bromophenyl Phenyl Ether	µg/L	<	0.19									
	Butyl Benzyl Phthalate	µg/L	<	0.0635									
	2-Chloronaphthalene	µg/L	<	0.2									
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.16									
	Chrysene	µg/L	<	0.13									
	Dibenzo(a,h)Anthrancene	µg/L	<	0.23									
	1,2-Dichlorobenzene	µg/L	<	1.9									
	1,3-Dichlorobenzene	µg/L	<	1.3									
	1,4-Dichlorobenzene	µg/L	<	1.4									
	3,3-Dichlorobenzidine	µg/L	<	0.53									
	Diethyl Phthalate	µg/L	<	0.2									
	Dimethyl Phthalate	µg/L	<	0.16									
	Di-n-Butyl Phthalate	µg/L		0.16									
	2,4-Dinitrotoluene	µg/L	<	0.13									

	2,6-Dinitrotoluene	µg/L	<	0.23									
	Di-n-Octyl Phthalate	µg/L	<	0.11									
	1,2-Diphenylhydrazine	µg/L	<	0.29									
	Fluoranthene	µg/L	<	0.19									
	Fluorene	µg/L	<	0.22									
	Hexachlorobenzene	µg/L	<	0.26									
	Hexachlorobutadiene	µg/L	<	0.21									
	Hexachlorocyclopentadiene	µg/L	<	0.19									
	Hexachloroethane	µg/L	<	0.33									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.11									
	Isophorone	µg/L	<	0.17									
	Naphthalene	µg/L	<	0.13									
	Nitrobenzene	µg/L	<	0.31									
	n-Nitrosodimethylamine	µg/L	<	0.71									
	n-Nitrosodi-n-Propylamine	µg/L	<	0.27									
	n-Nitrosodiphenylamine	µg/L	<	0.27									
	Phenanthrene	µg/L	<	0.14									
	Pyrene	µg/L	<	0.18									
	1,2,4-Trichlorobenzene	µg/L	<	0.14									
Group 6	Aldrin	µg/L	<	0.0052									
	alpha-BHC	µg/L	<	0.004									
	beta-BHC	µg/L	<	0.0082									
	gamma-BHC	µg/L	<	0.0031									
	delta BHC	µg/L	<	0.0031									
	Chlordane	µg/L	<	0.036									
	4,4-DDT	µg/L	<	0.0062									
	4,4-DDE	µg/L	<	0.0072									
	4,4-DDD	µg/L	<	0.0072									
	Dieldrin	µg/L	<	0.0031									
	alpha-Endosulfan	µg/L	<	0.0031									
	beta-Endosulfan	µg/L	<	0.0062									
	Endosulfan Sulfate	µg/L	<	0.0041									
	Endrin	µg/L	<	0.0082									
	Endrin Aldehyde	µg/L	<	0.01									
	Heptachlor	µg/L	<	0.0031									
	Heptachlor Epoxide	µg/L	<	0.0041									
	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	<	0.2									
	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 1.3, March 2021

Stream / Surface Water Information

Jeannette STP, NPDES Permit No. PA0027430, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Brush Creek**

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	037246	14.33	955	18.7			Yes
End of Reach 1	037246	12.06	926	20.9			Yes

Q_{7-10}

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	14.33	0.016										100	7		
End of Reach 1	12.06	0.017													

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	14.33														
End of Reach 1	12.06														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Jeannette STP, NPDES Permit No. PA0027430, Outfall 001

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

☑ ***Hydrodynamics***

Q_{7-10}

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)
14.33	0.30		0.30	5.105	0.002	0.664	30.487	45.949	0.267	0.519	0.147
12.06	0.34		0.337								

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)
14.33	2.59		2.59	5.105	0.002	0.775	30.487	39.336	0.326	0.426	4.296
12.06	2.869		2.87								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.147 PMF: 1 Analysis Hardness (mg/l): 141.56 Analysis pH: 7.19

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	794	
Total Antimony	0	0		0	1,100	1,100	1,164	
Total Arsenic	0	0		0	340	340	360	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	22,231	
Total Boron	0	0		0	8,100	8,100	8,575	
Total Cadmium	0	0		0	2.823	3.04	3.22	Chem Translator of 0.929 applied
Total Chromium (III)	0	0		0	757.399	2,397	2,537	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	17.2	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	101	
Total Copper	0	0		0	18.647	19.4	20.6	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	23.3	

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	94.088	127	135	Chem Translator of 0.74 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	1.74	Chem Translator of 0.85 applied
Total Nickel	0	0		0	628.305	630	666	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	5.849	6.88	7.28	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	68.8	
Total Zinc	0	0		0	157.310	161	170	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	3.18	
Acrylonitrile	0	0		0	650	650	688	
Benzene	0	0		0	640	640	678	
Bromoform	0	0		0	1,800	1,800	1,905	
Carbon Tetrachloride	0	0		0	2,800	2,800	2,964	
Chlorobenzene	0	0		0	1,200	1,200	1,270	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	19,055	
Chloroform	0	0		0	1,900	1,900	2,011	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	15,879	
1,1-Dichloroethylene	0	0		0	7,500	7,500	7,940	
1,2-Dichloropropane	0	0		0	11,000	11,000	11,645	
1,3-Dichloropropylene	0	0		0	310	310	328	
Ethylbenzene	0	0		0	2,900	2,900	3,070	
Methyl Bromide	0	0		0	550	550	582	
Methyl Chloride	0	0		0	28,000	28,000	29,641	
Methylene Chloride	0	0		0	12,000	12,000	12,703	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	1,059	
Tetrachloroethylene	0	0		0	700	700	741	
Toluene	0	0		0	1,700	1,700	1,800	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	7,199	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	3,176	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	3,599	
Trichloroethylene	0	0		0	2,300	2,300	2,435	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	593	
2,4-Dichlorophenol	0	0		0	1,700	1,700	1,800	
2,4-Dimethylphenol	0	0		0	660	660	699	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	84.7	
2,4-Dinitrophenol	0	0		0	660	660	699	
2-Nitrophenol	0	0		0	8,000	8,000	8,469	
4-Nitrophenol	0	0		0	2,300	2,300	2,435	
p-Chloro-m-Cresol	0	0		0	160	160	169	
Pentachlorophenol	0	0		0	10.518	10.5	11.1	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	487	

Acenaphthene	0	0		0	83	83.0	87.9	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	318	
Benzo(a)Anthracene	0	0		0	0.5	0.5	0.53	
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	31,758	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	4,764	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	286	
Butyl Benzyl Phthalate	0	0		0	140	140	148	
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	868	
1,3-Dichlorobenzene	0	0		0	350	350	371	
1,4-Dichlorobenzene	0	0		0	730	730	773	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	4,234	
Dimethyl Phthalate	0	0		0	2,500	2,500	2,647	
Di-n-Butyl Phthalate	0	0		0	110	110	116	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	1,694	
2,6-Dinitrotoluene	0	0		0	990	990	1,048	
1,2-Diphenylhydrazine	0	0		0	15	15.0	15.9	
Fluoranthene	0	0		0	200	200	212	
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	10.6	
Hexachlorocyclopentadiene	0	0		0	5	5.0	5.29	
Hexachloroethane	0	0		0	60	60.0	63.5	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	10,586	
Naphthalene	0	0		0	140	140	148	
Nitrobenzene	0	0		0	4,000	4,000	4,234	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	17,996	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	318	
Phenanthrene	0	0		0	5	5.0	5.29	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	138	
Aldrin	0	0		0	3	3.0	3.18	
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	1.01	
Chlordane	0	0		0	2.4	2.4	2.54	
4,4-DDT	0	0		0	1.1	1.1	1.16	
4,4-DDE	0	0		0	1.1	1.1	1.16	

4,4-DDD	0	0		0	1.1	1.1	1.16	
Dieldrin	0	0		0	0.24	0.24	0.25	
alpha-Endosulfan	0	0		0	0.22	0.22	0.23	
beta-Endosulfan	0	0		0	0.22	0.22	0.23	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.086	0.086	0.091	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.52	0.52	0.55	
Heptachlor Epoxide	0	0		0	0.5	0.5	0.53	
Toxaphene	0	0		0	0.73	0.73	0.77	

☑ ***CFC*** CCT (min): 0.147 PMF: 1 Analysis Hardness (mg/l): 141.56 Analysis pH: 7.19

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	233	
Total Arsenic	0	0		0	150	150	159	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	4,340	
Total Boron	0	0		0	1,600	1,600	1,694	
Total Cadmium	0	0		0	0.313	0.35	0.37	Chem Translator of 0.894 applied
Total Chromium (III)	0	0		0	98.522	115	121	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	11.0	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	20.1	
Total Copper	0	0		0	12.053	12.6	13.3	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	5.5	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	1,588	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	3.666	4.95	5.24	Chem Translator of 0.74 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	0.96	Chem Translator of 0.85 applied
Total Nickel	0	0		0	69.785	70.0	74.1	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	5.28	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	13.8	
Total Zinc	0	0		0	158.597	161	170	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	3.18	
Acrylonitrile	0	0		0	130	130	138	
Benzene	0	0		0	130	130	138	
Bromoform	0	0		0	370	370	392	
Carbon Tetrachloride	0	0		0	560	560	593	

Chlorobenzene	0	0		0	240	240	254	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	3,705	
Chloroform	0	0		0	390	390	413	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	3,282	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,588	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,329	
1,3-Dichloropropylene	0	0		0	61	61.0	64.6	
Ethylbenzene	0	0		0	580	580	614	
Methyl Bromide	0	0		0	110	110	116	
Methyl Chloride	0	0		0	5,500	5,500	5,822	
Methylene Chloride	0	0		0	2,400	2,400	2,541	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	222	
Tetrachloroethylene	0	0		0	140	140	148	
Toluene	0	0		0	330	330	349	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	1,482	
1,1,1-Trichloroethane	0	0		0	610	610	646	
1,1,2-Trichloroethane	0	0		0	680	680	720	
Trichloroethylene	0	0		0	450	450	476	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	116	
2,4-Dichlorophenol	0	0		0	340	340	360	
2,4-Dimethylphenol	0	0		0	130	130	138	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	16.9	
2,4-Dinitrophenol	0	0		0	130	130	138	
2-Nitrophenol	0	0		0	1,600	1,600	1,694	
4-Nitrophenol	0	0		0	470	470	498	
p-Chloro-m-Cresol	0	0		0	500	500	529	
Pentachlorophenol	0	0		0	8.069	8.07	8.54	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	96.3	
Acenaphthene	0	0		0	17	17.0	18.0	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	62.5	
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.11	
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	6,352	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	963	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	57.2	
Butyl Benzyl Phthalate	0	0		0	35	35.0	37.1	
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	169	
1,3-Dichlorobenzene	0	0		0	69	69.0	73.0	
1,4-Dichlorobenzene	0	0		0	150	150	159	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	847	
Dimethyl Phthalate	0	0		0	500	500	529	
Di-n-Butyl Phthalate	0	0		0	21	21.0	22.2	
2,4-Dinitrotoluene	0	0		0	320	320	339	
2,6-Dinitrotoluene	0	0		0	200	200	212	
1,2-Diphenylhydrazine	0	0		0	3	3.0	3.18	
Fluoranthene	0	0		0	40	40.0	42.3	
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	2.12	
Hexachlorocyclopentadiene	0	0		0	1	1.0	1.06	
Hexachloroethane	0	0		0	12	12.0	12.7	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	2,223	
Naphthalene	0	0		0	43	43.0	45.5	
Nitrobenzene	0	0		0	810	810	857	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	3,599	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	62.5	
Phenanthrene	0	0		0	1	1.0	1.06	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	27.5	
Aldrin	0	0		0	0.1	0.1	0.11	
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	0.005	
4,4-DDT	0	0		0	0.001	0.001	0.001	
4,4-DDE	0	0		0	0.001	0.001	0.001	
4,4-DDD	0	0		0	0.001	0.001	0.001	
Dieldrin	0	0		0	0.056	0.056	0.059	
alpha-Endosulfan	0	0		0	0.056	0.056	0.059	
beta-Endosulfan	0	0		0	0.056	0.056	0.059	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	0.038	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.004	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.004	
Toxaphene	0	0		0	0.0002	0.0002	0.0002	

☑ ***THH*** CCT (min): 0.147 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	5.93	
Total Arsenic	0	0		0	10	10.0	10.6	
Total Barium	0	0		0	2,400	2,400	2,541	
Total Boron	0	0		0	3,100	3,100	3,282	
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	4.23	
Dissolved Iron	0	0		0	300	300	318	
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	1,059	
Total Mercury	0	0		0	0.050	0.05	0.053	
Total Nickel	0	0		0	610	610	646	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	0.25	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	3.18	
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	106	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	6.03	
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	34.9	
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	72.0	
Methyl Bromide	0	0		0	100	100.0	106	
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	60.3	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	106	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	10,586	
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	31.8	
2,4-Dichlorophenol	0	0		0	10	10.0	10.6	
2,4-Dimethylphenol	0	0		0	100	100.0	106	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	2.12	
2,4-Dinitrophenol	0	0		0	10	10.0	10.6	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	N/A	N/A	N/A	
Phenol	0	0		0	4,000	4,000	4,234	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	74.1	
Anthracene	0	0		0	300	300	318	
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	212	
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	0.1	0.1	0.11	
2-Chloronaphthalene	0	0		0	800	800	847	
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	1,059	
1,3-Dichlorobenzene	0	0		0	7	7.0	7.41	
1,4-Dichlorobenzene	0	0		0	300	300	318	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	635	
Dimethyl Phthalate	0	0		0	2,000	2,000	2,117	
Di-n-Butyl Phthalate	0	0		0	20	20.0	21.2	

2,4-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
1,2-Diphenylhydrazine	0	0		0	N/A	N/A	N/A	
Fluoranthene	0	0		0	20	20.0	21.2	
Fluorene	0	0		0	50	50.0	52.9	
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	4.23	
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	36.0	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	10.6	
n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	20	20.0	21.2	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.074	
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	4.45	
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	21.2	
beta-Endosulfan	0	0		0	20	20.0	21.2	
Endosulfan Sulfate	0	0		0	20	20.0	21.2	
Endrin	0	0		0	0.03	0.03	0.032	
Endrin Aldehyde	0	0		0	1	1.0	1.06	
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): 4.296 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

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

Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	0.06	0.06	0.09	
Benzene	0	0		0	0.58	0.58	0.87	
Bromoform	0	0		0	7	7.0	10.5	
Carbon Tetrachloride	0	0		0	0.4	0.4	0.6	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	1.21	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	N/A	N/A	N/A	
Dichlorobromomethane	0	0		0	0.95	0.95	1.43	
1,2-Dichloroethane	0	0		0	9.9	9.9	14.9	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	1.36	
1,3-Dichloropropylene	0	0		0	0.27	0.27	0.41	
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	30.1	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	0.3	
Tetrachloroethylene	0	0		0	10	10.0	15.1	
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	0.83	
Trichloroethylene	0	0		0	0.6	0.6	0.9	
Vinyl Chloride	0	0		0	0.02	0.02	0.03	
2-Chlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0		0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0		0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0		0	N/A	N/A	N/A	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	0.030	0.03	0.045	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	2.26	
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	0.0002	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.002	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.0002	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.002	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.015	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.045	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	0.48	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.12	0.12	0.18	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.0002	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.05	0.05	0.075	
Diethyl Phthalate	0	0		0	N/A	N/A	N/A	
Dimethyl Phthalate	0	0		0	N/A	N/A	N/A	
Di-n-Butyl Phthalate	0	0		0	N/A	N/A	N/A	
2,4-Dinitrotoluene	0	0		0	0.05	0.05	0.075	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.075	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.045	
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	0.0001	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.015	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	0.15	

Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.002	
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	0.001	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.008	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	4.97	
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	0.000001	
alpha-BHC	0	0		0	0.0004	0.0004	0.0006	
beta-BHC	0	0		0	0.008	0.008	0.012	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0003	0.0003	0.0005	
4,4-DDT	0	0		0	0.00003	0.00003	0.00005	
4,4-DDE	0	0		0	0.00002	0.00002	0.00003	
4,4-DDD	0	0		0	0.0001	0.0001	0.0002	
Dieldrin	0	0		0	0.000001	0.000001	0.000002	
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	0.000009	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.00005	
Toxaphene	0	0		0	0.0007	0.0007	0.001	

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Antimony	Report	Report	Report	Report	Report	µg/L	5.93	THH	Discharge Conc > 10% WQBEL (no RP)
Total Arsenic	Report	Report	Report	Report	Report	µg/L	10.6	THH	Discharge Conc > 10% WQBEL (no RP)
Total Copper	0.37	0.57	13.3	20.6	20.6	µg/L	13.3	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	Report	Report	Report	Report	Report	µg/L	4.23	THH	Discharge Conc > 25% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	161	AFC	Discharge Conc > 10% WQBEL (no RP)
Acrolein	0.083	0.087	3.0	3.18	3.18	µg/L	3.0	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Chloroform	Report	Report	Report	Report	Report	µg/L	6.03	THH	Discharge Conc > 25% WQBEL (no RP)
Dichlorobromomethane	Report	Report	Report	Report	Report	µg/L	1.43	CRL	Discharge Conc > 25% WQBEL (no RP)
Trichloroethylene	0.025	0.039	0.9	1.41	2.26	µg/L	0.9	CRL	Discharge Conc ≥ 50% WQBEL (RP)

Bis(2-Ethylhexyl)Phthalate	0.013	0.021	0.48	0.75	1.21	µg/L	0.48	CRL	Discharge Conc ≥ 50% WQBEL (RP)

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	750	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	2,541	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	1,694	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	0.37	µg/L	Discharge Conc < TQL
Total Chromium (III)	121	µg/L	Discharge Conc < TQL
Hexavalent Chromium	11.0	µg/L	Discharge Conc < TQL
Total Cobalt	20.1	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	318	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	1,588	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	5.24	µg/L	Discharge Conc < TQL
Total Manganese	1,059	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.053	µg/L	Discharge Conc < TQL
Total Nickel	74.1	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	5.28	µg/L	Discharge Conc < TQL
Total Silver	6.88	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	0.25	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrylonitrile	0.09	µg/L	Discharge Conc < TQL
Benzene	0.87	µg/L	Discharge Conc < TQL
Bromoform	10.5	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	0.6	µg/L	Discharge Conc < TQL
Chlorobenzene	106	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	1.21	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	3,705	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	14.9	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethylene	34.9	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-Dichloropropane	1.36	µg/L	Discharge Conc < TQL

1,3-Dichloropropylene	0.41	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	72.0	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	106	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	5,822	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	30.1	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	0.3	µg/L	Discharge Conc < TQL
Tetrachloroethylene	15.1	µg/L	Discharge Conc ≤ 25% WQBEL
Toluene	60.3	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	106	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	646	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2-Trichloroethane	0.83	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.03	µg/L	Discharge Conc < TQL
2-Chlorophenol	31.8	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	10.6	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	106	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2.12	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	10.6	µg/L	Discharge Conc < TQL
2-Nitrophenol	1,694	µg/L	Discharge Conc < TQL
4-Nitrophenol	498	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.045	µg/L	Discharge Conc < TQL
Phenol	4,234	µg/L	Discharge Conc ≤ 25% WQBEL
2,4,6-Trichlorophenol	2.26	µg/L	Discharge Conc < TQL
Acenaphthene	18.0	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	318	µg/L	Discharge Conc < TQL
Benzidine	0.0002	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.002	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.0002	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.002	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.015	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.045	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	212	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	57.2	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.11	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	847	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.18	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.0002	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	169	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	7.41	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	159	µg/L	Discharge Conc ≤ 25% WQBEL

3,3-Dichlorobenzidine	0.075	µg/L	Discharge Conc < TQL
Diethyl Phthalate	635	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	529	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	21.2	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	0.075	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.075	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.045	µg/L	Discharge Conc < TQL
Fluoranthene	21.2	µg/L	Discharge Conc < TQL
Fluorene	52.9	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.0001	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.015	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.06	µg/L	Discharge Conc < TQL
Hexachloroethane	0.15	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.002	µg/L	Discharge Conc < TQL
Isophorone	36.0	µg/L	Discharge Conc < TQL
Naphthalene	45.5	µg/L	Discharge Conc < TQL
Nitrobenzene	10.6	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.001	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.008	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	4.97	µg/L	Discharge Conc < TQL
Phenanthrene	1.06	µg/L	Discharge Conc < TQL
Pyrene	21.2	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.074	µg/L	Discharge Conc < TQL
Aldrin	0.000001	µg/L	Discharge Conc < TQL
alpha-BHC	0.0006	µg/L	Discharge Conc < TQL
beta-BHC	0.012	µg/L	Discharge Conc < TQL
gamma-BHC	0.95	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.0005	µg/L	Discharge Conc < TQL
4,4-DDT	0.00005	µg/L	Discharge Conc < TQL
4,4-DDE	0.00003	µg/L	Discharge Conc < TQL
4,4-DDD	0.0002	µg/L	Discharge Conc < TQL
Dieldrin	0.000002	µg/L	Discharge Conc < TQL
alpha-Endosulfan	0.059	µg/L	Discharge Conc < TQL
beta-Endosulfan	0.059	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	21.2	µg/L	Discharge Conc < TQL
Endrin	0.032	µg/L	Discharge Conc < TQL
Endrin Aldehyde	1.06	µg/L	Discharge Conc < TQL
Heptachlor	0.000009	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.00005	µg/L	Discharge Conc < TQL
Toxaphene	0.0002	µg/L	Discharge Conc < TQL

ATTACHMENT J:
Whole Effluent Toxicity (WET) Evaluation and Summary

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%, 97%, 93%, 47%, and 23%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 0.93.

Summary of Four Most Recent Test Results

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: all tests were passed, see summary results below

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Reproduction
TIWC (decimal)	0.93
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name: Jeanette STP

Permit No.: PA0027430

Replicate No.	Test Completion Date: 9/20/2016 Control	TIWC	Test Completion Date: 9/26/2016 Control	TIWC
1	34	37	34	34
2	30	44	41	37
3	37	30	34	36
4	36	35	34	33
5	30	33	35	36
6	16	35	36	31
7	32	36	37	27
8	34	38	37	34
9	34	40	37	18
10	37	38	37	21
11				
12				
13				
14				
15				
Mean	32.000	36.600	36.200	30.700
Std Dev.	6.164	3.836	2.150	6.601
# Replicates	10	10	10	10
T-Test Result	6.6329		1.6522	
Deg. of Freedom	17		12	
Critical T Value	0.8633		0.8726	
Pass or Fail	PASS		PASS	

Replicate No.	Test Completion Date: 10/11/2016 Control	TIWC	Test Completion Date: 10/17/2016 Control	TIWC
1	36	32	37	15
2	33	32	38	37
3	35	36	34	20
4	32	38	37	38
5	34	34	33	34
6	35	41	33	38
7	39	37	40	38
8	34	37	32	37
9	37	38	34	34
10	27	40	39	17
11				
12				
13				
14				
15				
Mean	34.200	36.500	35.700	30.800
Std Dev.	3.225	3.064	2.830	9.484
# Replicates	10	10	10	10
T-Test Result	8.7893		1.3096	
Deg. of Freedom	16		11	
Critical T Value	0.8647		0.8755	
Pass or Fail	PASS		PASS	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.93
No. Per Replicate	1
TST b value	0.75
TST alpha value	0.2

Facility Name: Jeanette STP

Permit No.: PA0027430

Replicate No.	Test Completion Date: 9/20/2016 Control	TIWC	Test Completion Date: 9/26/2016 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: 10/11/2016 Control	TIWC	Test Completion Date: 10/17/2016 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	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	0.93
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: Jeanette STP

Permit No.: PA0027430

Replicate No.	Test Completion Date: 9/20/2016 Control	TIWC	Test Completion Date: 9/27/2016 Control	TIWC
1	0.9	0.8	1	1
2	0.5	1	1	0.9
3	0.9	1	0.9	1
4	0.9	0.9	1	1
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
Mean	0.800	0.925	0.975	0.975
Std Dev.	0.200	0.096	0.050	0.050
# Replicates	4	4	4	4
T-Test Result	5.5799		14.8898	
Deg. of Freedom	5		5	
Critical T Value	0.7267		0.7267	
Pass or Fail	PASS		PASS	

Replicate No.	Test Completion Date: 10/11/2016 Control	TIWC	Test Completion Date: 10/18/2016 Control	TIWC
1	1	0.8	0.9	1
2	1	1	1	1
3	1	1	1	0.9
4	1	0.8	1	1
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
Mean	1.000	0.900	0.975	0.975
Std Dev.	0.000	0.115	0.050	0.050
# Replicates	4	4	4	4
T-Test Result	6.2306		14.8898	
Deg. of Freedom	3		5	
Critical T Value	0.7649		0.7267	
Pass or Fail	PASS		PASS	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Chronic
Species Tested	Pimephales
Endpoint	Growth
TIWC (decimal)	0.93
No. Per Replicate	10
TST b value	0.75
TST alpha value	0.25

Facility Name: Jeanette STP

Permit No.: PA0027430

Replicate No.	Test Completion Date: 9/20/2016 Control	TIWC	Test Completion Date: 9/27/2016 Control	TIWC
1	0.396	0.367	0.453	0.488
2	0.221	0.459	0.416	0.485
3	0.342	0.384	0.377	0.484
4	0.369	0.385	0.413	0.464
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
Mean	0.332	0.399	0.415	0.480
Std Dev.	0.077	0.041	0.031	0.011
# Replicates	4	4	4	4
T-Test Result	4.2207		13.1450	
Deg. of Freedom	5		5	
Critical T Value	0.7267		0.7267	
Pass or Fail	PASS		PASS	

Replicate No.	Test Completion Date: 10/11/2016 Control	TIWC	Test Completion Date: 10/18/2016 Control	TIWC
1	0.579	0.418	0.559	0.549
2	0.506	0.544	0.565	0.593
3	0.563	0.528	0.583	0.516
4	0.541	0.455	0.556	0.509
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
Mean	0.547	0.486	0.566	0.542
Std Dev.	0.032	0.060	0.012	0.038
# Replicates	4	4	4	4
T-Test Result	2.3586		5.9584	
Deg. of Freedom	4		4	
Critical T Value	0.7407		0.7407	
Pass or Fail	PASS		PASS	

WET Summary and Evaluation

Facility Name	Jeanette STP
Permit No.	PA0027430
Design Flow (MGD)	3.3
Q_{7-10} Flow (cfs)	0.305
PMF_a	1
PMF_c	1

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/20/16	9/26/16	10/11/16	10/17/16
Ceriodaphnia	Reproduction	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/20/16	9/26/16	10/11/16	10/17/16
Ceriodaphnia	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/20/16	9/27/16	10/11/16	10/18/16
Pimephales	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	9/20/16	9/27/16	10/11/16	10/18/16
Pimephales	Growth	PASS	PASS	PASS	PASS

Reasonable Potential? NO

Permit Recommendations

Test Type	**Chronic**
TIWC	**94** % Effluent
Dilution Series	**24, 47, 94, 97, 100** % Effluent
Permit Limit	**None**
Permit Limit Species	

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

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

1. **Determine IWC – Acute (IWCa)**:

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

   [(3.3 MGD x 1.547) / ((0.305 cfs x 1) + (3.3 MGD x 1.547))] x 100 = **94.36%**

   Is IWCa < 1%? ☐ **YES** ☒ **NO**

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

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

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

   [(3.3 MGD x 1.547) / ((0.305 cfs x 1) + (3.3 MGD x 1.547))] x 100 = **94.36%**

3. **Determine Dilution Series**

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

   Dilution Series = 100%, 97%, 94%, 47%, and 24%.

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

Will WET limits be established in the permit? ☐ YES ☒ NO