

Application Type Renewal
Facility Type Municipal
Major / Minor Major

NPDES PERMIT FACT SHEET INDIVIDUAL SEWAGE

Application No. PA0021148
APS ID 1064579
Authorization ID 1398267

Applicant and Facility Information

<p>Applicant Name <u>Municipal Authority of Westmoreland County (MAWC)</u></p> <p>Applicant Address <u>124 Park & Pool Road</u> <u>New Stanton, PA 15672</u></p> <p>Applicant Contact <u>Norman Stout Jr.</u></p> <p>Applicant Phone <u>(724) 755-5921</u></p> <p>Client ID <u>64197</u></p> <p>Ch 94 Load Status <u>Not Overloaded</u></p> <p>Connection Status _____</p> <p>Date Application Received <u>May 27, 2022</u></p> <p>Date Application Accepted <u>June 1, 2022</u></p> <p>Purpose of Application <u>Renewal of existing NPDES permit for the discharge of treated sewage.</u></p>	<p>Facility Name <u>Mt Pleasant Borough STP</u></p> <p>Facility Address <u>340 Clay Avenue</u> <u>Mount Pleasant, PA 15666-1910</u></p> <p>Facility Contact <u>Same as applicant</u></p> <p>Facility Phone <u>Same as applicant</u></p> <p>Site ID <u>271476</u></p> <p>Municipality <u>Mount Pleasant Borough</u></p> <p>County <u>Westmoreland</u></p> <p>EPA Waived? <u>No</u></p> <p>If No, Reason <u>Major Facility</u></p>
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Summary of Review

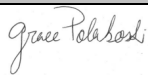
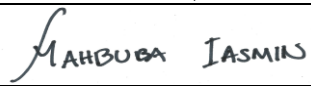
Introduction

The applicant has applied for the renewal of existing NPDES Permit No. PA0021148, which was previously issued on November 10, 2017 and expired on November 30, 2022. The Municipal Authority of Westmoreland County (MAWC) acquired Mt Pleasant Borough STP in 2020. NPDES Permit No. PA0021148 and the associated WQM Permit No. 463S81 A-3 T-1 were both transferred on February 18, 2022.

Facility Overview

Sewage from this plant is treated with a grit chamber/comminutor, primary clarifiers, aerobic digestors, and final clarifiers. The resulting effluent is disinfected via gas chlorine and discharges to Shupe Run (WWF), which is located in State Watershed 19-D. A comprehensive list of outfalls can be found below.

Outfall Number	Outfall Name	Outfall Type
001	—	Treated Sewage
003	Park Diversion Chamber Overflow	CSO
005	Old Bryce Factory Overflow	CSO
009	Cherry Avenue Overflow	CSO
022	—	Stormwater
023	—	Stormwater

Approve	Deny	Signatures	Date
X		 Grace Polakoski, E.I.T. / Environmental Engineering Specialist	November 10, 2022
X		 Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineer Manager	February 24, 2023

Summary of Review

CSO Outfalls 003, 005, and 009 will again be permitted. These outfalls serve as combined sewer overflows 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, 005, and 009 will be reconstructed.

The Department previously approved the NMC (Nine Minimum Controls) and LTCP Reports. Included in the NPDES Renewal Application was a request for an updated LTCP Schedule. The Department issued a letter approving the requested changes on November 9, 2022 (Attachment L). LTCP dates will be included in the permit.

Stormwater Outfalls 022 and 023 will again be permitted for the discharge of uncontaminated stormwater runoff from the areas in and around the treatment plant. Stormwater Outfall 021 has previously been permitted but has been removed from this permit since neither the drainage area nor the actual outfall itself lie on the property of Mt Pleasant Borough STP. An updated map of the facility and its stormwater outfalls was provided with the NPDES Renewal Application. Part C. X, Requirements Applicable to Stormwater Outfalls, has been added to the permit.

EPA-Administered Pretreatment Program Requirements

The EPA Administers a National Pretreatment Program as a 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 implement an EPA-approved Pretreatment Program. MAWC should incorporate Mt Pleasant Borough STP into their existing pretreatment program through intermunicipal agreements and Sewer Use Ordinances. The Part C condition "Pretreatment Program Implementation" has been added to this permit. MAWC reported one industrial contributor to Mt Pleasant Borough STP, which is Allegheny Restoration, a masonry business. Correspondence from Ryan Shuart of US EPA Region III regarding the pretreatment program can be found in Attachment M.

Summary of Whole Effluent Toxicity (WET) Tests

For the permit renewal, MAWC performed 3 chronic WET Tests at a TIWC of 95% and a dilution series of 24%, 48%, 95%, 98%, and 100%. According to email correspondence with Katelyn Warheit of MAWC (Attachment B), MAWC did not acquire the plant until 2020 and the previous permittee had not performed a WET Test for 2019. Based on the WET Test Evaluation (Attachment A), 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 99% and a dilution series of 25%, 50%, 74%, 99%, 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 (I) **Reissued permits. (1) Except as provided in paragraph (I)(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**

Summary of Review

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.

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

- Stormwater Outfall 021 has been removed from the permit
- *E. Coli* monitoring has been imposed
- Weekly average concentration and mass loading limits for ammonia-nitrogen have been removed from the permit
- WQBELs have been imposed for: total copper, free cyanide, dissolved iron, total zinc, dichlorobromomethane, benzo(k)fluoranthene, bis(2-Ethylhexyl)Phthalate, and indeno(1,2,3-cd)pyrene
- For WET Testing, TIWC is now 99% and the dilution series will be 25%, 50%, 74%, 99%, and 100%
- Ammonia-nitrogen summer limits have become more stringent
- Total Residual Chlorine limits have become more stringent
- Mass loading limits for CBOD₅, TSS, and ammonia nitrogen have changed

The Act 14-PL 834 Municipal Notification was provided by the May 10, 2022 letters and no comments were received.

Sludge use and disposal description and location(s): Greenbridge Reclamation, 234 Landfill Road, Scottdale, PA 15683

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)	1.5
Latitude	40° 8' 22"	Longitude	-79° 32' 3"
Quad Name	Mount Pleasant	Quad Code	40079B5
Wastewater Description: Sewage Effluent			
Receiving Waters	Shupe Run (WWF)	Stream Code	37958
NHD Com ID	69914377	RMI	1.14
Drainage Area	3.05 sq. mi.	Yield (cfs/mi ²)	0.0105
Q ₇₋₁₀ Flow (cfs)	0.0319	Q ₇₋₁₀ Basis	USGS StreamStats
Elevation (ft)	1052	Slope (ft/ft)	
Watershed No.	19-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	SILTATION		
Source(s) of Impairment	HIGHWAY/ROAD/BRIDGE RUNOFF (NON-CONSTRUCTION RELATED)		
TMDL Status	N/A	Name	None
Background/Ambient Data		Data Source	
pH (SU)	7.3 (MIN)/7.4 (MAX)	NPDES Renewal Application	
Temperature (°F)	20/15	PA Code	
Hardness (mg/L)	180	NPDES Renewal Application	
Other:			
Nearest Downstream Public Water Supply Intake	West County Municipal Authority - McKeesport		
PWS Waters	Youghiogheny River	Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	45.5

Changes Since Last Permit Issuance:

Other Comments:

Treatment Facility Summary				
Treatment Facility Name: Mt Pleasant Borough STP				
WQM Permit No.	Issuance Date	Purpose		
463S81	06/25/64	Permit approving the construction of a WWTP consisting of one mechanical bar screen, one grit chamber, two primary clarifier tanks, two bio-towers, three final clarifiers, one gas chlorine disinfection system, two chlorine contact tanks, one dechlorination system, two aerobic digesters, one belt filter press, and four sludge drying beds.		
463S81 A-1	09/08/03	Modifications to CSO Outfalls 002 and 003. A plug was installed on CSO Outfall 002 to convert it from a CSO Outfall to a plant bypass outfall. Modifications were made to the CSO 003 Diversion Chamber.		
463S81 A-2	03/15/16	Plant modifications including the construction of a mechanical bar screen, a bypass bar screen, a washer compactor, and a bagging system and chute extension.		
463S81 A-3	03/24/20	Upgrades to the existing Quarry Street Pump Station to eliminate overflows at the pump station		
463S81 A-3 T-1	02/18/22	Transfer of ownership from Mount Pleasant Borough to Municipal Authority of Westmoreland County		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Trickling Filter With Solids Removal	Gas Chlorine	1.5
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
1.5	2,500	Not Overloaded		Landfill

Compliance History

Facility: Mt. Pleasant Boro STP

NPDES Permit No.: PA0021148

Compliance Review Period: 11/2017 – 11/2022

Inspection Summary:

INSP ID	INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC
3383076	06/22/2022	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted
3383075	06/22/2022	Administrative/File Review	PA Dept of Environmental Protection	No Violations Noted
3450748	06/22/2022	Combined Sewer Overflow-Non-Sampling	PA Dept of Environmental Protection	No Violations Noted
3012518	02/24/2020	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted
3012525	02/24/2020	Combined Sewer Overflow-Non-Sampling	PA Dept of Environmental Protection	No Violations Noted
2908246	07/16/2019	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted
2908266	07/16/2019	Combined Sewer Overflow-Non-Sampling	PA Dept of Environmental Protection	No Violations Noted
2740598	06/05/2018	Combined Sewer Overflow-Non-Sampling	PA Dept of Environmental Protection	No Violations Noted
2740199	06/05/2018	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted

Violation Summary:

VIOL ID	VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE
959998	06/22/2022	92A.44	NPDES - Violation of effluent limits in Part A of permit	06/27/2022
959999	06/22/2022	92A.41(A)13B	NPDES - Unauthorized bypass occurred	06/27/2022
880556	02/24/2020	92A.44	NPDES - Violation of effluent limits in Part A of permit	03/18/2020
880557	02/24/2020	01	EXCEEDED THE CHEMICAL SINGLE SAMPLE MAXIMUM CONTAMINANT LEVEL	03/18/2020

Open Violations by Client ID:

No open CW violations for ID #85886

Enforcement Summary:

ENF ID	ENF TYPE	ENF CREATION DATE	VIOLATIONS	PENALTY AMOUNT	ENF FINALSTATUS	ENF CLOSED DATE
404924	NOV	06/27/2022	92A.41(A)13B; 92A.44		Administrative Close Out	11/07/2022
384778	NOV	03/18/2020	01; 92A.44		Administrative Close Out	07/05/2022

DMR Violation Summary:

START	END	PARAMETER	SAMPLE	PERMIT	UNIT OF MEASURE	STATISTICAL BASE CODE
09/01/2022	09/30/2022	Fecal Coliform	1049	1000	No./100 ml	Instantaneous Maximum
08/01/2022	08/31/2022	Fecal Coliform	1306	1000	No./100 ml	Instantaneous Maximum
07/01/2022	07/31/2022	Fecal Coliform	1827	1000	No./100 ml	Instantaneous Maximum
05/01/2022	05/31/2022	Total Suspended Solids	40	38	mg/L	Weekly Average
05/01/2022	05/31/2022	Total Suspended Solids	657.9	475	lbs/day	Weekly Average
09/01/2020	09/30/2020	Fecal Coliform	> 2420	1000	No./100 ml	Instantaneous Maximum
08/01/2020	08/31/2020	Dissolved Oxygen	4.6	5.0	mg/L	Minimum
08/01/2020	08/31/2020	Fecal Coliform	425	200	No./100 ml	Geometric Mean
08/01/2020	08/31/2020	Fecal Coliform	> 2420	1000	No./100 ml	Instantaneous Maximum
07/01/2020	07/31/2020	Dissolved Oxygen	3.9	5.0	mg/L	Minimum
07/01/2020	07/31/2020	Fecal Coliform	> 505	200	No./100 ml	Geometric Mean
07/01/2020	07/31/2020	Fecal Coliform	> 2420	1000	No./100 ml	Instantaneous Maximum
06/01/2020	06/30/2020	Fecal Coliform	499	200	No./100 ml	Geometric Mean
06/01/2020	06/30/2020	Fecal Coliform	1968	1000	No./100 ml	Instantaneous Maximum
05/01/2020	05/31/2020	Fecal Coliform	354	200	No./100 ml	Geometric Mean
05/01/2020	05/31/2020	Fecal Coliform	1120	1000	No./100 ml	Instantaneous Maximum
07/01/2019	07/31/2019	Dissolved Oxygen	4.2	5.0	mg/L	Minimum
05/01/2019	05/31/2019	Dissolved Oxygen	4.7	5.0	mg/L	Minimum

Compliance Status: In compliance. DMR exceedances may require a CACP

Completed by: John Murphy

Completed date: 11/8/2022

Compliance History

DMR Data for Outfall 001 (from May 1, 2021 to April 30, 2022)

Parameter	APR-22	MAR-22	FEB-22	JAN-22	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21
Flow (MGD) Average Monthly	1.466	1.248	1.878	1.336	1.1456	0.854	0.951	1.0439	1.0621	0.8965	0.8896	1.3535
Flow (MGD) Daily Maximum	2.715	2.058	3.253	3.011	2.431	1.0821	1.749	3.1858	2.6188	1.8864	1.9872	2.8645
pH (S.U.) Daily Minimum	7.1	7.2										
pH (S.U.) Minimum			6.9	6.9	6.4	6.2	6.4	6.6	6.0	6.5	6.2	6.5
pH (S.U.) Daily Maximum	7.6	7.7										
pH (S.U.) Maximum			7.6	7.6	7.4	7.1	7.4	7.7	8.1	7.4	7.4	7.5
DO (mg/L) Daily Minimum	9.8	10.1										
DO (mg/L) Minimum			10.9	9.6	9.7	8.6	7.2	7.06	6.8	6.4	5.9	6.5
TRC (mg/L) Average Monthly	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.03	0.03	0.02
TRC (mg/L) Instantaneous Maximum	0.03	0.03	0.03	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
CBOD5 (lbs/day) Average Monthly	< 40.3	< 44.3	119.0	51	< 29	36	< 22	62	65	< 43	< 28	< 38
CBOD5 (lbs/day) Weekly Average	62.5	77.3	151.3	70	39	58	< 37	143	88	58	39	< 61
CBOD5 (mg/L) Average Monthly	< 3.1	< 4.0	6.9	5	< 3.0	5	< 3	5.0	6	< 6	< 4	< 3
CBOD5 (mg/L) Weekly Average	3.9	5.5	8.0	7	4.2	8.4	< 3.7	6.5	7.6	7.4	6.0	3.7
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	1305	1469	1883	1309	1111	1153	1280	1449	1999	1815	1168	921
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	1893	2448	3798	2469	1853	1459	1632	2737	3997	2759	2739	1223

**NPDES Permit Fact Sheet
Mt Pleasant Borough STP**

NPDES Permit No. PA0021148

BOD5 (mg/L) Raw Sewage Influent Average Monthly	104	144	109	131	134	167	186	155	194	246	166	88
TSS (lbs/day) Average Monthly	< 78.4	< 53.4	< 103.1	< 59	< 44	< 35	< 35	< 65	< 59	< 35	< 35	< 66
TSS (lbs/day) Raw Sewage Influent Average Monthly	1724	1329	1561	1192	802	1995	896	974	2086	1147	1182	1297
TSS (lbs/day) Raw Sewage Influent Daily Maximum	2717	2830	3717	2210	1354	10899	1117	1208	6487	2327	2532	5734
TSS (lbs/day) Weekly Average	< 123.6	< 73.2	148.9	69	< 79	< 38	< 51	< 163	< 91	< 39	59	111
TSS (mg/L) Average Monthly	< 6	< 5	< 6	< 6	< 5	< 5	< 5	< 6	< 5	< 5	< 5	< 5.0
TSS (mg/L) Raw Sewage Influent Average Monthly	138	130	87	121	100	256	135	115	203	156	171	92
TSS (mg/L) Weekly Average	8	< 5	7	7	< 5	< 5	< 5	< 7	< 6	< 5	9	< 8
Fecal Coliform (No./100 ml) Geometric Mean	< 10	< 5	< 5	< 10	< 7	< 6	< 19	< 24	74	30	< 2	< 2
Fecal Coliform (No./100 ml) Instantaneous Maximum	60	5	32	43	54	20	114	218	301	269	46	132
Total Nitrogen (mg/L) Daily Maximum		8.89			17.3			22.5			1.69	
Ammonia (lbs/day) Average Monthly	< 11	< 9	< 14	< 8	< 7	< 6	< 6	< 8	< 9	< 5	5	2
Ammonia (lbs/day) Weekly Average	< 16	< 12	< 17	< 9	< 13	< 6	< 8	< 18	< 14	< 6	14	3
Ammonia (mg/L) Average Monthly	< 0.8	< 0.8	0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.80	< 0.8	< 0.7	0.7	0.2
Ammonia (mg/L) Weekly Average	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	< 0.8	0.8	< 0.8	2.1	0.2
Total Phosphorus (mg/L) Daily Maximum		0.84			2.6			2.7			3.59	

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

Development of Effluent Limitations

Outfall No.	001	Design Flow (MGD)	1.5
Latitude	40° 8' 22.00"	Longitude	-79° 32' 3.00"
Wastewater Description:		Sewage Effluent	

Technology-Based Limitations

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

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
Flow (MGD)	Report	Average Monthly	-	92a.27, 92a.61
	Report	Average Weekly	-	92a.27, 92a.61
	Max Daily			
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)
	25	Average Monthly	-	92a.61
Ammonia-Nitrogen (NH ₃ -N)	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.

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148 Mt Pleasant Borough STP

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 Mt Pleasant Borough STP are shown below:

Stream Parameters			
Reach 1		Reach 2	
Stream Code	37958	Stream Code	37958
RMI	1.14	RMI	0.54
Elevation (ft)	1052	Elevation (ft)	1047
Drainage Area (mi ²)	3.05	Drainage Area (mi ²)	3.48
Q ₇₋₁₀ Flow (cfs)	0.03	Q ₇₋₁₀ Flow (cfs)	0.04

Facility/Design Parameters	
Discharge Flow (MGD)	1.5
LFY (cfs/mi ²) [for use in summer modeling]	0.010
2*LFY (cfs/mi ²) [for use in winter modeling]	0.021

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)	5	DO Goal (mg/L)	5
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)	5	DO Goal (mg/L)	5

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.

Parameter	Limit (mg/l)	SBC	Model
Dissolved Oxygen	5	Minimum	WQM7.0
CBOD ₅ (Nov 1 – Apr 30)	17.85	Average Monthly	WQM7.0
CBOD ₅ (May 1 – Oct 31)	10	Average Monthly	WQM7.0
Ammonia Nitrogen (Nov 1 – Apr 30)	4.44	Average Monthly	WQM7.0
Ammonia Nitrogen (May 1 – Oct 31)	1.91	Average Monthly	WQM7.0

Based on a review of eDMR data for the past permit cycle, Mt Pleasant Borough STP will be able to achieve the new ammonia-nitrogen summer limits immediately upon permit issuance. The ammonia-nitrogen winter limits from the last permit cycle shall remain in place.

Total Residual Chlorine

To determine if WQBELs are required for discharges containing total residual chlorine (TRC), a discharge evaluation is performed using a DEP program called TRC_CALC created with Microsoft Excel for Windows. TRC_CALC calculates TRC Waste Load Allocations (WLAs) through the application of a mass balance model which considers TRC losses due to stream and discharge chlorine demands and first-order chlorine decay. Input values for the program include flow rates and chlorine

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demands for the receiving stream and the discharge, the number of samples taken per month, coefficients of TRC variability, partial mix factors, and an optional factor of safety. The mass balance model calculates WLAs for acute and chronic criteria that are then converted to long term averages using calculated multipliers. The multipliers are functions of the number of samples taken per month and the TRC variability coefficients (normally kept at default values unless site-specific information is available). The most stringent limitation between the acute and chronic long-term averages is converted to an average monthly limit for comparison to the BAT average monthly limit of 0.5 mg/L from 25 Pa. Code § 92a.48(b)(2). The more stringent of these average monthly TRC limitations is imposed in the permit. TRC_CALC recommends an average monthly limit of 0.011 mg/L and an IMAX of 0.035 mg/L. Modeling results can be found in Attachment F. eDMR data show that the facility will need a compliance schedule to achieve the new Total Residual Chlorine (TRC) limits. During this compliance schedule, the facility will need to comply with the previous TRC limit until the compliance period ends, when the facility shall comply with the new, more stringent TRC limit.

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 NPDES renewal application for Mt Pleasant Borough STP was received by the Department on May 27, 2022. The Toxics Management Spreadsheet (TMS) was run using the sampling data provided on the application. Results from the first TMS run can be found in Attachment G. The Pre-Draft Letter and Pre-Draft Survey can be found in Attachments H and I. The samples reported on the application did meet the current DEP Quantitation Limits (QLs) but MAWC still elected to resample for the pollutants included in the Pre-Draft Letter. The resampling results were provided to the DEP on October 28, 2022. Because MAWC elected to perform 10 additional samples, any samples that were considered to be “outliers” were removed from consideration. Additionally, because there were 10 samples to work with, the resampling data was evaluated using the TOXCONC model to get an AMEC value. However, removing two outliers from the free cyanide resampling data dropped the total number of samples below 10 so TOXCONC could no longer be used to

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evaluate the resampling data. Therefore, for free cyanide, the maximum value of the resampling data (13 µg/L) was entered into TMS. The TOXCONC inputs and results can be found in Attachment J. The TMS was run again using the updated sampling values (Attachment K). The following WQBELs were recommended for this facility as a result of the Reasonable Potential Analysis:

Pollutant	Average Monthly (µg/L)	Maximum Daily (µg/L)	IMAX (µg/L)
Total Copper	9.46	14.2	14.2
Free Cyanide	4.06	6.33	10.1
Dissolved Iron	Report	Report	Report
Total Zinc	Report	Report	Report
Chloroform	5.78	9.02	14.4
Dichlorobromomethane	1.1	1.72	2.75
Benzo(k)Fluoranthene	0.012	0.018	0.029
Bis(2-Ethylhexyl)Phthalate	0.37	0.58	0.93
Indeno(1,2,3-cd)Pyrene	0.001	0.002	0.003

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 5.0 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 CBOD₅, TSS, ammonia nitrogen. Average monthly mass loading limits will be established for CBOD₅, TSS, and ammonia nitrogen. Average weekly mass loading limits will be established for CBOD₅ and TSS. Mass loading limits will be calculated according to the formula below:

$$\begin{aligned} & \text{average annual design flow (MGD)} \times \text{concentration limit} \left(\frac{\text{mg}}{\text{L}} \right) \times 8.34 \text{ (conversion factor)} \\ & = \text{mass loading limit} \left(\frac{\text{lbs}}{\text{day}} \right) \end{aligned}$$

The following mass loading limitations were calculated and rounded according to DEP rounding guidance:

Parameter	Average Monthly (lbs/day)	Average Weekly (lbs/day)
CBOD ₅ (Nov 1 – Apr 30)	220	335
CBOD ₅ (May 1 – Oct 31)	125	185
TSS	310	475
Ammonia Nitrogen (Nov 1 – Apr 30)	55.5	—
Ammonia Nitrogen (May 1 – Oct 31)	23.9	—

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. Average monthly and average weekly mass loading limits for CBOD₅ have become more stringent. Due to DEP rounding guidance, the average monthly mass loading limits for TSS have become slightly more stringent. The average weekly mass loading limits from the last permit cycle will remain in place because they are slightly more stringent than what was calculated for this permit cycle. The average monthly mass loading limits for Ammonia-Nitrogen (Nov 1 – Apr 30) in the last permit cycle are more stringent than what is calculated above, therefore the limits from the last permit cycle will remain in place.

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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 BOD₅ 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. The "Daily Maximum" basis for the weekly average mass loading has been removed and updated to "Weekly Average" to more closely match the effluent sampling type and frequency.

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, quarterly sampling for nitrogen and phosphorus will be reimposed 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 1st 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.03	XXX	0.10	1/day	Grab

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 End of 2nd 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	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Copper, 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
Benzo(k)Fluoranthene (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
Bis(2-Ethylhexyl)Phthalate (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
Indeno(1,2,3-cd)Pyrene (ug/L)	XXX	XXX	XXX	Report	Report	XXX	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: Beginning of 3rd 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	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Copper, Total (ug/L)	XXX	XXX	XXX	9.46	14.2	14.2	1/week	24-Hr Composite
Cyanide, Free (ug/L)	XXX	XXX	XXX	4.06	6.33	10.1	1/week	24-Hr Composite
Benzo(k)Fluoranthene (ug/L)	XXX	XXX	XXX	0.012	0.018	0.029	1/week	24-Hr Composite
Dichlorobromomethane (ug/L)	XXX	XXX	XXX	5.78	9.02	14.4	1/week	24-Hr Composite
Bis(2-Ethylhexyl)Phthalate (ug/L)	XXX	XXX	XXX	0.37	0.58	0.93	1/week	24-Hr Composite
Chloroform (ug/L)	XXX	XXX	XXX	5.78	9.02	14.4	1/week	24-Hr Composite
Indeno(1,2,3-cd)Pyrene (ug/L)	XXX	XXX	XXX	0.001	0.002	0.003	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: Beginning of 2nd 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	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum		
Total Residual Chlorine (TRC)	XXX	XXX	XXX	0.011	XXX	0.035	1/day	Grab

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	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0 Daily Min	XXX	9.0 Daily Max	XXX	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) Nov 1 - Apr 30	220.0	335.0	XXX	17.0	27.0	36	2/week	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) May 1 - Oct 31	125.0	185.0	XXX	10.0	15.0	20	2/week	24-Hr Composite
Biochemical Oxygen Demand (BOD5) Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Total Suspended Solids	310.0	475.0	XXX	25.0	38.0	50	2/week	24-Hr Composite
Total Suspended Solids Raw Sewage Influent	Report	Report	XXX	Report	XXX	XXX	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia-Nitrogen Nov 1 - Apr 30	40.0	XXX	XXX	3.2	4.8	6.4	2/week	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	23.9	XXX	XXX	1.91	3.82	XXX	2/week	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Iron, Dissolved (ug/L)	XXX	XXX	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite
Zinc, Total (ug/L)	XXX	XXX	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 001

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

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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%, 98%, 95%, 48%, and 24%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 95%.

Summary of Four Most Recent Test Results

Comments: all tests were passed, see summary results below

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DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet			
Type of Test	Chronic	Facility Name	Mt Pleasant STP
Species Tested	Ceriodaphnia	Permit No.	PA0021148
Endpoint	Survival		
TIWC (decimal)	0.95		
No. Per Replicate	1		
TST b value	0.75		
TST alpha value	0.2		

Test Completion Date: 4/13/2020			Test Completion Date: 5/24/2021		
Replicate No.	Control	TIWC	Replicate No.	Control	TIWC
1	1	1	1	1	1
2	1	1	2	1	1
3	1	1	3	1	1
4	1	1	4	1	1
5	1	1	5	1	1
6	1	1	6	1	1
7	1	1	7	1	1
8	1	1	8	1	1
9	1	1	9	1	1
10	1	1	10	1	1
11			11		
12			12		
13			13		
14			14		
15			15		

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

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

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

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

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

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet			
Type of Test	Chronic	Facility Name	Mt Pleasant STP
Species Tested	Ceriodaphnia	Permit No.	PA0021148
Endpoint	Reproduction		
TIWC (decimal)	0.95		
No. Per Replicate	1		
TST b value	0.75		
TST alpha value	0.2		

Test Completion Date: 4/13/2020			Test Completion Date: 5/24/2021		
Replicate No.	Control	TIWC	Replicate No.	Control	TIWC
1	27	24	1	36	32
2	25	25	2	36	31
3	25	20	3	38	32
4	25	26	4	35	30
5	22	24	5	32	31
6	20	26	6	26	29
7	19	25	7	35	30
8	18	25	8	33	29
9	21	23	9	34	32
10	17	19	10	29	34
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	21.900	23.700	Mean	33.400	31.000
Std Dev.	3.446	2.406	Std Dev.	3.536	1.563
# Replicates	10	10	# Replicates	10	10

T-Test Result	6.5147		T-Test Result	6.0353	
Deg. of Freedom	17		Deg. of Freedom	17	
Critical T Value	0.8633		Critical T Value	0.8633	
Pass or Fail	PASS		Pass or Fail	PASS	

Test Completion Date: 5/9/2022			Test Completion Date: 5/9/2022		
Replicate No.	Control	TIWC	Replicate No.	Control	TIWC
1	27	30	1		
2	31	36	2		
3	27	31	3		
4	26	33	4		
5	24	29	5		
6	24	32	6		
7	24	33	7		
8	25	30	8		
9	21	30	9		
10	20	21	10		
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	24.300	31.100	Mean		
Std Dev.	3.143	4.725	Std Dev.		
# Replicates	10	10	# Replicates		

T-Test Result	7.4415		T-Test Result		
Deg. of Freedom	14		Deg. of Freedom		
Critical T Value	0.8681		Critical T Value		
Pass or Fail	PASS		Pass or Fail		

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DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet			
Type of Test	Chronic	Facility Name	Mt Pleasant STP
Species Tested	Pimephales	Permit No.	PA0021148
Endpoint	Survival		
TIWC (decimal)	0.95		
No. Per Replicate	10		
TST b value	0.75		
TST alpha value	0.25		

Test Completion Date: 4/14/2020			Test Completion Date: 5/25/2021		
Replicate e No.	Control	TIWC	Replicate e No.	Control	TIWC
1	1	0.9	1	1	1
2	1	0.9	2	1	1
3	1	0.5	3	1	1
4	1	0.9	4	1	1
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	1.000	0.800	Mean	1.000	1.000
Std Dev.	0.000	0.200	Std Dev.	0.000	0.000
# Replicates	4	4	# Replicates	4	4
T-Test Result	2.2018		T-Test Result		
Deg. of Freedom	3		Deg. of Freedom		
Critical T Value	0.7649		Critical T Value		
Pass or Fail	PASS		Pass or Fail	PASS	

Test Completion Date: 5/10/2022			Test Completion Date: 5/10/2022		
Replicate e No.	Control	TIWC	Replicate e No.	Control	TIWC
1	0.9	0.7	1		
2	1	0.9	2		
3	0.9	0.9	3		
4	1	0.7	4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	0.950	0.800	Mean		
Std Dev.	0.058	0.115	Std Dev.		
# Replicates	4	4	# Replicates		
T-Test Result	4.5480		T-Test Result		
Deg. of Freedom	4		Deg. of Freedom		
Critical T Value	0.7407		Critical T Value		
Pass or Fail	PASS		Pass or Fail		

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet			
Type of Test	Chronic	Facility Name	Mt Pleasant STP
Species Tested	Pimephales	Permit No.	PA0021148
Endpoint	Growth		
TIWC (decimal)	0.95		
No. Per Replicate	10		
TST b value	0.75		
TST alpha value	0.25		

Test Completion Date: 4/14/2020			Test Completion Date: 5/25/2021		
Replicate e No.	Control	TIWC	Replicate e No.	Control	TIWC
1	0.416	0.334	1	0.318	0.272
2	0.4	0.3811	2	0.331	0.262
3	0.351	0.312	3	0.316	0.269
4	0.366	0.355	4	0.3	0.261
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	0.383	0.346	Mean	0.316	0.266
Std Dev.	0.030	0.030	Std Dev.	0.013	0.005
# Replicates	4	4	# Replicates	4	4
T-Test Result	3.1328		T-Test Result	5.2701	
Deg. of Freedom	5		Deg. of Freedom	5	
Critical T Value	0.7267		Critical T Value	0.7267	
Pass or Fail	PASS		Pass or Fail	PASS	

Test Completion Date: 5/10/2022			Test Completion Date: 5/10/2022		
Replicate e No.	Control	TIWC	Replicate e No.	Control	TIWC
1	0.283	0.284	1		
2	0.292	0.29	2		
3	0.263	0.246	3		
4	0.32	0.385	4		
5			5		
6			6		
7			7		
8			8		
9			9		
10			10		
11			11		
12			12		
13			13		
14			14		
15			15		

Mean	0.291	0.301	Mean		
Std Dev.	0.022	0.059	Std Dev.		
# Replicates	4	4	# Replicates		
T-Test Result	2.7080		T-Test Result		
Deg. of Freedom	4		Deg. of Freedom		
Critical T Value	0.7407		Critical T Value		
Pass or Fail	PASS		Pass or Fail		

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

WET Summary and Evaluation

Facility Name	Mt Pleasant STP
Permit No.	PA0021148
Design Flow (MGD)	1.5
Q ₇₋₁₀ Flow (cfs)	0.0319
PMF _s	1
PMF _o	1

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Ceriodaphnia	Survival	4/13/20	5/24/21	5/9/22	
		PASS	PASS	PASS	

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Ceriodaphnia	Reproduction	4/13/20	5/24/21	5/9/22	
		PASS	PASS	PASS	

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Pimephales	Survival	4/14/20	5/25/21	5/10/22	
		PASS	PASS	PASS	

Species	Endpoint	Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Pimephales	Growth	4/14/20	5/25/21	5/10/22	
		PASS	PASS	PASS	

Reasonable Potential? NO

Permit Recommendations

Test Type Chronic
TIWC 99 % Effluent
Dilution Series 25, 50, 74, 99, 100 % Effluent
Permit Limit None
Permit Limit Species

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

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):

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

$$[(1.5 \text{ MGD} \times 1.547) / ((0.319 \text{ cfs} \times 1) + (1.5 \text{ MGD} \times 1.547))] \times 100 = \mathbf{98.6\%}$$

Is IWCa < 1%? ☐ YES ☒ NO

If the discharge is to the tidal portion of the Delaware River, indicate how the type of test was determined:

N/A

Type of Test for Permit Renewal: CHRONIC

2. Determine Target IWCc (If Chronic Tests Required)

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

$$[(1.5 \text{ MGD} \times 1.547) / ((0.0319 \text{ cfs} \times 1) + (1.5 \text{ MGD} \times 1.547))] \times 100 = \mathbf{98.6\% = 99\%}$$

3. Determine Dilution Series

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

Dilution Series = 100%, 99%, 74%, 50%, and 25%.

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

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

NPDES Permit Fact Sheet

**NPDES Permit No. PA0021148
Mt Pleasant Borough STP**

**ATTACHMENT B:
WET Testing Correspondence**

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

Polakoski, Grace

From: Katelyn Warheit <KWarheit@mawc.org>
Sent: Wednesday, November 2, 2022 12:04 PM
To: Polakoski, Grace; James Peperak
Cc: Dominic Garofola
Subject: [External] RE: Mt Pleasant STP 2019 WET Tests

ATTENTION: This email message is from an external sender. Do not open links or attachments from unknown senders. To report suspicious email, use the [Report Phishing button in Outlook](#).

Hi Grace,

MAWC acquired Mt. Pleasant Borough STP in August 2020. It is my understanding that the previous permittee, Mt. Pleasant Borough, did not complete a WET Test in 2019.

Thanks,

Katelyn Warheit | Environmental Compliance Superintendent
Municipal Authority of Westmoreland County
Cell: 724-454-0233
Email: kwarheit@mawc.org

From: Polakoski, Grace <grpolakosk@pa.gov>
Sent: Wednesday, November 2, 2022 11:56 AM
To: Katelyn Warheit <KWarheit@mawc.org>; James Peperak <JPeperak@mawc.org>
Cc: Dominic Garofola <dominic.garofola@Gibson-thomas.com>
Subject: Mt Pleasant STP 2019 WET Tests

CAUTION: This email originated from outside the organization. DO NOT click links or open attachments unless you recognize the sender and know the content is safe.

Hi Katie,

Can you please respond to this email with a pdf of the 2019 WET Tests for Mt Pleasant? Generally, all 4 of the WETT should be reported on the renewal application on the summary form.

Thanks,

Grace Polakoski (she/her) | Environmental Engineering Specialist
Department of Environmental Protection | Clean Water
South West Regional Office Building
400 Waterfront Drive | Pittsburgh, PA 15222
Phone: 412.442.4068
www.dep.pa.gov

DEP is now accepting permit and authorization applications, as well as other documents and correspondence, electronically through the OnBase Electronic Forms Upload tool. Please use the link below to view the webpage, get instructions, and submit documents:

<https://www.dep.pa.gov/DataandTools/Pages/Application-Form-Upload.aspx>

NPDES Permit Fact Sheet

**NPDES Permit No. PA0021148
Mt Pleasant Borough STP**

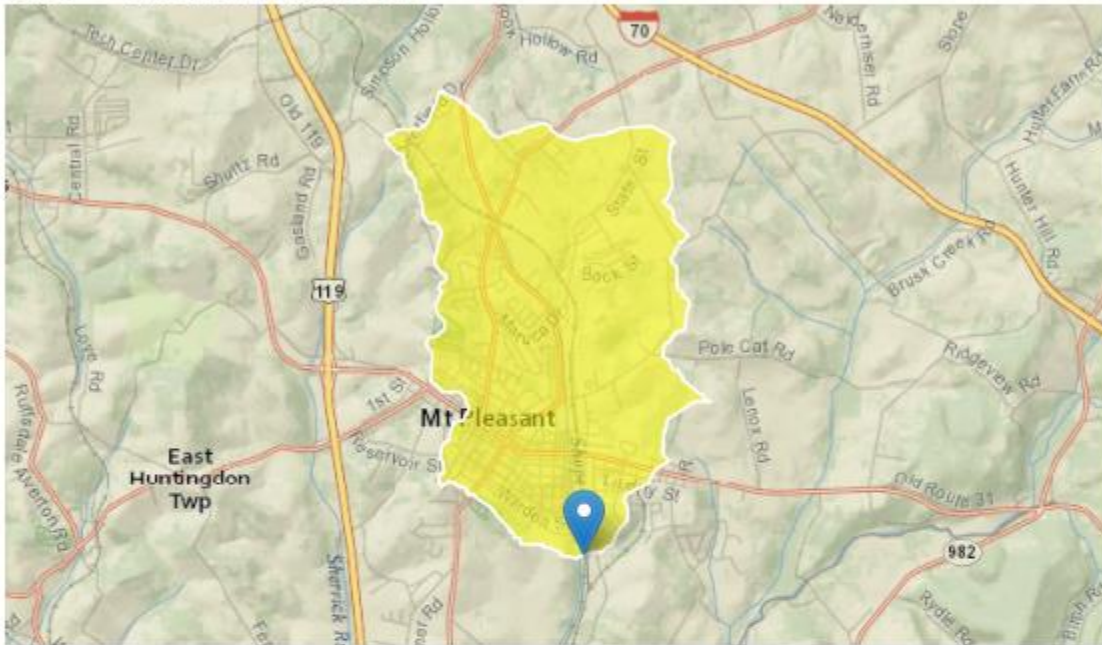
**ATTACHMENT C:
USGS StreamStats**

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

StreamStats Report

Region ID: PA
Workspace ID: PA20220627143451326000
Clicked Point (Latitude, Longitude): 40.13940, -79.53374
Time: 2022-06-27 10:35:19 -0400



[+ Collapse All](#)

➤ Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	3.05	square miles
ELEV	Mean Basin Elevation	1160	feet

➤ Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	3.05	square miles	2.26	1400
ELEV	Mean Basin Elevation	1160	feet	1050	2580

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

PII: Prediction Interval-Lower, PIU: 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	0.0972	ft ³ /s	43	43
30 Day 2 Year Low Flow	0.178	ft ³ /s	38	38
7 Day 10 Year Low Flow	0.0319	ft ³ /s	66	66
30 Day 10 Year Low Flow	0.0626	ft ³ /s	54	54
90 Day 10 Year Low Flow	0.12	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/>)

USGS Data Disclaimer: Unless otherwise stated, all data, metadata and related materials are considered to satisfy the quality standards relative to the purpose for which the data were collected. Although these data and associated metadata have been reviewed for accuracy and completeness and approved for release by the U.S. Geological Survey (USGS), no warranty expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.10.0

StreamStats Services Version: 1.2.22

NSS Services Version: 2.2.1

ATTACHMENT D:
WQM7.0 Modeling Results (Summer)

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

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
19D	37958	SHUPE RUN	1.140	1052.00	3.05	0.00000	0.00	<input checked="" type="checkbox"/>

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)	pH	Stream Temp (°C)	pH
Q7-10	0.010	0.03	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
Mt Pleasant STP	PA0021148	0.0000	0.0000	1.5000	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

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

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
19D	37958	SHUPE RUN	0.540	1047.00	3.48	0.00000	0.00	<input checked="" type="checkbox"/>

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)	pH	Stream Temp (°C)	pH
Q7-10	0.011	0.04	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	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	5		

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

WQM 7.0 Hydrodynamic Outputs

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>								
19D		37958		SHUPE RUN								
RMI	Stream Flow	PWS With	Net Stream Flow	Disc Analysis Flow	Reach Slope	Depth	Width	W/D Ratio	Velocity	Reach Trav Time	Analysis Temp	Analysis pH
	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft)	(ft)		(fps)	(days)	(°C)	
Q7-10 Flow												
1.140	0.03	0.00	0.03	2.3205	0.00158	.588	16.6	28.25	0.24	0.152	20.07	7.00
Q1-10 Flow												
1.140	0.02	0.00	0.02	2.3205	0.00158	NA	NA	NA	0.24	0.152	20.04	7.00
Q30-10 Flow												
1.140	0.04	0.00	0.04	2.3205	0.00158	NA	NA	NA	0.24	0.152	20.09	7.00

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name			
19D	37958	SHUPE RUN			
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>		<u>Analysis pH</u>	
1.140	1.500	20.068		7.000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>		<u>Reach Velocity (fps)</u>	
16.599	0.588	28.249		0.241	
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>		<u>Reach Kn (1/days)</u>	
9.89	0.598	1.89		0.704	
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>		<u>Reach DO Goal (mg/L)</u>	
5.044	3.623	Tsilvoglou		5	
<u>Reach Travel Time (days)</u>	Subreach Results				
0.152	TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)	
	0.015	9.80	1.86	5.04	
	0.030	9.71	1.85	5.05	
	0.046	9.62	1.83	5.05	
	0.061	9.54	1.81	5.05	
	0.076	9.45	1.79	5.06	
	0.091	9.36	1.77	5.07	
	0.106	9.28	1.75	5.08	
	0.122	9.20	1.73	5.09	
	0.137	9.11	1.71	5.11	
	0.152	9.03	1.69	5.12	

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>							
19D	37958	SHUPE RUN							
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		
1.140	Mt Pleasant STP	16.7	16.85	16.7	16.85	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		
1.140	Mt Pleasant STP	1.88	1.91	1.88	1.91	0	0		
Dissolved Oxygen Allocations									
RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
1.14	Mt Pleasant STP	10	10	1.91	1.91	5	5	0	0

WQM 7.0 Effluent Limits

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>					
19D	37958	SHUPE RUN					
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)
1.140	Mt Pleasant STP	PA0021148	0.000	CBOD5	10		
				NH3-N	1.91	3.82	
				Dissolved Oxygen			5

ATTACHMENT E:
WQM7.0 Modeling Results (Winter)

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

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
19D	37958	SHUPE RUN	1.140	1052.00	3.05	0.00000	0.00	<input checked="" type="checkbox"/>

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)	pH	Stream Temp (°C)	pH
Q7-10	0.021	0.03	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
Mt Pleasant STP	PA0021148	0.0000	0.0000	1.5000	0.000	5.00	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
19D	37958	SHUPE RUN	0.540	1047.00	3.48	0.00000	0.00	<input checked="" type="checkbox"/>

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)	pH	Stream Temp (°C)	pH
Q7-10	0.022	0.04	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

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	<input checked="" type="checkbox"/>
WLA Method	EMPR	Use Inputted W/D Ratio	<input type="checkbox"/>
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	<input type="checkbox"/>
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	<input checked="" type="checkbox"/>
D.O. Saturation	90.00%	Use Balanced Technology	<input checked="" type="checkbox"/>
D.O. Goal	5		

WQM 7.0 Hydrodynamic Outputs

<u>SWP Basin</u>			<u>Stream Code</u>			<u>Stream Name</u>						
19D			37958			SHUPE RUN						
RMI	Stream Flow	PWS With	Net Stream Flow	Disc Analysis Flow	Reach Slope	Depth	Width	W/D Ratio	Velocity	Reach Trav Time	Analysis Temp	Analysis pH
	(cfs)	(cfs)	(cfs)	(cfs)	(ft/ft)	(ft)	(ft)		(fps)	(days)	(°C)	
Q7-10 Flow												
1.140	0.03	0.00	0.03	2.3205	0.00158	.588	16.6	28.25	0.24	0.152	5.00	7.00
Q1-10 Flow												
1.140	0.02	0.00	0.02	2.3205	0.00158	NA	NA	NA	0.24	0.152	5.00	7.00
Q30-10 Flow												
1.140	0.04	0.00	0.04	2.3205	0.00158	NA	NA	NA	0.24	0.152	5.00	7.00

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

WQM 7.0 D.O. Simulation

SWP Basin	Stream Code	Stream Name	
19D	37958	SHUPE RUN	
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>	<u>Analysis pH</u>
1.140	1.500	5.000	7.000
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>
16.599	0.588	28.249	0.241
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>	<u>Reach Kn (1/days)</u>
17.64	1.069	4.38	0.221
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>	<u>Reach DO Goal (mg/L)</u>
5.102	2.534	Tsilvoglou	5
<u>Reach Travel Time (days)</u>	Subreach Results		
0.152	<u>TravTime (days)</u>	<u>CBOD5 (mg/L)</u>	<u>NH3-N (mg/L)</u>
			<u>D.O. (mg/L)</u>
	0.015	17.49	4.37
	0.030	17.35	4.35
	0.046	17.21	4.34
	0.061	17.07	4.33
	0.076	16.93	4.31
	0.091	16.79	4.30
	0.106	16.66	4.28
	0.122	16.52	4.27
	0.137	16.39	4.25
	0.152	16.25	4.24

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
19D	37958	SHUPE RUN

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
1.140	Mt Pleasant STP	24.1	24.32	24.1	24.32	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
1.140	Mt Pleasant STP	4.36	4.44	4.36	4.44	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
1.14	Mt Pleasant STP	17.85	17.85	4.44	4.44	5	5	0	0

WQM 7.0 Effluent Limits

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
19D	37958	SHUPE RUN

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)
1.140	Mt Pleasant STP	PA0021148	0.000	CBOD5	17.85		
				NH3-N	4.44	8.88	
				Dissolved Oxygen			5

NPDES Permit Fact Sheet

**NPDES Permit No. PA0021148
Mt Pleasant Borough STP**

**ATTACHMENT F:
TRC_CALC Modeling Results**

NPDES Permit Fact Sheet

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Mt Pleasant Borough STP

TRC EVALUATION			
Input appropriate values in A3:A9 and D3:D9			
0.0319	= Qstream (cfs)	0.5	= CV Daily
1.5	= Qdischarge (MGD)	0.5	= CV Hourly
30	= no. samples	1	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	1	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)		= Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 0.023	1.3.2.iii	WLA cfc = 0.015
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc = 0.009	5.1d	LTA_cfc = 0.009

Source	Effluent Limit Calculations
PENTOXSD TRG	5.1f AML MULT = 1.231
PENTOXSD TRG	5.1g AVG MON LIMIT (mg/l) = 0.011 AFC
	INST MAX LIMIT (mg/l) = 0.035

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

ATTACHMENT G:
TMS Modeling Results (original samples)

NPDES Permit Fact Sheet

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Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions Discharge Stream

Facility: **Mount Pleasant STP** NPDES Permit No.: **PA0021148** 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
1.5	100	7.3					

Discharge Pollutant	Units	Max Discharge Conc	0 if left blank		0.5 if left blank		0 if left blank		1 if left blank	
			Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod
Group 1	Total Dissolved Solids (PWS)	mg/L	517							
	Chloride (PWS)	mg/L	165							
	Bromide	mg/L	0.273							
	Sulfate (PWS)	mg/L	1050							
	Fluoride (PWS)	mg/L								
Group 2	Total Aluminum	µg/L	75							
	Total Antimony	µg/L	0.3							
	Total Arsenic	µg/L	< 0.4							
	Total Barium	µg/L	63							
	Total Beryllium	µg/L	< 1							
	Total Boron	µg/L	135							
	Total Cadmium	µg/L	< 0.1							
	Total Chromium (III)	µg/L	< 2							
	Hexavalent Chromium	µg/L	0.2							
	Total Cobalt	µg/L	< 0.2							
	Total Copper	µg/L	11							
	Free Cyanide	µg/L	5							
	Total Cyanide	µg/L	3							
	Dissolved Iron	µg/L	64							
	Total Iron	µg/L	57.4							
	Total Lead	µg/L	< 0.3							
	Total Manganese	µg/L	10							
	Total Mercury	µg/L	< 0.1							
	Total Nickel	µg/L	< 2							
	Total Phenols (Phenolics) (PWS)	µg/L	27							
	Total Selenium	µg/L	< 0.5							
	Total Silver	µg/L	< 0.2							
	Total Thallium	µg/L	< 0.05							
	Total Zinc	µg/L	28							
	Total Molybdenum	µg/L	< 4							
	Acrolein	µg/L	< 0.9							
	Acrylamide	µg/L	<							
	Acrylonitrile	µg/L	< 0.3							
	Benzene	µg/L	< 0.04							
	Bromoform	µg/L	< 0.1							
	Carbon Tetrachloride	µg/L	< 0.1							

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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Mount Pleasant STP, NPDES Permit No. PA0021148, Outfall 001

Instructions Discharge **Stream**

Receiving Surface Water Name: **Shupe Run (WWF)**

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	037958	1.14	1052	3.05			Yes
End of Reach 1	037958	0.54	1047	3.48			Yes

Q₇₋₁₀

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	1.14	0.0105			28.25							100	7		
End of Reach 1	0.54	0.0107			28.25										

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	1.14														
End of Reach 1	0.54														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Mount Pleasant STP, NPDES Permit No. PA0021148, Outfall 001

Instructions

Results

RETURN TO INPUTS

SAVE AS PDF

PRINT

All

Inputs

Results

Limits

Hydrodynamics

Q₇₋₁₀

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)
1.14	0.03		0.03	2.321	0.002	0.588	16.6	28.25	0.241	0.152	0.004
0.54	0.04		0.037					28.250			

Q_n

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)
1.14	0.37		0.37	2.321	0.002	0.623	16.6	26.642	0.26	0.141	0.361
0.54	0.413		0.41								

Wasteload Allocations

AFC

CCT (min): 0.004

PMF: 1

Analysis Hardness (mg/l): 100

Analysis pH: 7.29

Pollutants	Stream Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	760	
Total Antimony	0	0		0	1,100	1,100	1,115	
Total Arsenic	0	0		0	340	340	345	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	21,290	
Total Boron	0	0		0	8,100	8,100	8,212	
Total Cadmium	0	0		0	2.014	2.13	2.16	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	569.763	1,803	1,828	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	16.5	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	96.3	
Total Copper	0	0		0	13.439	14.0	14.2	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	22.3	

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Dissolved Iron	0	0	0	N/A	N/A	N/A	
Total Iron	0	0	0	N/A	N/A	N/A	
Total Lead	0	0	0	64.581	81.6	82.8	Chem Translator of 0.791 applied
Total Manganese	0	0	0	N/A	N/A	N/A	
Total Mercury	0	0	0	1.400	1.65	1.67	Chem Translator of 0.85 applied
Total Nickel	0	0	0	468.236	469	476	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0	0	N/A	N/A	N/A	
Total Selenium	0	0	0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0	0	3.217	3.78	3.84	Chem Translator of 0.85 applied
Total Thallium	0	0	0	65	65.0	65.9	
Total Zinc	0	0	0	117.180	120	121	Chem Translator of 0.978 applied
Acrolein	0	0	0	3	3.0	3.04	
Acrylonitrile	0	0	0	650	650	659	
Benzene	0	0	0	640	640	649	
Bromoform	0	0	0	1,800	1,800	1,825	
Carbon Tetrachloride	0	0	0	2,800	2,800	2,839	
Chlorobenzene	0	0	0	1,200	1,200	1,217	
Chlorodibromomethane	0	0	0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0	0	18,000	18,000	18,248	
Chloroform	0	0	0	1,900	1,900	1,926	
Dichlorobromomethane	0	0	0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0	0	15,000	15,000	15,207	
1,1-Dichloroethylene	0	0	0	7,500	7,500	7,604	
1,2-Dichloropropane	0	0	0	11,000	11,000	11,152	
1,3-Dichloropropylene	0	0	0	310	310	314	
Ethylbenzene	0	0	0	2,900	2,900	2,940	
Methyl Bromide	0	0	0	550	550	558	
Methyl Chloride	0	0	0	28,000	28,000	28,386	
Methylene Chloride	0	0	0	12,000	12,000	12,166	
1,1,2,2-Tetrachloroethane	0	0	0	1,000	1,000	1,014	
Tetrachloroethylene	0	0	0	700	700	710	
Toluene	0	0	0	1,700	1,700	1,723	
1,2-trans-Dichloroethylene	0	0	0	6,800	6,800	6,894	
1,1,1-Trichloroethane	0	0	0	3,000	3,000	3,041	
1,1,2-Trichloroethane	0	0	0	3,400	3,400	3,447	
Trichloroethylene	0	0	0	2,300	2,300	2,332	
Vinyl Chloride	0	0	0	N/A	N/A	N/A	
2-Chlorophenol	0	0	0	560	560	568	
2,4-Dichlorophenol	0	0	0	1,700	1,700	1,723	
2,4-Dimethylphenol	0	0	0	660	660	669	
4,6-Dinitro-o-Cresol	0	0	0	80	80.0	81.1	
2,4-Dinitrophenol	0	0	0	660	660	669	
2-Nitrophenol	0	0	0	8,000	8,000	8,110	
4-Nitrophenol	0	0	0	2,300	2,300	2,332	
p-Chloro-m-Cresol	0	0	0	160	160	162	
Pentachlorophenol	0	0	0	11.724	11.7	11.9	
Phenol	0	0	0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0	0	460	460	466	

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Acenaphthene	0	0		0	83	83.0	84.1
Anthracene	0	0		0	N/A	N/A	N/A
Benzidine	0	0		0	300	300	304
Benzo(a)Anthracene	0	0		0	0.5	0.5	0.51
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	30,414
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	4,562
4-Bromophenyl Phenyl Ether	0	0		0	270	270	274
Butyl Benzyl Phthalate	0	0		0	140	140	142
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A
Chrysene	0	0		0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0		0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0		0	820	820	831
1,3-Dichlorobenzene	0	0		0	350	350	355
1,4-Dichlorobenzene	0	0		0	730	730	740
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A
Diethyl Phthalate	0	0		0	4,000	4,000	4,055
Dimethyl Phthalate	0	0		0	2,500	2,500	2,535
Di-n-Butyl Phthalate	0	0		0	110	110	112
2,4-Dinitrotoluene	0	0		0	1,600	1,600	1,622
2,6-Dinitrotoluene	0	0		0	990	990	1,004
1,2-Diphenylhydrazine	0	0		0	15	15.0	15.2
Fluoranthene	0	0		0	200	200	203
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	10.1
Hexachlorocyclopentadiene	0	0		0	5	5.0	5.07
Hexachloroethane	0	0		0	60	60.0	60.8
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A
Isophorone	0	0		0	10,000	10,000	10,138
Naphthalene	0	0		0	140	140	142
Nitrobenzene	0	0		0	4,000	4,000	4,055
n-Nitrosodimethylamine	0	0		0	17,000	17,000	17,235
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A
n-Nitrosodiphenylamine	0	0		0	300	300	304
Phenanthrene	0	0		0	5	5.0	5.07
Pyrene	0	0		0	N/A	N/A	N/A
1,2,4-Trichlorobenzene	0	0		0	130	130	132

☒ CFC

CCT (min): 0.004

PMF: 1

Analysis Hardness (mg/l): 100

Analysis pH: 7.29

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	

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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	223	
Total Arsenic	0	0		0	150	150	152	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	4,157	
Total Boron	0	0		0	1,600	1,600	1,622	
Total Cadmium	0	0		0	0.246	0.27	0.27	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.115	86.2	87.4	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	10.5	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	19.3	
Total Copper	0	0		0	8.956	9.33	9.46	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	5.27	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	1,521	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.517	3.18	3.23	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	0.92	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.007	52.2	52.9	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	5.06	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	13.2	
Total Zinc	0	0		0	118.139	120	121	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	3.04	
Acrylonitrile	0	0		0	130	130	132	
Benzene	0	0		0	130	130	132	
Bromoform	0	0		0	370	370	375	
Carbon Tetrachloride	0	0		0	560	560	568	
Chlorobenzene	0	0		0	240	240	243	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	3,548	
Chloroform	0	0		0	390	390	395	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	3,143	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,521	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,230	
1,3-Dichloropropylene	0	0		0	61	61.0	61.8	
Ethylbenzene	0	0		0	580	580	588	
Methyl Bromide	0	0		0	110	110	112	
Methyl Chloride	0	0		0	5,500	5,500	5,576	
Methylene Chloride	0	0		0	2,400	2,400	2,433	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	213	
Tetrachloroethylene	0	0		0	140	140	142	
Toluene	0	0		0	330	330	335	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	1,419	
1,1,1-Trichloroethane	0	0		0	610	610	618	

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1,1,2-Trichloroethane	0	0		0	680	680	689
Trichloroethylene	0	0		0	450	450	456
Vinyl Chloride	0	0		0	N/A	N/A	N/A
2-Chlorophenol	0	0		0	110	110	112
2,4-Dichlorophenol	0	0		0	340	340	345
2,4-Dimethylphenol	0	0		0	130	130	132
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	16.2
2,4-Dinitrophenol	0	0		0	130	130	132
2-Nitrophenol	0	0		0	1,600	1,600	1,622
4-Nitrophenol	0	0		0	470	470	476
p-Chloro-m-Cresol	0	0		0	500	500	507
Pentachlorophenol	0	0		0	8,995	8.99	9.12
Phenol	0	0		0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0		0	91	91.0	92.3
Acenaphthene	0	0		0	17	17.0	17.2
Anthracene	0	0		0	N/A	N/A	N/A
Benidine	0	0		0	59	59.0	59.8
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.1
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A
Bis(2-Chloroethyl)Ether	0	0		0	6,000	6,000	6,083
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	923
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	54.7
Butyl Benzyl Phthalate	0	0		0	35	35.0	35.5
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A
Chrysene	0	0		0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0		0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0		0	160	160	162
1,3-Dichlorobenzene	0	0		0	69	69.0	70.0
1,4-Dichlorobenzene	0	0		0	150	150	152
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A
Diethyl Phthalate	0	0		0	800	800	811
Dimethyl Phthalate	0	0		0	500	500	507
Di-n-Butyl Phthalate	0	0		0	21	21.0	21.3
2,4-Dinitrotoluene	0	0		0	320	320	324
2,6-Dinitrotoluene	0	0		0	200	200	203
1,2-Diphenylhydrazine	0	0		0	3	3.0	3.04
Fluoranthene	0	0		0	40	40.0	40.6
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	2.03
Hexachlorocyclopentadiene	0	0		0	1	1.0	1.01
Hexachloroethane	0	0		0	12	12.0	12.2
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A

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Isophorone	0	0	0	2,100	2,100	2,129
Naphthalene	0	0	0	43	43.0	43.6
Nitrobenzene	0	0	0	810	810	821
n-Nitrosodimethylamine	0	0	0	3,400	3,400	3,447
n-Nitrosodi-n-Propylamine	0	0	0	N/A	N/A	N/A
n-Nitrosodiphenylamine	0	0	0	59	59.0	59.8
Phenanthrene	0	0	0	1	1.0	1.01
Pyrene	0	0	0	N/A	N/A	N/A
1,2,4-Trichlorobenzene	0	0	0	26	26.0	26.4

☒ THH

CCT (min): 0.004

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	0	500,000	500,000	N/A	
Chloride (PWS)	0	0	0	0	250,000	250,000	N/A	
Sulfate (PWS)	0	0	0	0	250,000	250,000	N/A	
Total Aluminum	0	0	0	0	N/A	N/A	N/A	
Total Antimony	0	0	0	0	5.6	5.6	5.68	
Total Arsenic	0	0	0	0	10	10.0	10.1	
Total Barium	0	0	0	0	2,400	2,400	2,433	
Total Boron	0	0	0	0	3,100	3,100	3,143	
Total Cadmium	0	0	0	0	N/A	N/A	N/A	
Total Chromium (III)	0	0	0	0	N/A	N/A	N/A	
Hexavalent Chromium	0	0	0	0	N/A	N/A	N/A	
Total Cobalt	0	0	0	0	N/A	N/A	N/A	
Total Copper	0	0	0	0	N/A	N/A	N/A	
Free Cyanide	0	0	0	0	4	4.0	4.06	
Dissolved Iron	0	0	0	0	300	300	304	
Total Iron	0	0	0	0	N/A	N/A	N/A	
Total Lead	0	0	0	0	N/A	N/A	N/A	
Total Manganese	0	0	0	0	1,000	1,000	1,014	
Total Mercury	0	0	0	0	0.050	0.05	0.051	
Total Nickel	0	0	0	0	610	610	618	
Total Phenols (Phenolics) (PWS)	0	0	0	0	5	5.0	N/A	
Total Selenium	0	0	0	0	N/A	N/A	N/A	
Total Silver	0	0	0	0	N/A	N/A	N/A	
Total Thallium	0	0	0	0	0.24	0.24	0.24	
Total Zinc	0	0	0	0	N/A	N/A	N/A	
Acrolein	0	0	0	0	3	3.0	3.04	
Acrylonitrile	0	0	0	0	N/A	N/A	N/A	
Benzene	0	0	0	0	N/A	N/A	N/A	
Bromoform	0	0	0	0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0	0	0	N/A	N/A	N/A	
Chlorobenzene	0	0	0	0	100	100.0	101	
Chlorodibromomethane	0	0	0	0	N/A	N/A	N/A	

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2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A
Chloroform	0	0		0	5.7	5.7	5.78
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	33.5
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	68.9
Methyl Bromide	0	0		0	100	100.0	101
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	57.8
1,2-trans-Dichloroethylene	0	0		0	100	100.0	101
1,1,1-Trichloroethane	0	0		0	10,000	10,000	10,138
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	30.4
2,4-Dichlorophenol	0	0		0	10	10.0	10.1
2,4-Dimethylphenol	0	0		0	100	100.0	101
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	2.03
2,4-Dinitrophenol	0	0		0	10	10.0	10.1
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	4,055
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A
Acenaphthene	0	0		0	70	70.0	71.0
Anthracene	0	0		0	300	300	304
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	203
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	0.1
2-Chloronaphthalene	0	0		0	800	800	811
Chrysene	0	0		0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0		0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0		0	1,000	1,000	1,014

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1,3-Dichlorobenzene	0	0		0	7	7.0	7.1	
1,4-Dichlorobenzene	0	0		0	300	300	304	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	608	
Dimethyl Phthalate	0	0		0	2,000	2,000	2,028	
Di-n-Butyl Phthalate	0	0		0	20	20.0	20.3	
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	20.3	
Fluorene	0	0		0	50	50.0	50.7	
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	4.06	
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	34.5	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	10.1	
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	20.3	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.071	

☒ CRL

CCT (min): 0.361

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	

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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	0.069
Benzene	0	0		0	0.58	0.58	0.67
Bromoform	0	0		0	7	7.0	8.11
Carbon Tetrachloride	0	0		0	0.4	0.4	0.46
Chlorobenzene	0	0		0	N/A	N/A	N/A
Chlorodibromomethane	0	0		0	0.8	0.8	0.93
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	1.1
1,2-Dichloroethane	0	0		0	9.9	9.9	11.5
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A
1,2-Dichloropropane	0	0		0	0.9	0.9	1.04
1,3-Dichloropropylene	0	0		0	0.27	0.27	0.31
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	23.2
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	0.23
Tetrachloroethylene	0	0		0	10	10.0	11.6
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	0.64
Trichloroethylene	0	0		0	0.6	0.6	0.69
Vinyl Chloride	0	0		0	0.02	0.02	0.023
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	0.035
Phenol	0	0		0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	1.74

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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	0.0001
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.001
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.0001
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.001
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.012
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.035
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	0.37
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	0.14
Dibenzo(a,h)Anthracene	0	0		0	0.0001	0.0001	0.0001
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	0.058
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	0.058
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.058
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.035
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	0.00009
Hexachlorobutadiene	0	0		0	0.01	0.01	0.012
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A
Hexachloroethane	0	0		0	0.1	0.1	0.12
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.001
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	0.0008
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.006
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	3.82
Phenanthrene	0	0		0	N/A	N/A	N/A
Pyrene	0	0		0	N/A	N/A	N/A
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A

☐ Recommended WQBELs & Monitoring Requirements

No. Samples/Month: 4

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Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Total Copper	0.12	0.18	9.46	14.2	14.2	µg/L	9.46	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	0.051	0.079	4.06	6.33	10.1	µg/L	4.06	THH	Discharge Conc ≥ 50% WQBEL (RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	304	THH	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	120	AFC	Discharge Conc > 10% WQBEL (no RP)
Chloroform	0.072	0.11	5.78	9.02	14.4	µg/L	5.78	THH	Discharge Conc ≥ 50% WQBEL (RP)
Dichlorobromomethane	0.014	0.021	1.1	1.72	2.75	µg/L	1.1	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Benzo(k)Fluoranthene	0.0001	0.0002	0.012	0.018	0.029	µg/L	0.012	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Bis(2-Ethylhexyl)Phthalate	0.005	0.007	0.37	0.58	0.93	µg/L	0.37	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Indeno(1,2,3-cd)Pyrene	0.00001	0.00002	0.001	0.002	0.003	µg/L	0.001	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 Antimony	5.68	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	2,433	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	1,622	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	0.27	µg/L	Discharge Conc < TQL
Total Chromium (III)	87.4	µg/L	Discharge Conc < TQL
Hexavalent Chromium	10.5	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	19.3	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Total Iron	1,521	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	3.23	µg/L	Discharge Conc < TQL
Total Manganese	1,014	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.051	µg/L	Discharge Conc < TQL
Total Nickel	52.9	µg/L	Discharge Conc < TQL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	5.06	µg/L	Discharge Conc < TQL
Total Silver	3.78	µg/L	Discharge Conc < TQL
Total Thallium	0.24	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	3.0	µg/L	Discharge Conc < TQL
Acrylonitrile	0.069	µg/L	Discharge Conc < TQL

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Benzene	0.67	µg/L	Discharge Conc < TQL
Bromoform	8.11	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	0.46	µg/L	Discharge Conc < TQL
Chlorobenzene	101	µg/L	Discharge Conc < TQL
Chlorodibromomethane	0.93	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	3,548	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	11.5	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	33.5	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	1.04	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	0.31	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	68.9	µg/L	Discharge Conc < TQL
Methyl Bromide	101	µg/L	Discharge Conc < TQL
Methyl Chloride	5,576	µg/L	Discharge Conc < TQL
Methylene Chloride	23.2	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	0.23	µg/L	Discharge Conc < TQL
Tetrachloroethylene	11.6	µg/L	Discharge Conc < TQL
Toluene	57.8	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	101	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	618	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	0.64	µg/L	Discharge Conc < TQL
Trichloroethylene	0.69	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.023	µg/L	Discharge Conc < TQL
2-Chlorophenol	30.4	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	10.1	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	101	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2.03	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	10.1	µg/L	Discharge Conc < TQL
2-Nitrophenol	1,622	µg/L	Discharge Conc < TQL
4-Nitrophenol	476	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.035	µg/L	Discharge Conc < TQL
Phenol	4,055	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	1.74	µg/L	Discharge Conc < TQL
Acenaphthene	17.2	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	304	µg/L	Discharge Conc < TQL
Benzidine	0.0001	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.001	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.0001	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.001	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.035	µg/L	Discharge Conc < TQL

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Bis(2-Chloroisopropyl)Ether	203	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	54.7	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.1	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	811	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.14	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthracene	0.0001	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	162	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	7.1	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	152	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	0.058	µg/L	Discharge Conc < TQL
Diethyl Phthalate	608	µg/L	Discharge Conc ≤ 25% WQBEL
Dimethyl Phthalate	507	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	20.3	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	0.058	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.058	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.035	µg/L	Discharge Conc < TQL
Fluoranthene	20.3	µg/L	Discharge Conc < TQL
Fluorene	50.7	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.00009	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.012	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.01	µg/L	Discharge Conc < TQL
Hexachloroethane	0.12	µg/L	Discharge Conc < TQL
Isophorone	34.5	µg/L	Discharge Conc < TQL
Naphthalene	43.6	µg/L	Discharge Conc < TQL
Nitrobenzene	10.1	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.0008	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.006	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	3.82	µg/L	Discharge Conc < TQL
Phenanthrene	1.01	µg/L	Discharge Conc < TQL
Pyrene	20.3	µg/L	Discharge Conc ≤ 25% WQBEL
1,2,4-Trichlorobenzene	0.071	µg/L	Discharge Conc < TQL

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Mt Pleasant Borough STP**

**ATTACHMENT H:
Pre-Draft Letter**

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP



June 28, 2022

VIA ELECTRONIC MAIL:

Norman Stout Jr.
Municipal Authority of Westmoreland County
124 Park and Pool Rd
New Stanton, PA 15672

Dear Norman Stout:

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 Copper	9.46	14.2	14.2
001	Free Cyanide	4.06	6.33	10.1
001	Dissolved Iron	Report	Report	Report
001	Chloroform	Report	Report	Report
001	Dichlorobromomethane	1.1	1.72	2.75
001	Benzo(k)Fluoranthene	0.012	0.018	0.029
001	Bis(2-Ethylhexyl)Phthalate	0.37	0.58	0.93
001	Indeno(1,2,3-cd)Pyrene	0.001	0.002	0.003

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.

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

Sincerely,

A handwritten signature in cursive script that reads "Grace Polakoski".

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

Enclosures

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

NPDES Permit Fact Sheet

**NPDES Permit No. PA0021148
Mt Pleasant Borough STP**

**ATTACHMENT I:
Pre-Draft Survey**

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PRE-DRAFT PERMIT SURVEY FOR TOXIC POLLUTANTS

Permittee Name: <u>Municipal Authority of Westmoreland County</u>	Permit No.: <u>PA0021148</u>
Pollutant(s) identified by DEP that may require WQBELs: <u>8 pollutants</u>	
Is the permittee aware of the source(s) of the pollutant(s)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> 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)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
If Yes, describe prior studies and results:	
Does the permittee believe it can achieve the proposed WQBELs now? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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: <input checked="" type="checkbox"/> Uncertain	
Will the permittee conduct additional sampling for the pollutant(s) to supplement the application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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 <u>not</u> been submitted to DEP, please attach to this survey.	
<input type="checkbox"/> Discharge pollutant concentration coefficient(s) of variability	Year(s) Studied:
<input type="checkbox"/> Discharge and background Total Hardness concentrations (metals)	Year(s) Studied:
<input type="checkbox"/> Background / ambient pollutant concentrations	Year(s) Studied:
<input type="checkbox"/> Chemical translator(s) (metals)	Year(s) Studied:
<input type="checkbox"/> Slope and width of receiving waters	Year(s) Studied:
<input type="checkbox"/> Velocity of receiving waters at design conditions	Year(s) Studied:
<input type="checkbox"/> Acute and/or chronic partial mix factors (mixing at design conditions)	Year(s) Studied:
<input type="checkbox"/> Volatilization rates (highly volatile organics)	Year(s) Studied:
<input type="checkbox"/> 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.

NPDES Permit Fact Sheet

**NPDES Permit No. PA0021148
Mt Pleasant Borough STP**

**ATTACHMENT J:
TOX_CONC Results**

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

Total Copper

Facility:		Mt Pleasant STP				
NPDES #:		PA0021148				
Outfall No:		001				
n (Samples/Month):		4				
Reviewer/Permit Engineer:		GRP				
Parameter Name	Total Copper					
Units	µg/L					
Detection Limit	1					
Sample Date	When entering values below the detection limit, enter "ND" or use the < notation (eg. <0.02)					
05/27/22	11					
07/26/22	10					
08/02/22	10					
08/09/22	9					
08/16/22	10					
08/23/22	9					
08/30/22	12					
09/06/22	9					
09/13/22	8					
09/20/22	10					
09/27/22	12					

[illegible]

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

Dissolved Iron

Facility: Mt Pleasant STP NPDES #: PA0021148 Outfall No: 001 n (Samples/Month): 4 Reviewer/Permit Engineer: GRP						
Parameter Name	Dissolved Iron					
Units	µg/L					
Detection Limit	15					
Sample Date	When entering values below the detection limit, enter "ND" or use the < notation (eg. <0.02)					
07/26/22	31					
08/02/22	37					
08/09/22	21					
08/16/22	46					
08/23/22	23					
08/30/22	39					
09/06/22	36					
09/13/22	<20					
09/20/22	30					
09/27/22	48					

[illegible]

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

Chloroform

Facility:	Mt Pleasant STP					
NPDES #:	PA0021148					
Outfall No:	001					
n (Samples/Month):	4					
Reviewer/Permit Engineer:	GRP					
Parameter Name	Chloroform					
Units	µg/L					
Detection Limit	0.09					
Sample Date	<i>When entering values below the detection limit, enter "ND" or use the < notation (eg. <0.02)</i>					
08/02/22	16.3					
08/09/22	11.5					
08/16/22	10					
08/23/22	13					
08/30/22	4.16					
09/06/22	6.58					
09/13/22	14.6					
09/20/22	12.4					
09/27/22	8.83					
10/11/22	9.59					

[illegible]

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

Dichlorobromomethane

Facility: Mt Pleasant STP NPDES #: PA0021148 Outfall No: 001 n (Samples/Month): 4 Reviewer/Permit Engineer: GRP					
Parameter Name	chlorobromomethane				
Units	µg/L				
Detection Limit	0.08				
Sample Date	<i>When entering values below the detection limit, enter "ND" or use the < notation (eg. <0.02)</i>				
05/27/22	2.5				
08/02/22	3.41				
08/09/22	2.98				
08/16/22	3.3				
08/23/22	3.83				
09/06/22	1.22				
09/13/22	4				
09/20/22	2.48				
09/27/22	1.67				
10/11/22	1.86				

[illegible]

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

Benzo(k)Fluoranthene

Facility: Mt Pleasant STP NPDES #: PA0021148 Outfall No: 001 n (Samples/Month): 4 Reviewer/Permit Engineer: GRP	
Parameter Name	enzo(k)fluoranthene
Units	µg/L
Detection Limit	0.08
Sample Date	When entering values below the detection limit, enter "ND" or use the < notation (eg. <0.02)
05/27/22	0.135
07/27/22	0.312
08/03/22	0.309
08/10/22	0.312
08/17/22	0.312
08/24/22	0.312
08/31/22	0.315
09/07/22	0.306
09/14/22	0.309
09/21/22	0.312
09/28/22	0.306

[illegible]

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

Bis(2-Ethylhexyl)Phthalate

Facility: Mt Pleasant STP NPDES #: PA0021148 Outfall No: 001 n (Samples/Month): 4 Reviewer/Permit Engineer: GRP	
Parameter Name	2-Ethylhexyl phthalate
Units	µg/L
Detection Limit	0.181
Sample Date	When entering values below the detection limit, enter "ND" or use the < notation (eg. <0.02)
05/27/22	2.7
07/27/22	1.48
08/03/22	1.46
08/10/22	1.48
08/17/22	1.48
08/24/22	1.48
08/31/22	1.49
09/07/22	1.45
09/14/22	1.46
09/21/22	1.48
09/28/22	1.45

[illegible]

NPDES Permit No. PA0021148
Mt Pleasant Borough STP

Indeno(1,2,3-cd)pyrene

Facility: Mt Pleasant STP NPDES #: PA0021148 Outfall No: 001 n (Samples/Month): 4 Reviewer/Permit Engineer: GRP	
Parameter Name	eno (1,2,3cd)pyrene
Units	µg/L
Detection Limit	0.05
Sample Date	When entering values below the detection limit, enter "ND" or use the < notation (eg. <0.02)
05/27/22	0.125
07/27/22	0.365
08/03/22	0.362
08/10/22	0.365
08/17/22	0.365
08/24/22	0.365
08/31/22	0.369
09/07/22	0.358
09/14/22	0.362
09/21/22	0.365
09/28/22	0.358

[illegible]

ATTACHMENT K:
TMS Modeling Results (resampling)

NPDES Permit Fact Sheet

NPDES Permit No. PA0021148
Mt Pleasant Borough STP



Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions Discharge Stream

Facility: Mount Pleasant STP NPDES Permit No.: PA0021148 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 _n
1.5	100	7.3					

				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	Strea m CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		517										
	Chloride (PWS)	mg/L		165										
	Bromide	mg/L		0.273										
	Sulfate (PWS)	mg/L		1050										
	Fluoride (PWS)	mg/L												
Group 2	Total Aluminum	µg/L		75										
	Total Antimony	µg/L		0.3										
	Total Arsenic	µg/L	<	0.4										
	Total Barium	µg/L		63										
	Total Beryllium	µg/L	<	1										
	Total Boron	µg/L		135										
	Total Cadmium	µg/L	<	0.1										
	Total Chromium (III)	µg/L	<	2										
	Hexavalent Chromium	µg/L		0.2										
	Total Cobalt	µg/L	<	0.2										
	Total Copper	µg/L		11.56										
	Free Cyanide	µg/L		13										
	Total Cyanide	µg/L		3										
	Dissolved Iron	µg/L		47.64										
	Total Iron	µg/L		57.4										
	Total Lead	µg/L	<	0.3										
	Total Manganese	µg/L		10										
	Total Mercury	µg/L	<	0.1										
	Total Nickel	µg/L	<	2										
	Total Phenols (Phenolics) (PWS)	µg/L		27										
	Total Selenium	µg/L	<	0.5										
	Total Silver	µg/L	<	0.2										
	Total Thallium	µg/L	<	0.05										
	Total Zinc	µg/L		28										
	Total Molybdenum	µg/L	<	4										
	Acrolein	µg/L	<	0.9										
	Acrylamide	µg/L	<											
	Acrylonitrile	µg/L	<	0.3										
	Benzene	µg/L	<	0.04										
	Bromoform	µg/L	<	0.1										

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Mt Pleasant Borough STP



Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Mount Pleasant STP, NPDES Permit No. PA0021148, Outfall 001

Instructions Discharge **Stream**

Receiving Surface Water Name: **Shupe Run (WWF)**

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	037958	1.14	1052	3.05			Yes
End of Reach 1	037958	0.54	1047	3.48			Yes

Q₇₋₁₀

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	1.14	0.0105			28.25							100	7		
End of Reach 1	0.54	0.0107			28.25										

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	1.14														
End of Reach 1	0.54														

NPDES Permit Fact Sheet

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Mt Pleasant Borough STP



Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Mount Pleasant STP, NPDES Permit No. PA0021148, 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)
1.14	0.03		0.03	2.321	0.002	0.588	16.6	28.25	0.241	0.152	0.004
0.54	0.04		0.037					28.250			

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)
1.14	0.37		0.37	2.321	0.002	0.623	16.6	26.642	0.26	0.141	0.361
0.54	0.413		0.41								

☒ Wasteload Allocations

☒ AFC

CCT (min): 0.004

PMF: 1

Analysis Hardness (mg/l): 100

Analysis pH: 7.29

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	760	
Total Antimony	0	0		0	1,100	1,100	1,115	
Total Arsenic	0	0		0	340	340	345	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	21,290	
Total Boron	0	0		0	8,100	8,100	8,212	
Total Cadmium	0	0		0	2.014	2.13	2.16	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	569.763	1,803	1,828	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	16.5	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	96.3	
Total Copper	0	0		0	13.439	14.0	14.2	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	22.3	

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Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	64.581	81.6	82.8	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	1.67	Chem Translator of 0.85 applied
Total Nickel	0	0		0	468.236	469	476	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	3.217	3.78	3.84	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	65.9	
Total Zinc	0	0		0	117.180	120	121	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	3.04	
Acrylonitrile	0	0		0	650	650	659	
Benzene	0	0		0	640	640	649	
Bromoform	0	0		0	1,800	1,800	1,825	
Carbon Tetrachloride	0	0		0	2,800	2,800	2,839	
Chlorobenzene	0	0		0	1,200	1,200	1,217	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	18,248	
Chloroform	0	0		0	1,900	1,900	1,926	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	15,207	
1,1-Dichloroethylene	0	0		0	7,500	7,500	7,604	
1,2-Dichloropropane	0	0		0	11,000	11,000	11,152	
1,3-Dichloropropylene	0	0		0	310	310	314	
Ethylbenzene	0	0		0	2,900	2,900	2,940	
Methyl Bromide	0	0		0	550	550	558	
Methyl Chloride	0	0		0	28,000	28,000	28,386	
Methylene Chloride	0	0		0	12,000	12,000	12,166	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	1,014	
Tetrachloroethylene	0	0		0	700	700	710	
Toluene	0	0		0	1,700	1,700	1,723	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	6,894	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	3,041	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	3,447	
Trichloroethylene	0	0		0	2,300	2,300	2,332	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	568	
2,4-Dichlorophenol	0	0		0	1,700	1,700	1,723	
2,4-Dimethylphenol	0	0		0	660	660	669	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	81.1	
2,4-Dinitrophenol	0	0		0	660	660	669	
2-Nitrophenol	0	0		0	8,000	8,000	8,110	
4-Nitrophenol	0	0		0	2,300	2,300	2,332	
p-Chloro-m-Cresol	0	0		0	160	160	162	
Pentachlorophenol	0	0		0	11.724	11.7	11.9	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	466	

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Acenaphthene	0	0	0	83	83.0	84.1
Anthracene	0	0	0	N/A	N/A	N/A
Benzidine	0	0	0	300	300	304
Benzo(a)Anthracene	0	0	0	0.5	0.5	0.51
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	30,414
Bis(2-Chloroisopropyl)Ether	0	0	0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0	0	4,500	4,500	4,562
4-Bromophenyl Phenyl Ether	0	0	0	270	270	274
Butyl Benzyl Phthalate	0	0	0	140	140	142
2-Chloronaphthalene	0	0	0	N/A	N/A	N/A
Chrysene	0	0	0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0	0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0	0	820	820	831
1,3-Dichlorobenzene	0	0	0	350	350	355
1,4-Dichlorobenzene	0	0	0	730	730	740
3,3-Dichlorobenzidine	0	0	0	N/A	N/A	N/A
Diethyl Phthalate	0	0	0	4,000	4,000	4,055
Dimethyl Phthalate	0	0	0	2,500	2,500	2,535
Di-n-Butyl Phthalate	0	0	0	110	110	112
2,4-Dinitrotoluene	0	0	0	1,600	1,600	1,622
2,6-Dinitrotoluene	0	0	0	990	990	1,004
1,2-Diphenylhydrazine	0	0	0	15	15.0	15.2
Fluoranthene	0	0	0	200	200	203
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	10.1
Hexachlorocyclopentadiene	0	0	0	5	5.0	5.07
Hexachloroethane	0	0	0	60	60.0	60.8
Indeno(1,2,3-cd)Pyrene	0	0	0	N/A	N/A	N/A
Isophorone	0	0	0	10,000	10,000	10,138
Naphthalene	0	0	0	140	140	142
Nitrobenzene	0	0	0	4,000	4,000	4,055
n-Nitrosodimethylamine	0	0	0	17,000	17,000	17,235
n-Nitrosodi-n-Propylamine	0	0	0	N/A	N/A	N/A
n-Nitrosodiphenylamine	0	0	0	300	300	304
Phenanthrene	0	0	0	5	5.0	5.07
Pyrene	0	0	0	N/A	N/A	N/A
1,2,4-Trichlorobenzene	0	0	0	130	130	132

☒ CFC

CCT (min): 0.004

PMF: 1

Analysis Hardness (mg/l): 100

Analysis pH: 7.29

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	

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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	223	
Total Arsenic	0	0		0	150	150	152	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	4,157	
Total Boron	0	0		0	1,600	1,600	1,622	
Total Cadmium	0	0		0	0.246	0.27	0.27	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.115	86.2	87.4	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	10.5	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	19.3	
Total Copper	0	0		0	8.956	9.33	9.46	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	5.27	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	1,521	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2,517	3.18	3.23	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	0.92	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.007	52.2	52.9	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	5.06	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	13.2	
Total Zinc	0	0		0	118.139	120	121	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	3.04	
Acrylonitrile	0	0		0	130	130	132	
Benzene	0	0		0	130	130	132	
Bromoform	0	0		0	370	370	375	
Carbon Tetrachloride	0	0		0	560	560	568	
Chlorobenzene	0	0		0	240	240	243	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	3,548	
Chloroform	0	0		0	390	390	395	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	3,143	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,521	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,230	
1,3-Dichloropropylene	0	0		0	61	61.0	61.8	
Ethylbenzene	0	0		0	580	580	588	
Methyl Bromide	0	0		0	110	110	112	
Methyl Chloride	0	0		0	5,500	5,500	5,576	
Methylene Chloride	0	0		0	2,400	2,400	2,433	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	213	
Tetrachloroethylene	0	0		0	140	140	142	
Toluene	0	0		0	330	330	335	

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1,2-trans-Dichloroethylene	0	0	0	1,400	1,400	1,419
1,1,1-Trichloroethane	0	0	0	610	610	618
1,1,2-Trichloroethane	0	0	0	680	680	689
Trichloroethylene	0	0	0	450	450	456
Vinyl Chloride	0	0	0	N/A	N/A	N/A
2-Chlorophenol	0	0	0	110	110	112
2,4-Dichlorophenol	0	0	0	340	340	345
2,4-Dimethylphenol	0	0	0	130	130	132
4,6-Dinitro-o-Cresol	0	0	0	16	16.0	16.2
2,4-Dinitrophenol	0	0	0	130	130	132
2-Nitrophenol	0	0	0	1,600	1,600	1,622
4-Nitrophenol	0	0	0	470	470	476
p-Chloro-m-Cresol	0	0	0	500	500	507
Pentachlorophenol	0	0	0	8.995	8.99	9.12
Phenol	0	0	0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0	0	91	91.0	92.3
Acenaphthene	0	0	0	17	17.0	17.2
Anthracene	0	0	0	N/A	N/A	N/A
Benzidine	0	0	0	59	59.0	59.8
Benzo(a)Anthracene	0	0	0	0.1	0.1	0.1
Benzo(a)Pyrene	0	0	0	N/A	N/A	N/A
3,4-Benzofluoranthene	0	0	0	N/A	N/A	N/A
Benzo(k)Fluoranthene	0	0	0	N/A	N/A	N/A
Bis(2-Chloroethyl)Ether	0	0	0	6,000	6,000	6,083
Bis(2-Chloroisopropyl)Ether	0	0	0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0	0	910	910	923
4-Bromophenyl Phenyl Ether	0	0	0	54	54.0	54.7
Butyl Benzyl Phthalate	0	0	0	35	35.0	35.5
2-Chloronaphthalene	0	0	0	N/A	N/A	N/A
Chrysene	0	0	0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0	0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0	0	160	160	162
1,3-Dichlorobenzene	0	0	0	69	69.0	70.0
1,4-Dichlorobenzene	0	0	0	150	150	152
3,3-Dichlorobenzidine	0	0	0	N/A	N/A	N/A
Diethyl Phthalate	0	0	0	800	800	811
Dimethyl Phthalate	0	0	0	500	500	507
Di-n-Butyl Phthalate	0	0	0	21	21.0	21.3
2,4-Dinitrotoluene	0	0	0	320	320	324
2,6-Dinitrotoluene	0	0	0	200	200	203
1,2-Diphenylhydrazine	0	0	0	3	3.0	3.04
Fluoranthene	0	0	0	40	40.0	40.6
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	2.03

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Hexachlorocyclopentadiene	0	0		0	1	1.0	1.01	
Hexachloroethane	0	0		0	12	12.0	12.2	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	2,129	
Naphthalene	0	0		0	43	43.0	43.6	
Nitrobenzene	0	0		0	810	810	821	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	3,447	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	59.8	
Phenanthrene	0	0		0	1	1.0	1.01	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	26.4	

☒ **THH**

CCT (min): 0.004

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	5.68	
Total Arsenic	0	0		0	10	10.0	10.1	
Total Barium	0	0		0	2,400	2,400	2,433	
Total Boron	0	0		0	3,100	3,100	3,143	
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	4.06	
Dissolved Iron	0	0		0	300	300	304	
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	1,014	
Total Mercury	0	0		0	0.050	0.05	0.051	
Total Nickel	0	0		0	610	610	618	
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	0.24	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	3.04	
Acrylonitrile	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	

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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	101
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	5.78
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	33.5
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	68.9
Methyl Bromide	0	0		0	100	100.0	101
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	57.8
1,2-trans-Dichloroethylene	0	0		0	100	100.0	101
1,1,1-Trichloroethane	0	0		0	10,000	10,000	10,138
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	30.4
2,4-Dichlorophenol	0	0		0	10	10.0	10.1
2,4-Dimethylphenol	0	0		0	100	100.0	101
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	2.03
2,4-Dinitrophenol	0	0		0	10	10.0	10.1
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	4,055
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A
Acenaphthene	0	0		0	70	70.0	71.0
Anthracene	0	0		0	300	300	304
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	203
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

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Butyl Benzyl Phthalate	0	0		0	0.1	0.1	0.1	
2-Chloronaphthalene	0	0		0	800	800	811	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthracene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	1,014	
1,3-Dichlorobenzene	0	0		0	7	7.0	7.1	
1,4-Dichlorobenzene	0	0		0	300	300	304	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	608	
Dimethyl Phthalate	0	0		0	2,000	2,000	2,028	
Di-n-Butyl Phthalate	0	0		0	20	20.0	20.3	
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	20.3	
Fluorene	0	0		0	50	50.0	50.7	
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	4.06	
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	34.5	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	10.1	
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	20.3	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.071	

☒ CRL

CCT (min): 0.361

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	

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NPDES Permit No. PA0021148
Mt Pleasant Borough STP

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	0.069
Benzene	0	0		0	0.58	0.58	0.67
Bromoform	0	0		0	7	7.0	8.11
Carbon Tetrachloride	0	0		0	0.4	0.4	0.46
Chlorobenzene	0	0		0	N/A	N/A	N/A
Chlorodibromomethane	0	0		0	0.8	0.8	0.93
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	1.1
1,2-Dichloroethane	0	0		0	9.9	9.9	11.5
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A
1,2-Dichloropropane	0	0		0	0.9	0.9	1.04
1,3-Dichloropropylene	0	0		0	0.27	0.27	0.31
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	23.2
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	0.23
Tetrachloroethylene	0	0		0	10	10.0	11.6
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	0.64
Trichloroethylene	0	0		0	0.6	0.6	0.69
Vinyl Chloride	0	0		0	0.02	0.02	0.023
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

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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	0.035
Phenol	0	0		0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	1.74
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	0.0001
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.001
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.0001
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.001
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.012
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.035
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	0.37
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	0.14
Dibenzo(a,h)Anthracene	0	0		0	0.0001	0.0001	0.0001
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	0.058
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	0.058
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.058
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.035
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	0.00009
Hexachlorobutadiene	0	0		0	0.01	0.01	0.012
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A
Hexachloroethane	0	0		0	0.1	0.1	0.12
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.001
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	0.0008
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.006
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	3.82

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Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	

☒ **Recommended WQBELs & Monitoring Requirements**

No. Samples/Month: **4**

Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Total Copper	0.12	0.18	9.46	14.2	14.2	µg/L	9.46	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	0.051	0.079	4.06	6.33	10.1	µg/L	4.06	THH	Discharge Conc ≥ 50% WQBEL (RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	304	THH	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	120	AFC	Discharge Conc > 10% WQBEL (no RP)
Chloroform	0.072	0.11	5.78	9.02	14.4	µg/L	5.78	THH	Discharge Conc ≥ 50% WQBEL (RP)
Dichlorobromomethane	0.014	0.021	1.1	1.72	2.75	µg/L	1.1	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Benzo(k)Fluoranthene	0.0001	0.0002	0.012	0.018	0.029	µg/L	0.012	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Bis(2-Ethylhexyl)Phthalate	0.005	0.007	0.37	0.58	0.93	µg/L	0.37	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Indeno(1,2,3-cd)Pyrene	0.00001	0.00002	0.001	0.002	0.003	µg/L	0.001	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 Antimony	5.68	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	2,433	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	1,622	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	0.27	µg/L	Discharge Conc < TQL
Total Chromium (III)	87.4	µg/L	Discharge Conc < TQL
Hexavalent Chromium	10.5	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	19.3	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Total Iron	1,521	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	3.23	µg/L	Discharge Conc < TQL
Total Manganese	1,014	µg/L	Discharge Conc ≤ 10% WQBEL

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Total Mercury	0.051	µg/L	Discharge Conc < TQL
Total Nickel	52.9	µg/L	Discharge Conc < TQL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	5.06	µg/L	Discharge Conc < TQL
Total Silver	3.78	µg/L	Discharge Conc < TQL
Total Thallium	0.24	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	3.0	µg/L	Discharge Conc < TQL
Acrylonitrile	0.069	µg/L	Discharge Conc < TQL
Benzene	0.67	µg/L	Discharge Conc < TQL
Bromoform	8.11	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	0.46	µg/L	Discharge Conc < TQL
Chlorobenzene	101	µg/L	Discharge Conc < TQL
Chlorodibromomethane	0.93	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	3,548	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	11.5	µg/L	Discharge Conc < TQL
1,1,1-Dichloroethylene	33.5	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	1.04	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	0.31	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	68.9	µg/L	Discharge Conc < TQL
Methyl Bromide	101	µg/L	Discharge Conc < TQL
Methyl Chloride	5,576	µg/L	Discharge Conc < TQL
Methylene Chloride	23.2	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	0.23	µg/L	Discharge Conc < TQL
Tetrachloroethylene	11.6	µg/L	Discharge Conc < TQL
Toluene	57.8	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	101	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	618	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	0.64	µg/L	Discharge Conc < TQL
Trichloroethylene	0.69	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.023	µg/L	Discharge Conc < TQL
2-Chlorophenol	30.4	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	10.1	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	101	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2.03	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	10.1	µg/L	Discharge Conc < TQL
2-Nitrophenol	1,622	µg/L	Discharge Conc < TQL
4-Nitrophenol	476	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.035	µg/L	Discharge Conc < TQL
Phenol	4,055	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	1.74	µg/L	Discharge Conc < TQL

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Acenaphthene	17.2	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	304	µg/L	Discharge Conc < TQL
Benzidine	0.0001	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.001	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.0001	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.001	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.035	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	203	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	54.7	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.1	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	811	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.14	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthracene	0.0001	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	162	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	7.1	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	152	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	0.058	µg/L	Discharge Conc < TQL
Diethyl Phthalate	608	µg/L	Discharge Conc ≤ 25% WQBEL
Dimethyl Phthalate	507	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	20.3	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	0.058	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.058	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.035	µg/L	Discharge Conc < TQL
Fluoranthene	20.3	µg/L	Discharge Conc < TQL
Fluorene	50.7	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.00009	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.012	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.01	µg/L	Discharge Conc < TQL
Hexachloroethane	0.12	µg/L	Discharge Conc < TQL
Isophorone	34.5	µg/L	Discharge Conc < TQL
Naphthalene	43.6	µg/L	Discharge Conc < TQL
Nitrobenzene	10.1	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.0008	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.006	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	3.82	µg/L	Discharge Conc < TQL
Phenanthrene	1.01	µg/L	Discharge Conc < TQL
Pyrene	20.3	µg/L	Discharge Conc ≤ 25% WQBEL
1,2,4-Trichlorobenzene	0.071	µg/L	Discharge Conc < TQL

NPDES Permit Fact Sheet

**NPDES Permit No. PA0021148
Mt Pleasant Borough STP**

**ATTACHMENT L:
LTCP Update Approval Letter**

November 9, 2022

VIA ELECTRONIC MAIL:

Norman Stout Jr.
Municipal Authority of Westmoreland County
PO Box 730
Greensburg, PA 15601-0730

Re: LTCP Update - Sewage
Mount Pleasant Borough STP
Permit No. PA0021148
Authorization ID No. 1398267
Mount Pleasant Borough, Westmoreland County

Dear Norman Stout,

Included in the NPDES Permit Renewal Application received by the Department on May 27, 2022 was a “Proposed CSO Compliance Schedule” which serves as an extension request for the previously-approved Long-Term Control Plan (LTCP). The LTCP Update still proposes to comply with the Presumption Approach of the EPA’s CSO Policy by capture for treatment 94.25% 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 the “Long Term Control Plan Revision Based on Post Construction Monitoring” prepared by Gibson-Thomas Engineering Co., Inc. in October 2016:

Milestone	Date
Part II permit application for Improvements to CSO 003, 005, and 009	June 1, 2017
Construction Begin	June 1, 2018
Construction End	June 1, 2019
Post-Construction Monitoring Begin	March 1, 2020
Post-Construction Monitoring End	December 1, 2020
Summary Report of Monitoring	March 1, 2021

The following LTCP Plan Implementation Schedule is approved:

Milestone	Date
Part II permit application for Improvements to CSO 003, 005, and 009	Completed as of June 2017
Begin Outfall 003, 005, and 009 reconstruction	June 1, 2024
Complete Outfall 003, 005, and 009 reconstruction	June 1, 2025
Submit PCCMP for DEP review and approval	December 1, 2025
Begin PCCMP implementation	Within 90 days of PCCMP approval

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Complete PCCMP implementation	365 days from PCCMP implementation begin date
Submit PCCMP Report with CSO Program Recommendations	180 days from PCCMP implementation completion date

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.

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

Sincerely,

A handwritten signature in cursive script that reads "Grace Polakoski".

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

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

ATTACHMENT M:
Pretreatment Correspondence

NPDES Permit Fact Sheet

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Mt Pleasant Borough STP

Polakoski, Grace

From: Shuart, Ryan <shuart.ryan@epa.gov>
Sent: Thursday, November 3, 2022 7:31 AM
To: Polakoski, Grace
Subject: [External] RE: Mt Pleasant Borough STP (PA0021148) Pretreatment Program

ATTENTION: This email message is from an external sender. Do not open links or attachments from unknown senders. To report suspicious email, use the [Report Phishing button in Outlook](#).

Grace;

Do you know if there are any significant industrial users contributing to this facility? If so they may need to do a local limits evaluation for this POTW. Either way, the pretreatment language needs to be in the permit since it is covered by a muni with a pretreatment program. Thanks for reaching out to me.

Best,

Ryan Shuart
Permits Section
Water Division

From: Polakoski, Grace <grpolakosk@pa.gov>
Sent: Wednesday, November 02, 2022 2:29 PM
To: Shuart, Ryan <shuart.ryan@epa.gov>
Subject: Mt Pleasant Borough STP (PA0021148) Pretreatment Program

Hi Ryan,

I am getting ready to issue a draft NPDES permit for Mt Pleasant Borough STP (PA0021148), which is located in Mt Pleasant Borough in Westmoreland County. Maria Schumack advised me to contact you first before I include anything in the permit about the pretreatment program. Pretreatment would be added to this facility because it is a POTW that is owned by an authority that owns a combination of POTWs that result in a combined flow of > 5MGD. It also has commercial/industrial contributors.

This is the first permit cycle that Mt Pleasant Borough STP would be required to do anything for the pretreatment program. Do you need anything from me before I add the language into the permit?

Thank you,

Grace Polakoski (she/her) | Environmental Engineering Specialist
Department of Environmental Protection | Clean Water
South West Regional Office Building
400 Waterfront Drive | Pittsburgh, PA 15222
Phone: 412.442.4068
www.dep.pa.gov

DEP is now accepting permit and authorization applications, as well as other documents and correspondence, electronically through the OnBase Electronic Forms Upload tool. Please use the link below to view the webpage, get instructions, and submit documents:

<https://www.dep.pa.gov/DataandTools/Pages/Application-Form-Upload.aspx>