Pennsylvania
Department of
Environmental Protection

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0026522**
Facility Type	**Municipal**	APS ID	**1106660**
Major / Minor	**Major**	Authorization ID	**1471656**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**W Mifflin Sanitary Sewer & Stormwater Authority Allegheny County**	Facility Name	**New England STP**
Applicant Address	1302 Lower Bull Run Road	Facility Address	New England Road
	West Mifflin, PA 15122-2902		West Mifflin, PA 15122-2902
Applicant Contact	Gary Stetar	Facility Contact	Gary Stetar
Applicant Phone	(412) 466-6070	Facility Phone	
Client ID	40651	Site ID	3774
Ch 94 Load Status	No Existing Overload	Municipality	West Mifflin Borough
Connection Status		County	Allegheny
Date Application Received	January 31, 2024	EPA Waived?	No
Date Application Accepted	February 5, 2024	If No, Reason	Major Facility
Purpose of Application	Renewal of NPDES Major Permit.		

Summary of Review

West Mifflin Sanitary Sewer and Stormwater Authority in Allegheny County has applied for renewal of the New England STP.

Treatment at the plant consists of sewage grinder and grit removal, addition of soda ash, primary clarification, activated sludge process, final clarification and UV disinfection.

Act 14 Notification was provided in the October 30, 2023 letters to Allegheny County and West Mifflin Borough.

Sludge use and disposal description and location:

Sludge is managed by anaerobic digestion, dewatering by centrifuge, and hauled to landfill by Waste Management.

Industrial Users

The Authority identifies no industrial users connected to their system.

An EPA Approved pretreatment program is not required for this POTW under 5 MGD.

WET Testing Summary

The Authority submitted passing Chronic WET Tests at the TIWC specified in the previous permit. A new TIWC calculation was run. The new TIWC is 99.6% and will have a dilution series of 25%, 50%, 70%, 90%, 100%.

Approve	Deny	Signatures	Date
x		John Price Jack Price / Environmental Engineering Specialist	October 30, 2025
x		Mahbuba Iasmin Mahbuba Iasmin, Ph.D., P.E. / Environmental Engineering Manager	November 19, 2025

Summary of Review

Chapter 94 Status

The most recent Chapter 94 Report shows no existing or projected overloads within the next 5 years. This projection was made for both Organic and Hydraulic loading to the plant.

Issuance of the draft permit is recommended.

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.	101	Design Flow (MGD)	1.2
Latitude	40º 19' 56.73"	Longitude	-79º 55' 17.19"
Quad Name	Glassport	Quad Code	40079C8
Wastewater Description:	Sewage Effluent-Internal Outfall as Monitoring Point		
Receiving Waters	Unnamed Tributary to Monongahela River (WWF)	Stream Code	39422
NHD Com ID	99408288	RMI	1.63
Drainage Area	0.97	Yield (cfs/mi^2)	0.0078
Q_{7-10} Flow (cfs)	0.00757	Q_{7-10} Basis	USGS StreamStats
Elevation (ft)	915.25	Slope (ft/ft)	0.0263
Watershed No.	19-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	METALS, ORGANIC ENRICHMENT		
Source(s) of Impairment	ACID MINE DRAINAGE, RURAL (RESIDENTIAL AREAS)		
TMDL Status	Final	Name	Unnamed tributary to the Monongahela River

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

Nearest Downstream Public Water Supply Intake	PA Amer Water Co-Pittsburgh PWSID 5020039		
PWS Waters	Monongahela River	Flow at Intake (cfs)	1,230
PWS RMI	4.60	Distance from Outfall (mi)	5.6 Linear Miles

Unnamed Tributary 39422 to the Monongahela River Watershed TMDL

The facility discharges to Unnamed Tributary to the Monongahela River (Stream Code 39422). The TMDL addresses acid mine drainage to the aforementioned stream. The TMDL identified Total Iron and Total Aluminum as parameters of concern. The facility was not considered a source under the TMDL and was not given a load allocation. The TMS Model recommended no limits for Total Iron and Total Aluminum. Please see Attachment 6 for the TMDL Summary. Quarterly Monitoring for Total Aluminum and Total Iron are established.

Changes Since Last Permit Issuance:

A new Toxics Management Spreadsheet (TMS) and Water Quality Model (WQM) 7.0 model were run for the discharge. The models resulted in new more stringent limits for Total Copper, Free Cyanide, and Total Zinc. More stringent limitations are also included for Ammonia-Nitrogen.

The existing permit contains a Total Manganese monitoring requirement. This monitoring requirement was imposed based on a mistaken assumption that Total Manganese was included in the acid mine drainage TMDL. The reasonable potential analysis for renewal included the quarterly Total Manganese testing. TMS Recommended no monitoring for Total Manganese.

Other Comments:

Sample collection point Outfall 101 is after disinfection and prior to the connection to common outfall, Outfall 001.

Other Outfalls

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0
Latitude	40º 20' 6.20"	Longitude	-79º 55' 33.62"
Quad Name	Glassport	Quad Code	40079C8
Wastewater Description:	Common outfall for Outfalls 101 and 201. Mix of non-contact stormwater and treated sewage effluent after point of compliance.		

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	002	Design Flow (MGD)	0
Latitude	40º 20' 6.20"	Longitude	-79º 55' 33.62"
Quad Name	Glassport	Quad Code	40079C8
Stormwater Drainage Area (ft^2)	21,587		
Wastewater Description:	Non-contact stormwater.		

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	201	Design Flow (MGD)	0
Latitude	40º 20' 6.20"	Longitude	-79º 55' 33.62"
Quad Name	Glassport	Quad Code	40079C8
Stormwater Drainage Area (ft^2)	20,187		
Wastewater Description:	Non-contact stormwater. -Internal Outfall		

Other Comments:

These outfalls are identified as non-contact stormwater discharge outfalls, or in the case of Outfall 001, the plant effluent is monitored upstream in the process at Outfall 101 with all water quality modeling performed based on Outfall 101.

Treatment Facility Summary

Treatment Facility Name: New England STP

WQM Permit No.	Issuance Date	Short Description
0271418	09/10/1971	Construction of original plant.
0271418 A-1	04/16/1997	Add equalization tank, influent grinder, standby bar screen, refurbish primary clarifiers, replace blowers, add anerobic digester.
0201402	03/08/2001	Sewer upgrades, pump station upgrades.
0201402 A-1	10/07/2015	Remove gas chlorination and add UV disinfection.
0201402 A-2	12/16/2023	Permittee name change.

Plant Description

Treatment at the New England STP consists of the following:

Sewage Treatment

- Flow equalization
- Sewage grinder
- Addition of soda ash
- Grit removal unit
- Primary clarification (2 units)
- Activated sludge (3 units)
- Final clarification (3 units)
- UV disinfection (3 units)

Sludge Treatment

- Anaerobic digestion (2 units)
- Centrifugal dewatering
- Hauled to landfill

Outfalls

The facility has four outfalls, however two of these outfalls are internal monitoring points. Outfall 001 is the physical outfall to the receiving stream. Outfall 101 is an internal monitoring point and the point of compliance for treated sewage effluent that flows to Outfall 001. Outfall 201 is an internal outfall for non-contact stormwater that flows to Outfall 001. There is also Outfall 002, which is an outfall for non-contact stormwater. Outfall 002 discharges to the same receiving stream.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Activated Sludge	Ultraviolet	1.2

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
1.2	2,040	Not Overloaded	Anaerobic digestion, centrifugal dewatering	Hauled to landfill

Changes Since Last Permit Issuance:

No technical changes have been made to the facility since the previous NPDES Authorization. A WQM Amendment was issued to change the name of the facility.

Operations Compliance Check Summary Report

Facility: New England STP

NPDES Permit No.: PA0026522

Compliance Review Period: September 1, 2020 to August 31, 2025

Inspection Summary:

INSP ID	INSPECTED DATE	INSP TYPE	INSPECTION RESULT DESC	INSPECTOR
3341206	03/15/2022	Compliance Evaluation	Violation(s) Noted	WATKINS, EDWIN
3984330	05/08/2025	Compliance Evaluation	Violation(s) Noted	WATKINS, EDWIN
3784253	06/05/2024	Compliance Evaluation	Violation(s) Noted	WATKINS, EDWIN
4020268	06/16/2025	Chapter 94 Inspection	Administratively Closed	LUCAS, AUSTIN
3533379	03/16/2023	Compliance Evaluation	Violation(s) Noted	WATKINS, EDWIN
3196498	05/20/2021	Compliance Evaluation	No Violations Noted	WATKINS, EDWIN

Violation Summary:

VIOL ID	VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE
950007	03/15/2022	92A.44	NPDES - Violation of effluent limits in Part A of permit	12/06/2023
950009	03/15/2022	CSL201	CSL - Unauthorized, unpermitted discharge of sewage to waters of the Commonwealth	12/06/2023
990533	03/16/2023	92A.41(A)5	NPDES - Failure to properly operate and maintain all facilities which are installed or used by the permittee to achieve compliance	12/06/2023
990534	03/16/2023	92A.41(A)10C	NPDES - Failure to collect representative samples	12/06/2023
8191552	06/05/2024	CSL201	CSL - Unauthorized, unpermitted discharge of sewage to waters of the Commonwealth	06/25/2024
8234907	05/08/2025	92A.44	NPDES - Violation of effluent limits in Part A of permit	08/19/2025

Open Violations by Client ID:

There are no open violations by Client ID at this time.

Enforcement Summary:

ENF ID	ENF TYPE	ENF CREATION DATE	VIOLATIONS	# OF VIOLATIONS	PENALTY AMOUNT	AMOUNT RECEIVED	ENF FINALSTATUS	ENF CLOSED DATE
414616	NOV	04/06/2023	92A.41(A)10C; 92A.41(A)5	2			Administrative Close Out	03/12/2024
402516	NOV	04/01/2022	92A.44; CSL201	2			Administrative Close Out	03/12/2024
389536	NOV	10/23/2020	92A.41(A)12B; CSL201	2			Administrative Close Out	01/31/2024
414616	NOV	04/06/2023	92A.41(A)10C; 92A.41(A)5	2			Administrative Close Out	03/12/2024
402516	NOV	04/01/2022	92A.44; CSL201	2			Administrative Close Out	03/12/2024
389536	NOV	10/23/2020	92A.41(A)12B; CSL201	2			Administrative Close Out	01/31/2024

Effluent Violations for Outfall 101

Parameter	Date	SBC	DMR Value	Units	Limit Value	Units
pH	01/31/25	Inst Min	5.9	S.U.	6.0	S.U.

Compliance Status:
The facility has had one pH effluent violation. The comments submitted to DEP state that the instantaneous minimum pH violation in a composite sample was caused by an unknown substance discharged to the plant. A final compliance status will be determined at permit issuance.

Compliance History

DMR Data for Outfall 101 (from September 1, 2024 to August 31, 2025)

Parameter	AUG-25	JUL-25	JUN-25	MAY-25	APR-25	MAR-25	FEB-25	JAN-25	DEC-24	NOV-24	OCT-24	SEP-24
Flow (MGD) Average Monthly	0.253	0.390	0.511	0.601	0.664	0.425	0.723	0.347	0.367	0.315	0.200	0.246
Flow (MGD) Daily Maximum	0.628	0.845	1.036	2.095	1.943	0.601	2.556	0.935	0.647	0.841	0.273	0.589
pH (S.U.) Instantaneous Minimum	6.4	6.6	6.4	6.7	6.1	6.4	6.6	5.9	6.0	6.2	6.4	6.2
pH (S.U.) Instantaneous Maximum	7.7	7.9	7.7	7.4	7.5	8.4	7.4	7.3	7.2	7.4	7.3	7.4
DO (mg/L) Instantaneous Minimum	7.45	7.66	7.31	7.72	7.77	8.36	8.74	8.98	7.87	7.23	7.60	6.94
$CBOD_5$ (lbs/day) Average Monthly	11.11	15.45	19.97	24.13	20.46	14.37	30.52	15.51	15.60	17.01	8.02	5.89
$CBOD_5$ (lbs/day) Weekly Average	13.78	21.16	29.55	41.85	27.63	16.93	36.97	25.35	21.11	29.86	12.60	6.70
$CBOD_5$ (mg/L) Average Monthly	5.37	4.45	4.90	4.47	4.31	4.22	4.92	5.57	4.89	5.77	4.72	3.44
$CBOD_5$ (mg/L) Weekly Average	6.05	5.30	5.60	4.89	4.57	5.14	5.37	7.46	7.46	6.03	7.50	3.58
BOD_5 (lbs/day) Raw Sewage Influent Average Monthly	398	522	597	903	681	554	926	532	524	567	316	287
BOD_5 (lbs/day) Raw Sewage Influent Daily Maximum	457	1019	698	1957	949	725	1476	708	704	1188	373	343
BOD_5 (mg/L) Raw Sewage Influent Average Monthly	194.6	155.88	153.63	177.76	144.07	161.07	157.60	194.37	163.42	199.78	186.08	168.08
TSS (lbs/day) Average Monthly	23.97	31.89	22.14	34.65	29.70	25.21	53.04	27.33	34.80	32.56	14.63	10.64
TSS (lbs/day) Raw Sewage Influent Average Monthly	702	602.1	697	895	792	614	838	554	682	593	476	361
TSS (lbs/day) Raw Sewage Influent Daily Maximum	1830	1071	771	1503	1318	1092	1359	702	917	738	673	694

TSS (lbs/day) Weekly Average	32.53	51.89	28.65	60.05	39.38	29.14	66.38	43.34	47.20	55.27	27.45	12.83
TSS (mg/L) Average Monthly	11.31	9.05	5.63	6.28	7.06	7.38	9.25	10.0	11.06	11.38	8.65	6.13
TSS (mg/L) Raw Sewage Influent Average Monthly	328.00	183.6	185.25	192.89	184.00	179.75	144.25	203.78	217.6	239.5	282.6	214
TSS (mg/L) Weekly Average	14.5	11.25	7.25	7.50	9.25	8.0	10.75	15.5	15.5	13.25	16.25	7.25
Fecal Coliform (No./100 ml) Geometric Mean	15.3	8.42	6.04	2.02	2.09	3.74	11.30	4.46	3.45	11.11	4.77	11.57
Fecal Coliform (No./100 ml) Instantaneous Maximum	21.1	191.8	85.9	13.4	11	1413.6	399.8	9.7	10.9	490.7	18.5	90.8
Total Nitrogen (lbs/day) Annual Average									75.28			
Total Nitrogen (mg/L) Annual Average									24.8			
Ammonia-Nitrogen(lbs/day) Average Monthly	< 0.96	< 1.48	< 2.39	< 2.67	< 3.08	< 1.66	< 2.80	< 1.27	< 1.28	< 2.56	< 0.75	< 0.79
Ammonia-Nitrogen(lbs/day) Weekly Average	< 1.02	< 2.36	< 5.09	< 5.01	< 6.50	< 2.02	< 3.30	< 1.59	< 1.67	< 6.59	< 0.87	< 0.87
Ammonia-Nitrogen(mg/L) Average Monthly	< 0.466	< 0.41	< 0.55	< 0.466	< 0.60	< 0.488	< 0.46	< 0.47	< 0.44	< 0.829	< 0.429	< 0.464
Ammonia-Nitrogen(mg/L) Weekly Average	< 0.5	< 0.5	< 0.95	< 0.556	< 1.15	< 0.564	< 0.5	< 0.5	< 0.55	< 1.52	< 0.500	< 0.5
Total Phosphorus (lbs/day) Annual Average									7.47			
Total Phosphorus (mg/L) Annual Average									2.46			
Total Aluminum (lbs/day) Average Quarterly			0.084			0.14			< 0.304			< 0.183

Total Aluminum (mg/L) Average Quarterly			0.03			0.04			< 0.10			< 0.10
Total Iron (lbs/day) Average Quarterly			0.224			0.32			0.364			0.128
Total Iron (mg/L) Average Quarterly			0.08			0.09			0.12			0.07
Total Manganese (lbs/day) Average Quarterly			0.036			0.07			0.091			0.037
Total Manganese (mg/L) Average Quarterly			0.013			0.02			0.03			< 0.02
UV Dosage (mWsec/cm²) Instantaneous Minimum	0.6	1.3	2.7	2.7	3.0	2.6	4.2	3.2	3.1	1.1	1.7	1.4
UV Dosage (mWsec/cm²) Average Monthly	1.72	2.48	4.9	4.6	5.9	4.5	7.4	4.0	4.6	3.6	3.1	3.5
Chronic WET - Ceriodaphnia Survival (TUc) Daily Maximum			GG			GG			GG			GG
Chronic WET - Ceriodaphnia Reproduction (TUc) Daily Maximum			GG			GG			GG			GG
Chronic WET - Pimephales Survival (TUc) Daily Maximum			GG			GG			GG			GG
Chronic WET - Pimephales Growth (TUc) Daily Maximum			GG			GG			GG			GG

Development of Effluent Limitations

Outfall No. 101 **Design Flow (MGD)** 1.2
Latitude 40º 19' 56.00" **Longitude** -79º 55' 20.00"
Wastewater Description: Sewage Effluent

Technology-Based Limitations

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

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

Comments: WQM 7.0 Model determined that TBELs are appropriate for $CBOD_5$ year-round.

Water Quality-Based Limitations

The following limitations and monitoring requirements were determined through water quality modeling (output files attached):

Parameter	Limit (mg/L)	SBC	Model
Dissolved Oxygen	5.0 (min)	Average Monthly	WQM 7.0 Version 1.1
Ammonia-Nitrogen (Warm Period)	1.92	Average Monthly	WQM 7.0 Version 1.1
Ammonia-Nitrogen (Cold Period)	2.83	Average Monthly	WQM 7.0 Version 1.1
Total Aluminum (µg/L)	Report	Average Monthly	Toxics Management Spreadsheet 1.4
Total Arsenic (µg/L)	Report	Average Monthly	Toxics Management Spreadsheet 1.4
Hexavalent Chromium (µg/L)	Report	Average Monthly	Toxics Management Spreadsheet 1.4
Total Copper (µg/L)	9.37	Average Monthly	Toxics Management Spreadsheet 1.4
Free Cyanide (µg/L)	4.02	Average Monthly	Toxics Management Spreadsheet 1.4
Dissolved Iron (µg/L)	Report	Average Monthly	Toxics Management Spreadsheet 1.4
Total Zinc (µg/L)	120	Average Monthly	Toxics Management Spreadsheet 1.4

Analyses for WQBELs were performed using the $Q_{7\text{-}10}$ flow. The flow was obtained via USGS StreamStats. The USGS StreamStats Report is located in Attachment 1.

The WQM 7.0 model returned limits for Ammonia-Nitrogen and Dissolved Oxygen. The WQM Reports are available in Attachment 2.

WQBELs for Toxic Parameters were determined in a Reasonable Potential (RP) analysis. The RP Analysis is described in detail in the Reasonable Potential Analysis section.

eDMR Data and Renewal Testing indicate that the permittee will not be able to immediately comply reliably with new Total Copper limits. A schedule of compliance is included for the permittee to reach full compliance with final effluent limitations. Per Section IV.G.3 of the SOP for Individual NPDES Sewage Applications, the permittee will be given up to three years to reach compliance with final effluent limitations. This period of 3 years includes time to plan and execute modifications to treatment facilities, operations, or other measures, or to conduct source review and control measures.

For Total Zinc and Free Cyanide, the effluent testing data shows that the permittee will likely be able to immediately comply with new effluent limitations. These limitations will become effective on the effective date of the permit.

Reasonable Potential Analysis

The SOP for Sewage Effluent Limits (DEP Document No. BCW-PMT-033, Revised February 5, 2024), Section II.F. and the SOP for Toxic Pollutants (DEP Document No. BCW-PMT-037) instruct the permit manager to evaluate the reasonable potential for toxic pollutants to cause an excursion above water quality standards based on the available data. The permit application submitted to DEP contained effluent testing data for the facility. The outfall is to an Unnamed Tributary to Monongahela River. A toxics Reasonable Potential (RP) Analysis was performed in TMS based on the effluent testing submitted in the renewal application and follow up information submitted in the pre-draft survey.

The application instructions for major NPDES permits states that J-values may be used when reporting parameter concentrations in renewal testing. The lab sheets documenting Reporting Limit, Chain of Custody information, J-Values, and other relevant information are included in Attachment 3. Where less than 10 samples were available, the maximum of the reported concentrations was used. The initial TMS analysis recommended new more stringent limits for the following:

- Total Boron
- Hexavalent Chromium
- Total Copper
- Free Cyanide
- Dissolved Iron
- Total Zinc

The applicant was informed of these recommendations and responded to the Pre-Draft Survey with a plan to sample effluent to determine if the long-term average concentration is protective of the most stringent water quality criteria as modeled by TMS. The long-term average of the renewal testing and the additional samples was determined using the ToxConc Spreadsheet. The ToxConc values for long-term average and coefficient of variation were then used in the TMS Model. The Pre-Draft Survey response, summarized results from additional testing, and the ToxConc report are included in Attachment 3. The TMS Report for the Reasonable Potential Analysis is included in Attachment 4.

Based on the updated information, the following WQBELs were recommended by TMS:

- Total Copper
- Free Cyanide
- Total Zinc

In addition to effluent limitations, TMS recommended monitor and report requirements for the following:

- Total Aluminum
- Total Arsenic
- Hexavalent Chromium
- Dissolved Iron

According to the SOP for WQBELs, monitoring is required when the concentration detected is between 10% and 50% of the WQBELs. Monitoring frequency is determined from Table 6-3 of the PADEP's Permit Writer's Manual and the SOP for Individual Sewage. For monitor-only parameters, quarterly monitoring is established to provide sufficient data for determining the long-term average of these parameters.

The monitoring requirement may be revisited if the record of effluent data demonstrates the concentration of these parameters is no longer within this range without treatment. Proposed relaxation of monitoring requirements must fall under the backsliding exceptions under Section 402(o) of the Clean Water Act.

For WQBELs, a monitoring frequency of 1/week is recommended by Table 6-3 of the Permit Writer's Manual. For the interim period, a monitoring period of 1/month is being imposed for process control as the permittee reaches compliance with final effluent limitations. The permittee may elect to perform additional sampling at permittees discretion.

Best Professional Judgment (BPJ) Limitations

Comments: N/A

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

(40 CFR 122.44 (l)(2) Establishing limitations, standards, and other permit conditions., 40 CFR Ch. I (7-1-21 Edition))

There is a permit limitation listed under the Proposed Backsliding section below that will be made less stringent under 112.44 (l)(2)(i). No other limitations in this permit have been made less stringent.

Proposed Backsliding

The following exceptions to anti-backsliding are acceptable under EPA's anti-backsliding regulation 40 CFR 122.44(l)(2)(i):

(A) Material and substantial alterations or additions to the permitted facility occurred after permit issuance which justify the application of a less stringent effluent limitation;
(B)
(1) Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance; or
(2) The Administrator determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b);
(C) A less stringent effluent limitation is necessary because of events over which the permittee has no control and for which there is no reasonably available remedy;
(D) The permittee has received a permit modification under section 301(c), 301(g), 301(h), 301(i), 301(k), 301(n), or 316(a); or
(E) The permittee has installed the treatment facilities required to meet the effluent limitations in the previous permit and has properly operated and maintained the facilities but has nevertheless been unable to achieve the previous effluent limitations, in which case the limitations in the reviewed, reissued, or modified permit may reflect the level of pollutant control actually achieved (but shall not be less stringent than required by effluent guidelines in effect at the time of permit renewal, reissuance, or modification).

(40 CFR 122.44 (l)(2)(i) Establishing limitations, standards, and other permit conditions., 40 CFR Ch. I (7-1-21 Edition))

The following list contains proposed effluent limitations that will be less stringent, along with a justification under the anti-backsliding regulation. All other permit limitations will be unchanged or will be more stringent than the existing limitations.

- The original Total Manganese monitoring requirement was not established to meet a state standard. The receiving stream is under a TMDL for acid mine drainage, which typically includes impairment for Total Manganese. The TMDL does not identify Total Manganese as a contributing factor to impairment. The Total Manganese limit was applied in error. No reasonable potential has been determined for this parameter from renewal testing, or from the monitoring requirement, nor have any Toxics Management Spreadsheet models recommended monitoring.

  This limit qualifies for the anti-backsliding exception under 40 CFR122.44(l) and Section 402(o)(2) of the CWA because the limit was not derived from a translation of water quality standards to effluent limitations for this facility.

Mass Loadings

Mass loading limits are applicable for publicly owned treatment works. Current policy requires average monthly mass loading limits be established for $CBOD_5$, TSS, and NH_3-N and average weekly mass loading limits be established for $CBOD_5$ and TSS.

Average monthly mass loading limits (lbs./day) are based on the formula: design flow (MGD) x concentration limit (mg/L) x conversion factor (8.34).

(*Section IV, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised March 24, 2021, Version 1.9*)

Ultraviolet Disinfection

Ultraviolet (UV) disinfection is used therefore Total Residual Chlorine (TRC) limits are not applicable. Routine monitoring of UV intensity is at the same monitoring frequency that is used for TRC.

(*Section I.A, Note 4, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised March 24, 2021, Version 1.9* and *25 PA Code 92a.61(b)*.)

Per and Poly Fluoroalkyl substances (PFAS) Monitoring

Effluent was sampled for four PFAS parameters; PFOA, PFOS, HFPO-DA, and PFBS as part of renewal. Testing of these parameters returned a detection for one of these substances above the TQL. See Attachment 7 for PFAS Target Quantitation Limits. Per the SOP for Establishing Sewage Effluent Limitations, quarterly monitoring is established when any PFAS parameter is detected in renewal testing. A footnote is included in Part A containing instructions to discontinue monitoring if four consecutive non-detects.

(*Section II.G, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised February 5, 2025, Version 2.0*)

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 ≥ 1MGD.

(*Note 12 SOP-Establishing Effluent Limitations for Individual Sewage Permits Final November 9, 2012, Revised February 5, 2024, Version 2.0.* and *25 PA Code 92a.61(b).)*

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

$CBOD_5$ and TSS influent loads will once again be reported for monthly average and daily maximum values in lbs/day and monthly average concentrations in mg/L.

(Section *IV.E.8. SOP – New and Reissuance Individual Sewage NPDES Permits Final November 9, 2012, Revised February 3, 2022, Version 2.0.)*

Monitoring frequencies are generally determined using Table 6-3 of the Permit Writer's Manual, however there are exceptions to this guidance. For new parameters introduced into renewed permits, in which the application manager desires for the permittee to collect data to verify reasonable potential for the subsequent permit application review, the application manager may select any reasonable monitoring frequency that is greater than or equal to once per year.

A monitoring frequency of 1/quarter has been selected for these parameters: Hexavalent Chromium, Total Arsenic, Dissolved Iron, Total Iron, Total Aluminum.

(Section *IV.E.5. SOP – New and Reissuance Individual Sewage NPDES Permits Final November 9, 2012, Revised February 3, 2022, Version 2.0.)*

Nutrient monitoring is required by the SOP for Effluent Limitations for Individual Sewage Permits. Monitoring is included to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). The receiving stream is not listed as impaired for nutrients, therefore at the discretion of the application manager, a monitoring frequency less than the equivalent of conventional pollutants in Table 6-3 of the Permit Writer's Manual has been selected. The monitoring frequency is 1/year.

(*Section I.A, Note 7 & 8, SOP for Clean Water Program, Establishing Effluent Limitations for Individual Sewage Permits, Final November 9, 2012, Revised March 24, 2021, Version 1.9* and *25 PA Code 92a.61(b)*.)

Rounding-Off Mathematical Values. Section 5 C.2. of the Permit Writers Manual contains general guidelines for rounding conventional and toxic pollutants, with instructions to round down to the nearest decimal place indicated.

General Magnitude	Conventional Pollutants	Toxic Pollutants
<0.01	to nearest 0.001	to nearest 0.001
0.01 - 0.1	to nearest 0.01	to nearest 0.01
0.1 - 1.0	to nearest 0.1	to nearest 0.01
1.0 - 10.0	to nearest 0.5	to nearest 0.01
10.0 - 60.0	to nearest 1.0	to nearest 0.01
60.0 or greater	to nearest 5.0	to nearest 0.10

(Department Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, Updated June 28, 2023 (Document No. 362-0400-001))

Section 2.C of the Permit Writers Manual contains the procedure for converting average monthly effluent limitations to average weekly, maximum daily, and instantaneous maximum effluent limitations. The average monthly limit is multiplied according to the following chart:

Discharge Solution	Parameters	Average Weekly	Maximum Daily	Instantaneous Maximum Multiplier
Sewage	All	1.5		2.0
Industrial	All		2.0	2.5*

(Department Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, Updated June 28, 2023 (Document No. 362-0400-001))

Table 5-3: Methods of Expressing Effluent Limits for Sewage Discharges

Discharge Situation	Mass Loadings (lbs/day)			Concentrations (mg/L)				
	Average Monthly	Average Weekly[3]	Maximum Daily	Average Monthly	Average Weekly	Maximum Daily	Instant Maximum[4]	Limit On Flow[6]
A. POTW DISCHARGES:								
1. Technology Based concentration limits	x	x[3]		x	x[3]		x	Yes
2. Water Quality Based limits	x	x[3]		x	x[3]		x	Yes
3. Water Quality Based limits (Toxics)	x		x	x		x		
B. NON-POTW DISCHARGES:								
1. Technology Based concentration limits	x[5]			x			x	Yes
2. Water Quality based limits	x[5]			x			x	Yes

1. This table is for all pollutants, conventional, non-conventional, toxic and all other pollutants that may be regulated by the permit. (Also refer to the toxics management strategy when specifying toxic WQBELs.)

2. X indicates need for an effluent limitation.

3. Only CBOD and TSS limitation.

4. Only include Instantaneous maximum limitations on the DMR forms if grab a sample is specified in the permit, otherwise do not include instantaneous maximum limitations on the DMR.

   Also, the permit page could include the following language for when composite samples are required "Instantaneous maximum limitations are imposed to allow for a grab sample to be collected by the appropriate regulatory agency to determine compliance. The permittee does not have to monitor for the instantaneous maximum limitations, however, if grab samples are collected by the permittee, the results must be reported."

5. This is for all sewage permits with design flow greater than 100,000 gpd since 25 Pa. Code § 94.13 requires flow monitoring.

6. The maximum monthly average flow limitation is the permitted flow that is to be placed in the NPDES permit. Generally, the annual average flow (AAF) is to be used for water quality modeling and to be used to determine the allowable mass loading in NPDES permits (i.e., AAF x 8.34 x mg/l = #/day) (Refer to the Domestic Wastewater Facilities Manual).

(Department Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits, Updated June 28, 2023 (Document No. 362-0400-001))

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers.

Table 6-3 – Self-Monitoring Requirements for SEWAGE Discharges

Plant Design Flow (MGD)	Flow Monitoring	C-BOD_5 or BOD_5	Suspended Solids	pH	Fecal Coliform	Chlorine Residual	NH_3-N	Phosphorus	DO	Toxics
Single Residence (Individual Permit)	2/year by estimate	2/year*	2/year*	1/month*	2/year*	1/month*	2/year*	2/year*	2/year*	N/A
.0005 to .002	weekly, using average pump rate or weir (a)	1/month*	1/month*	daily*	1/month*	daily*	1/month*	1/month*	daily*	N/A
.002 to .01	weekly, using average pump rate or weir (a)	2/month*	2/month*	daily*	2/month*	daily*	2/month*	2/month*	daily*	N/A
0.01 to 0.1	weekly, using average pump rate or weir (a)	2/month*	2/month*	daily*	2/month*	daily*	2/month*	2/month*	Daily*	1/week*
0.1 to 1.0	meter	1/week**	1/week**	daily*	1/week*	daily*	1/week**	1/week**	daily*	1/week****
1.0 to 5.0	meter	2/week***	2/week***	daily*	2/week*	daily*	2/week***	2/week***	daily*	1/week****
5.0 to 25.0	meter	daily***	daily***	daily*	daily*	1/shift*	daily***	daily***	daily*	1/week****
over 25.0	meter	daily***	daily***	1/shift*	daily*	1/shift*	1/shift***	1/shift***	1/shift*	1/week****

* Grab sample-these should be most representative of the effluent and are to be taken at a time when the normal daily maximum flow would reach the sampling point.

** 8-hour composite sample.

*** 24-hour composite sample.

**** Same sample type as for Industrial Process Wastewater (See Table 6-4).

Whole Effluent Toxicity (WET)

For Outfall 101, ☐ **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: Quarterly for the first year of the permit term, after which testing was conducted annually per permit condition C.III.B.2. of the previous permit.

The dilution series used for the tests was: 100%, 97%, 93%, 47%, and 23%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 93%.

Summary of Four Most Recent Test Results

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

NOEC/LC50 Data Analysis

	***Ceriodaphnia* Results (% Effluent)**			***Pimephales* Results (% Effluent)**			
Test Date	**NOEC Survival**	**NOEC Reproduction**	**LC50**	**NOEC Survival**	**NOEC Growth**	**LC50**	**Pass? ***
07/18/2022	100%	100%	>100%	93%	100%	>100%	Y
10/5/2022	100%	100%	>100%	100%	100%	>100%	Y
01/06/2023	100%	100%	>100%	100%	100%	>100%	Y
11/22/2023	100%	100%	>100%	100%	100%	>100%	Y

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

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

☐ **YES** ☒ **NO**

Comments:

The previous permit was issued with Quarterly WET Testing, however the testing was reduced to annual under Condition C.III.B. Per Section I.A. the SOP for WET Testing (Document No. BPNPSM-PMT-031). The annual monitoring is re-established under the same condition.

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

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

1. Determine IWC – Acute (IWCa):

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

[(1.2 MGD x 1.547) / ((0.00757 cfs x 1) + (1.2 MGD x 1.547))] x 100 = **99.6%**

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, not within Delaware River Basin

Type of Test for Permit Renewal: Chronic

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

N/A, Chronic Tests Required

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

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

[(1.2 MGD x 1.547) / ((0.00757 cfs x 1) + (1.2 MGD x 1.547))] x 100 = 100%

3. Determine Dilution Series

Dilution Series = 100%, 90%, 70%, 50%, and 25%.

WET Limits

Has reasonable potential been determined? ☐ YES ☒ NO

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

Wet limitations from the previous permit will be established in the permit under antibacksliding provisions.

	Parameter Statistical Basis	Proposed Change	Previous Permit	New Permit	Reason for Change
Total Copper	Total Copper (µg/L) Average Monthly	New effluent limitation	-	9.37	TMS Report Recommendation Reasonable Potential Found
	Total Copper (µg/L) Daily Max	Statistical Basis Added	-	14.0	
	Total Copper (µg/L) Instantaneous Maximum	Statistical Basis Added	-	14.0	
	Total Copper Mass Loading (lbs/day) Average Monthly	Mass Loading/Stat Basis Added	-	0.094	
	Total Copper Mass Loading (lbs/day) Weekly Average	Statistical Basis Added	-	0.14	
Total Zinc	Total Zinc (µg/L) Average Monthly	New effluent limitation	-	120	
	Total Zinc (µg/L) Daily Max	Statistical Basis Added	-	120	
	Total Zinc (µg/L) Instantaneous Maximum	Statistical Basis Added	-	120	
	Total Zinc Mass Loading (lbs/day) Average Monthly	Mass Loading/Stat Basis Added	-	1.2	
	Total Zinc Mass Loading (lbs/day) Daily Max	Statistical Basis Added	-	1.2	
Free Cyanide	Free Cyanide (µg/L) Average Monthly	New effluent limitation	-	4.02	
	Free Cyanide (µg/L) Daily Max	Statistical Basis Added	-	7.12	
	Free Cyanide (µg/L) Instantaneous Maximum	Statistical Basis Added	-	10.0	
	Free Cyanide Mass Loading (lbs/day) Average Monthly	Mass Loading/Stat Basis Added	-	0.04	
	Free Cyanide Mass Loading (lbs/day) Weekly Average	Statistical Basis Added	-	0.071	
	Total Arsenic (µg/L) Average Quarterly	Added Monitoring	-	Report	TMS Report Recommendation Monitoring Required
	Hexavalent Chromium (µg/L) Average Quarterly	Added Monitoring	-	Report	
	Dissolved Iron (µg/L) Average Quarterly	Added Monitoring	-	Report	
	Total Manganese (µg/L) Average Monthly	Remove Monitoring	Report	-	TMS Report No Reasonable Potential
	$CBOD_5$ Mass Loading (lbs/day) Weekly Average	Revise limit down	376.0	375.0	Rounding Guidance

	Parameter Statistical Basis	Proposed Change	Previous Permit	New Permit	Reason for Change
Ammonia-Nitrogen	Summer Ammonia-Nitrogen (mg/L) Average Monthly	More stringent (lower effluent limitation).	2	2.83	WQM 7.0 Report Rounding Guidance
	Summer Ammonia-Nitrogen (mg/L) Weekly Average	Statistical Basis Added	3	2.88	2.C Permit Writer's Manual Rounding Guidance
	Summer Ammonia-Nitrogen (mg/L) Instantaneous Maximum	Statistical Basis Added	4	3.84	WQM 7.0 Report Rounding Guidance
	Summer Ammonia-Nitrogen (lbs/day) Average Monthly	Mass Loading/Stat Basis Added	20	19.21	BCW-PMT-002 IV.B Rounding Guidance
	Summer Ammonia-Nitrogen (lbs/day) Weekly Average	Statistical Basis Added	30	28.82	Rounding Guidance
	Winter Ammonia-Nitrogen (mg/L) Average Monthly	More stringent (lower effluent limitation).	3	2.83	WQM 7.0 Report Rounding Guidance
	Winter Ammonia-Nitrogen (mg/L) Weekly Average	Statistical Basis Added	4.5	4.24	2.C Permit Writer's Manual Rounding Guidance
	Winter Ammonia-Nitrogen (mg/L) Instantaneous Maximum	Statistical Basis Added	6	5.66	WQM 7.0 Report Rounding Guidance
	Winter Ammonia-Nitrogen (lbs/day) Average Monthly	Mass Loading/Stat Basis Added	30	28.32	BCW-PMT-002 IV.B Rounding Guidance
	Winter Ammonia-Nitrogen (lbs/day) Weekly Average	Statistical Basis Added	45	42.43	Rounding Guidance

Additionally, the sample type for toxics monitoring is changed from 8-hour composite sample to 24-hour composite sample per Table 6-3 of the Permit Writer's Manual.

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" (386-0400-001), SOPs and/or BPJ.

Outfall 101, Effective Period: Permit Effective Date through 36 Months Following 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	Weekly Average	Instant. Maximum		
Copper, Total (ug/L)	XXX	XXX	XXX	Report	Report Daily Max	XXX	1/month	24-Hr Composite
Cyanide, Free (ug/L)	XXX	XXX	XXX	Report	Report Daily Max	XXX	1/month	24-Hr Composite
Zinc, Total (ug/L)	XXX	XXX	XXX	Report	Report Daily Max	XXX	1/month	24-Hr Composite

Compliance Sampling Location: Outfall 101

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" (386-0400-001), SOPs and/or BPJ.

Outfall 101, Effective Period: 36 Months Following 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		
Copper, Total (ug/L)	0.094	0.14 Wkly Avg	XXX	9.37	14.0 Daily Max	14.0	1/week	24-Hr Composite
Cyanide, Free (ug/L)	0.04	0.063	XXX	4.02	6.27 Daily Max	10.0	1/week	24-Hr Composite
Zinc, Total (ug/L)	1.2	1.2	XXX	120.0	120.0 Daily Max	120.0	1/week	24-Hr Composite

Compliance Sampling Location: Outfall 101

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" (386-0400-001), SOPs and/or BPJ.

Outfall 101, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2)	Required
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0	XXX	XXX	XXX	1/day	Grab
$CBOD_5$	250.0	375.0	XXX	25.0	37.5	50.0	2/week	24-Hr Composite
BOD_5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TSS	300.0	450.0	XXX	30.0	45.0	60.0	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
Total Nitrogen	Report Annl Avg	XXX	XXX	Report Annl Avg	XXX	XXX	1/year	24-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	28.32	42.43	XXX	2.83	4.24	5.66	2/week	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	19.21	28.82	XXX	1.92	2.88	3.84	2/week	24-Hr Composite
Total Phosphorus	Report Annl Avg	XXX	XXX	Report Daily Max	XXX	XXX	1/year	24-Hr Composite

Outfall 101 , Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2)	Required
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum	Measurement Frequency	Sample Type
Total Aluminum	Report Avg Qrtly	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	24-Hr Composite
Total Arsenic	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Hexavalent Chromium	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Dissolved Iron	XXX	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
Total Iron	Report Avg Qrtly	XXX	XXX	Report Avg Qrtly	XXX	XXX	1/quarter	24-Hr Composite
UV Dosage (mWsec/cm²)	XXX	XXX	Report	Report	XXX	XXX	1/day	Measured
PFOA (ng/L)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	Grab
PFOS (ng/L)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	Grab
PFBS (ng/L)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	Report Daily Max	XXX	XXX	1/quarter	Grab
Toxicity, Chronic - Ceriodaphnia Survival (TUc)	XXX	XXX	XXX	XXX	1.08	XXX	See Permit	24-Hr Composite
Toxicity, Chronic - Ceriodaphnia Reproduction (TUc)	XXX	XXX	XXX	XXX	1.08	XXX	See Permit	24-Hr Composite
Toxicity, Chronic - Pimephales Survival (TUc)	XXX	XXX	XXX	XXX	1.08	XXX	See Permit	24-Hr Composite
Toxicity, Chronic - Pimephales Growth (TUc)	XXX	XXX	XXX	XXX	1.08	XXX	See Permit	24-Hr Composite

Compliance Sampling Location: Outfall 101

Attachment 1
Receiving Stream Characteristics

StreamStats Report-Upstream

Region ID: PA
Workspace ID: PA20250609192124912000
Clicked Point (Latitude, Longitude): 40.33195, -79.92024
Time: 2025-06-09 15:21:48 -0400

Outlet Elevation: 915.25'

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.97	square miles
ELEV	Mean Basin Elevation	1109	feet
OUTLETXA83	X coordinate of the outlet, in NAD_1983_Albers,meters	-163154.6369	meters
OUTLETYA83	Y coordinate of the outlet, in NAD_1983_Albers, meters	149652.5071	meters

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.97	square miles	2.26	1400
ELEV	Mean Basin Elevation	1109	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0254	ft^3/s
30 Day 2 Year Low Flow	0.0488	ft^3/s

Statistic	Value	Unit
7 Day 10 Year Low Flow	0.00757	ft^3/s
30 Day 10 Year Low Flow	0.0161	ft^3/s
90 Day 10 Year Low Flow	0.0325	ft^3/s

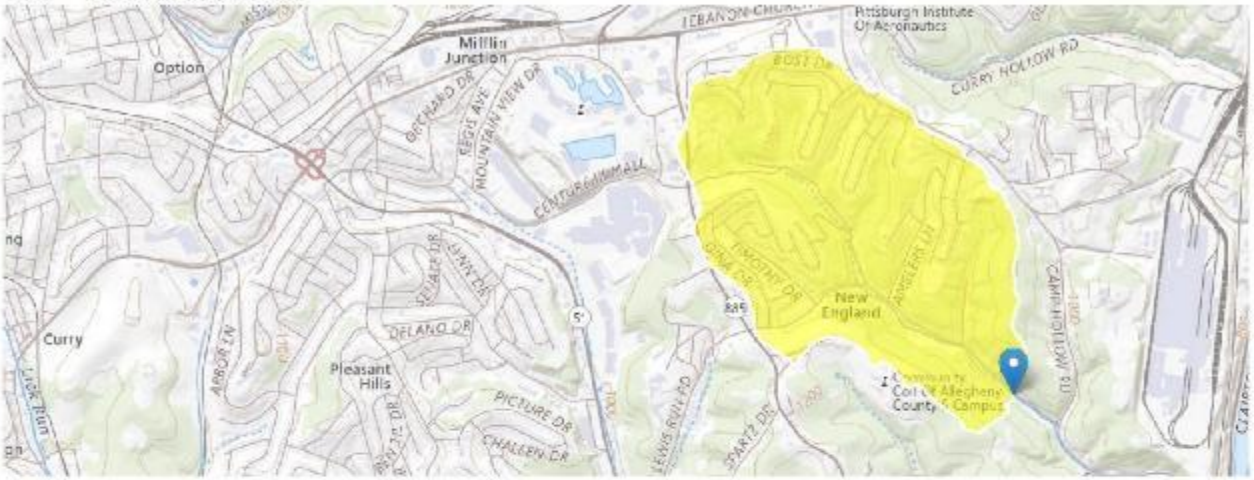
Low-Flow Statistics Citations

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

Application Version: 4.29.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

StreamStats Report-Downstream

Region ID: PA
Workspace ID: PA20250609192607719000
Clicked Point (Latitude, Longitude): 40.32880, -79.91457
Time: 2025-06-09 15:26:52 -0400



Outlet Elevation: 862.45'

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1.24	square miles
ELEV	Mean Basin Elevation	1098	feet
OUTLETXA83	X coordinate of the outlet, in NAD_1983_Albers,meters	-162681.3378	meters
OUTLETYA83	Y coordinate of the outlet, in NAD_1983_Albers, meters	149289.7208	meters

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1.24	square miles	2.26	1400
ELEV	Mean Basin Elevation	1098	feet	1050	2580

Low-Flow Statistics Disclaimers [Low Flow Region 4]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors.

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	0.0333	ft^3/s
30 Day 2 Year Low Flow	0.0633	ft^3/s

Statistic	Value	Unit
7 Day 10 Year Low Flow	0.0102	ft^3/s
30 Day 10 Year Low Flow	0.0213	ft^3/s
90 Day 10 Year Low Flow	0.0422	ft^3/s

Low-Flow Statistics Citations

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

Application Version: 4.29.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment 2
WQM Report-Warm Period

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
19C	39422	Trib 39422 of Monongahela River	1.630	915.25	0.97	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.008	0.00	0.00	0.000	0.000	10.0	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
W.M. San Auth	PA0026522	1.2000	1.2000	1.2000	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	8.38	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
19C	39422	Trib 39422 of Monongahela River	1.250	862.45	1.24	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.008	0.00	0.00	0.000	0.000	10.0	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	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	8.38	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☑
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19C	39422	Trib 39422 of Monongahela River

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
1.630	0.01	0.00	0.01	1.8564	0.02632	.736	7.36	10	0.34	0.067	20.02	7.00
Q1-10 Flow												
1.630	0.00	0.00	0.00	1.8564	0.02632	NA	NA	NA	0.34	0.068	20.01	7.00
Q30-10 Flow												
1.630	0.01	0.00	0.01	1.8564	0.02632	NA	NA	NA	0.34	0.067	20.03	7.00

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19C	39422	Trib 39422 of Monongahela River

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
1.630	W.M. San Auth	9.66	9.69	9.66	9.69	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
1.630	W.M. San Auth	1.91	1.92	1.91	1.92	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
1.63	W.M. San Auth	25	25	1.92	1.92	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19C	39422	Trib 39422 of Monongahela River

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
1.630	1.200	20.021	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach W/DRatio**	**Reach Velocity (fps)**
7.361	0.736	10.000	0.344
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
24.90	1.499	1.92	0.701
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.014	86.080	Tsivoglou	5
Reach Travel Time (days)			
0.067			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.007	24.65	1.91	6.52
0.013	24.40	1.90	7.37
0.020	24.16	1.89	7.85
0.027	23.92	1.88	8.11
0.034	23.67	1.87	8.24
0.040	23.44	1.86	8.24
0.047	23.20	1.85	8.24
0.054	22.97	1.85	8.24
0.061	22.73	1.84	8.24
0.067	22.51	1.83	8.24

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19C	39422	Trib 39422 of Monongahela River

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)
1.630	W.M. San Auth	PA0026522	1.200	CBOD5	25		
				NH3-N	1.92	3.84	
				Dissolved Oxygen			5

Attachment 2
WQM Report-Cold Period

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
19C	39422	Trib 39422 of Monongahela River	1.630	915.25	0.97	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.016	0.00	0.00	0.000	0.000	10.0	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
W.M. San Auth	PA0026522	1.2000	1.2000	1.2000	0.000	15.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	4.00	12.80	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
19C	39422	Trib 39422 of Monongahela River	1.250	862.45	1.24	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.016	0.00	0.00	0.000	0.000	10.0	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	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	12.80	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☑
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	5		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
19C	39422	Trib 39422 of Monongahela River

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
1.630	0.02	0.00	0.02	1.8564	0.02632	.737	7.37	10	0.34	0.067	14.92	7.00
Q1-10 Flow												
1.630	0.01	0.00	0.01	1.8564	0.02632	NA	NA	NA	0.34	0.067	14.95	7.00
Q30-10 Flow												
1.630	0.02	0.00	0.02	1.8564	0.02632	NA	NA	NA	0.35	0.067	14.89	7.00

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
19C	39422	Trib 39422 of Monongahela River

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
1.630	W.M. San Auth	14.07	14.15	14.07	14.15	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
1.630	W.M. San Auth	2.8	2.83	2.8	2.83	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
1.63	W.M. San Auth	25	25	2.83	2.83	5	5	0	0

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
19C	39422	Trib 39422 of Monongahela River

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
1.630	1.200	14.917	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach W/DRatio**	**Reach Velocity (fps)**
7.367	0.737	10.000	0.345
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
24.81	1.499	2.81	0.473
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
5.065	76.444	Tsivoglou	5
Reach Travel Time (days)			
0.067			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.007	24.61	2.80	6.84
0.013	24.42	2.79	7.90
0.020	24.22	2.78	8.53
0.027	24.03	2.77	8.91
0.034	23.84	2.77	9.11
0.040	23.65	2.76	9.11
0.047	23.46	2.75	9.11
0.054	23.27	2.74	9.11
0.061	23.09	2.73	9.11
0.067	22.90	2.72	9.11

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
19C	39422	Trib 39422 of Monongahela River

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)
1.630	W.M. San Auth	PA0026522	1.200	CBOD5	25		
				NH3-N	2.83	5.66	
				Dissolved Oxygen			5

Attachment 3
Initial TMS Results, Pre-Draft Survey, and Renewal Testing

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **New England STP** NPDES Permit No.: **PA0026522** Outfall No.: **101**

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

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
1.2	100	7						

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L											
	Chloride (PWS)	mg/L											
	Bromide	mg/L											
	Sulfate (PWS)	mg/L											
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	mg/L		0.15			0.4						
	Total Antimony	µg/L	<	0.5									
	Total Arsenic	µg/L	<	2									
	Total Barium	µg/L		58.6									
	Total Beryllium	µg/L	<	1									
	Total Boron	µg/L		200									
	Total Cadmium	µg/L	<	0.2									
	Total Chromium (III)	µg/L	<	2									
	Hexavalent Chromium	µg/L	<	5									
	Total Cobalt	µg/L	<	1									
	Total Copper	µg/L		23									
	Free Cyanide	µg/L	<	20									
	Total Cyanide	µg/L	<	20									
	Dissolved Iron	µg/L		400									
	Total Iron	mg/L		0.16			0.47						
	Total Lead	µg/L	<	1									
	Total Manganese	mg/L		0.04			0.96						
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		3.82									
	Total Phenols (Phenolics) (PWS)	µg/L		21									
	Total Selenium	µg/L	<	5									
	Total Silver	µg/L	<	0.4									
	Total Thallium	µg/L	<	2									
	Total Zinc	µg/L		101									
	Total Molybdenum	µg/L		2.67									
	Acrolein	µg/L	<	1									

Group 3	Chlorobenzene	µg/L	<	0.5									
	Chlorodibromomethane	µg/L	<	0.5									
	Chloroethane	µg/L	<	0.5									
	2-Chloroethyl Vinyl Ether	µg/L	<	0.5									
	Chloroform	µg/L	<	0.5									
	Dichlorobromomethane	µg/L	<	0.5									
	1,1-Dichloroethane	µg/L	<	0.5									
	1,2-Dichloroethane	µg/L	<	0.5									
	1,1-Dichloroethylene	µg/L	<	0.5									
	1,2-Dichloropropane	µg/L	<	0.5									
	1,3-Dichloropropylene	µg/L	<	0.5									
	1,4-Dioxane	µg/L	<	0.1									
	Ethylbenzene	µg/L	<	0.5									
	Methyl Bromide	µg/L	<	0.5									
	Methyl Chloride	µg/L	<	0.5									
	Methylene Chloride	µg/L	<	0.5									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5									
	Tetrachloroethylene	µg/L	<	0.5									
	Toluene	µg/L	<	0.5									
	1,2-trans-Dichloroethylene	µg/L	<	0.5									
	1,1,1-Trichloroethane	µg/L	<	0.5									
	1,1,2-Trichloroethane	µg/L	<	0.5									
	Trichloroethylene	µg/L	<	0.5									
	Vinyl Chloride	µg/L	<	0.5									
Group 4	2-Chlorophenol	µg/L	<	0.5									
	2,4-Dichlorophenol	µg/L	<	0.5									
	2,4-Dimethylphenol	µg/L	<	0.5									
	4,6-Dinitro-o-Cresol	µg/L	<	2.1									
	2,4-Dinitrophenol	µg/L	<	2.1									
	2-Nitrophenol	µg/L	<	1									
	4-Nitrophenol	µg/L	<	1									
	p-Chloro-m-Cresol	µg/L	<	0.2									
	Pentachlorophenol	µg/L	<	1									
	Phenol	µg/L	<	0.5									
	2,4,6-Trichlorophenol	µg/L	<	0.5									
Group 5	Acenaphthene	µg/L	<	0.2									
	Acenaphthylene	µg/L	<	0.2									
	Anthracene	µg/L	<	0.2									
	Benzidine	µg/L	<	1									
	Benzo(a)Anthracene	µg/L	<	0.1									
	Benzo(a)Pyrene	µg/L	<	0.2									
	3,4-Benzofluoranthene	µg/L	<	0.2									
	Benzo(ghi)Perylene	µg/L	<	0.2									
	Benzo(k)Fluoranthene	µg/L	<	0.2									
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.2									
	Bis(2-Chloroethyl)Ether	µg/L	<	0.2									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.2									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	2.9									
	4-Bromophenyl Phenyl Ether	µg/L	<	0.2									
	Butyl Benzyl Phthalate	µg/L	<	1.04									
	2-Chloronaphthalene	µg/L	<	0.2									
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.2									
	Chrysene	µg/L	<	0.2									
	Dibenzo(a,h)Anthrancene	µg/L	<	0.2									
	1,2-Dichlorobenzene	µg/L	<	0.2									
	1,3-Dichlorobenzene	µg/L	<	0.2									
	1,4-Dichlorobenzene	µg/L	<	0.2									
	3,3-Dichlorobenzidine	µg/L	<	1									
	Diethyl Phthalate	µg/L	<	2.1									
	Dimethyl Phthalate	µg/L	<	2.1									
	Di-n-Butyl Phthalate	µg/L	<	2.1									
	2,4-Dinitrotoluene	µg/L	<	0.5									
	2,6-Dinitrotoluene	µg/L	<	0.5									
	Di-n-Octyl Phthalate	µg/L	<	2.1									

	1,2-Diphenylhydrazine	µg/L	<	0.2										
	Fluoranthene	µg/L	<	0.2										
	Fluorene	µg/L	<	0.2										
	Hexachlorobenzene	µg/L	<	0.2										
	Hexachlorobutadiene	µg/L	<	0.2										
	Hexachlorocyclopentadiene	µg/L	<	1										
	Hexachloroethane	µg/L	<	0.2										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.2										
	Isophorone	µg/L	<	0.5										
	Naphthalene	µg/L	<	0.2										
	Nitrobenzene	µg/L	<	0.2										
	n-Nitrosodimethylamine	µg/L	<	0.2										
	n-Nitrosodi-n-Propylamine	µg/L	<	0.2										
	n-Nitrosodiphenylamine	µg/L	<	0.2										
	Phenanthrene	µg/L	<	0.2										
	Pyrene	µg/L	<	0.2										
	1,2,4-Trichlorobenzene	µg/L	<	0.2										
Group 6	Aldrin	µg/L	<											
	alpha-BHC	µg/L	<											
	beta-BHC	µg/L	<											
	gamma-BHC	µg/L	<											
	delta BHC	µg/L	<											
	Chlordane	µg/L	<											
	4,4-DDT	µg/L	<											
	4,4-DDE	µg/L	<											
	4,4-DDD	µg/L	<											
	Dieldrin	µg/L	<											
	alpha-Endosulfan	µg/L	<											
	beta-Endosulfan	µg/L	<											
	Endosulfan Sulfate	µg/L	<											
	Endrin	µg/L	<											
	Endrin Aldehyde	µg/L	<											
	Heptachlor	µg/L	<											
	Heptachlor Epoxide	µg/L	<											
	PCB-1016	µg/L	<											
	PCB-1221	µg/L	<											
	PCB-1232	µg/L	<											
	PCB-1242	µg/L	<											
	PCB-1248	µg/L	<											
	PCB-1254	µg/L	<											
	PCB-1260	µg/L	<											
	PCBs, Total	µg/L	<											
	Toxaphene	µg/L	<											
	2,3,7,8-TCDD	ng/L	<											
Group 7	Gross Alpha	pCi/L												
	Total Beta	pCi/L	<											
	Radium 226/228	pCi/L	<											
	Total Strontium	µg/L	<											
	Total Uranium	µg/L	<											
	Osmotic Pressure	mOs/kg												

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

New England STP, NPDES Permit No. PA0026522, Outfall 101

Instructions | Discharge | Stream

Receiving Surface Water Name: **UNT to Monongahela River**

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	039422	10	913	0.98			Yes
End of Reach 1	039422	9.62	880.12	0.99			Yes

Q_{7-10}

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	10	0.0078										100	7		
End of Reach 1	9.62	0.0078													

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	10														
End of Reach 1	9.62														

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2013

Model Results

New England STP, NPDES Permit No. PA0026522, Outfall 101

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)
10	0.01		0.01	1.856	0.026	0.578	9.394	16.255	0.343	0.068	0.00003
9.62	0.01		0.008								

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)
10	0.10		0.10	1.856	0.026	0.591	9.394	15.895	0.353	0.066	0.005
9.62	0.106		0.11								

☑ *Wasteload Allocations*

☑ *AFC* CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	750	750	753	
Total Antimony	0	0		0	1,100	1,100	1,105	
Total Arsenic	0	0		0	340	340	341	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	21,086	
Total Boron	0	0		0	8,100	8,100	8,133	
Total Cadmium	0	0		0	2.014	2.13	2.14	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	569.763	1,803	1,810	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	16.4	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	95.4	
Total Copper	0	0		0	13.439	14.0	14.1	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	22.1	
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	64.561	81.6	82.0	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	1.66	Chem Translator of 0.85 applied
Total Nickel	0	0		0	468.236	469	471	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	3.8	Chem Translator of 0.85 applied
Total Thallium	0	0		0	66	66.0	66.3	
Total Zinc	0	0		0	117.180	120	120	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	3.01	
Acrylonitrile	0	0		0	650	650	653	
Benzene	0	0		0	640	640	643	
Bromoform	0	0		0	1,800	1,800	1,807	
Carbon Tetrachloride	0	0		0	2,800	2,800	2,812	
Chlorobenzene	0	0		0	1,200	1,200	1,205	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	18,074	
Chloroform	0	0		0	1,900	1,900	1,908	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	15,062	
1,1-Dichloroethylene	0	0		0	7,500	7,500	7,531	
1,2-Dichloropropane	0	0		0	11,000	11,000	11,045	
1,3-Dichloropropylene	0	0		0	310	310	311	
Ethylbenzene	0	0		0	2,900	2,900	2,912	
Methyl Bromide	0	0		0	550	550	552	
Methyl Chloride	0	0		0	28,000	28,000	28,115	
Methylene Chloride	0	0		0	12,000	12,000	12,049	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	1,004	
Tetrachloroethylene	0	0		0	700	700	703	
Toluene	0	0		0	1,700	1,700	1,707	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	6,828	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	3,012	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	3,414	
Trichloroethylene	0	0		0	2,300	2,300	2,309	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	562	
2,4-Dichlorophenol	0	0		0	1,700	1,700	1,707	
2,4-Dimethylphenol	0	0		0	660	660	663	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	80.3	
2,4-Dinitrophenol	0	0		0	660	660	663	
2-Nitrophenol	0	0		0	8,000	8,000	8,033	
4-Nitrophenol	0	0		0	2,300	2,300	2,309	
p-Chloro-m-Cresol	0	0		0	160	160	161	
Pentachlorophenol	0	0		0	8.723	8.72	8.76	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	462	
Acenaphthene	0	0		0	83	83.0	83.3	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	301	
Benzo(a)Anthracene	0	0		0	0.5	0.5	0.5	
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	30,124	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	4,519	
4-Bromophanyl Phenyl Ether	0	0		0	270	270	271	
Butyl Benzyl Phthalate	0	0		0	140	140	141	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	823	
1,3-Dichlorobenzene	0	0		0	350	350	351	
1,4-Dichlorobenzene	0	0		0	730	730	733	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	4,016	
Dimethyl Phthalate	0	0		0	2,500	2,500	2,510	
Di-n-Butyl Phthalate	0	0		0	110	110	110	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	1,607	
2,6-Dinitrotoluene	0	0		0	990	990	994	
1,2-Diphenylhydrazine	0	0		0	15	15.0	15.1	
Fluoranthene	0	0		0	200	200	201	
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	10.0	
Hexachlorocyclopentadiene	0	0		0	5	5.0	5.02	
Hexachloroethane	0	0		0	60	60.0	60.2	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	10,041	
Naphthalene	0	0		0	140	140	141	
Nitrobenzene	0	0		0	4,000	4,000	4,016	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	17,070	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	301	
Phenanthrene	0	0		0	5	5.0	5.02	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	131	

☑ ***CFC*** CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	221	
Total Arsenic	0	0		0	150	150	151	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	4,117	
Total Boron	0	0		0	1,600	1,600	1,607	
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	86.5	Chem Translator of 0.86 applied

Hexavalent Chromium	0	0		0	10	10.4	10.4	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	19.1	
Total Copper	0	0		0	8.956	9.33	9.37	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	5.22	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	1,506	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.517	3.18	3.19	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	0.91	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.007	52.2	52.4	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	5.01	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	13.1	
Total Zinc	0	0		0	118.139	120	120	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	3.01	
Acrylonitrile	0	0		0	130	130	131	
Benzene	0	0		0	130	130	131	
Bromoform	0	0		0	370	370	372	
Carbon Tetrachloride	0	0		0	560	560	562	
Chlorobenzene	0	0		0	240	240	241	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	3,514	
Chloroform	0	0		0	390	390	392	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	3,113	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,506	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,209	
1,3-Dichloropropylene	0	0		0	61	61.0	61.3	
Ethylbenzene	0	0		0	580	580	582	
Methyl Bromide	0	0		0	110	110	110	
Methyl Chloride	0	0		0	5,500	5,500	5,523	
Methylene Chloride	0	0		0	2,400	2,400	2,410	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	211	
Tetrachloroethylene	0	0		0	140	140	141	
Toluene	0	0		0	330	330	331	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	1,406	
1,1,1-Trichloroethane	0	0		0	610	610	613	
1,1,2-Trichloroethane	0	0		0	680	680	683	
Trichloroethylene	0	0		0	450	450	452	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	110	
2,4-Dichlorophenol	0	0		0	340	340	341	
2,4-Dimethylphenol	0	0		0	130	130	131	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	16.1	
2,4-Dinitrophenol	0	0		0	130	130	131	
2-Nitrophenol	0	0		0	1,600	1,600	1,607	

4-Nitrophenol	0	0		0	470	470	472	
p-Chloro-m-Cresol	0	0		0	500	500	502	
Pentachlorophenol	0	0		0	6.693	6.69	6.72	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	91.4	
Acenaphthene	0	0		0	17	17.0	17.1	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	59.2	
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	6,025	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	914	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	54.2	
Butyl Benzyl Phthalate	0	0		0	35	35.0	35.1	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	160	160	161	
1,3-Dichlorobenzene	0	0		0	69	69.0	69.3	
1,4-Dichlorobenzene	0	0		0	150	150	151	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	803	
Dimethyl Phthalate	0	0		0	500	500	502	
Di-n-Butyl Phthalate	0	0		0	21	21.0	21.1	
2,4-Dinitrotoluene	0	0		0	320	320	321	
2,6-Dinitrotoluene	0	0		0	200	200	201	
1,2-Diphenylhydrazine	0	0		0	3	3.0	3.01	
Fluoranthene	0	0		0	40	40.0	40.2	
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	2.01	
Hexachlorocyclopentadiene	0	0		0	1	1.0	1.0	
Hexachloroethane	0	0		0	12	12.0	12.0	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	2,109	
Naphthalene	0	0		0	43	43.0	43.2	
Nitrobenzene	0	0		0	810	810	813	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	3,414	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	59.2	
Phenanthrene	0	0		0	1	1.0	1.0	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	26.1	

☑ **THH** CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	5.62	
Total Arsenic	0	0		0	10	10.0	10.0	
Total Barium	0	0		0	2,400	2,400	2,410	
Total Boron	0	0		0	3,100	3,100	3,113	
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	4.02	
Dissolved Iron	0	0		0	300	300	301	
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	1,004	
Total Mercury	0	0		0	0.050	0.05	0.05	
Total Nickel	0	0		0	610	610	613	
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	3.01	
Acrylonitrile	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	
Bromoform	0	0		0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0		0	N/A	N/A	N/A	
Chlorobenzene	0	0		0	100	100.0	100	
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	5.72	
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	33.1	
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	68.3	
Methyl Bromide	0	0		0	100	100.0	100	
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	57.2	

1,2-trans-Dichloroethylene	0	0		0	100	100.0	100	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	10,041	
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	30.1	
2,4-Dichlorophenol	0	0		0	10	10.0	10.0	
2,4-Dimethylphenol	0	0		0	100	100.0	100	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	2.01	
2,4-Dinitrophenol	0	0		0	10	10.0	10.0	
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	4,016	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	70.3	
Anthracene	0	0		0	300	300	301	
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	201	
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	803	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	1,004	
1,3-Dichlorobenzene	0	0		0	7	7.0	7.03	
1,4-Dichlorobenzene	0	0		0	300	300	301	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	602	
Dimethyl Phthalate	0	0		0	2,000	2,000	2,008	
Di-n-Butyl Phthalate	0	0		0	20	20.0	20.1	
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	20.1	
Fluorene	0	0		0	50	50.0	50.2	
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	4.02	
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	34.1	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	10.0	
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	20.1	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.07	

☑ *CRL* CCT (min): 0.005 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	0.06	0.06	0.063	
Benzene	0	0		0	0.58	0.58	0.61	
Bromoform	0	0		0	7	7.0	7.4	
Carbon Tetrachloride	0	0		0	0.4	0.4	0.42	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	0.85	
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	1.0	

1,2-Dichloroethane	0	0		0	9.9	9.9	10.5	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	0.95	
1,3-Dichloropropylene	0	0		0	0.27	0.27	0.29	
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	21.1	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	0.21	
Tetrachloroethylene	0	0		0	10	10.0	10.6	
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	0.58	
Trichloroethylene	0	0		0	0.6	0.6	0.63	
Vinyl Chloride	0	0		0	0.02	0.02	0.021	
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	0.032	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	1.58	
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	0.011	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.032	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	0.34	
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	0.13	
Dibenzo(a,h)Anthrancene	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	0.053	
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	0.053	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.053	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.032	
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	0.00008	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.011	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	0.11	
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	0.0007	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.005	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	3.49	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	Report	Report	Report	Report	Report	mg/L	0.75	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Boron	Report	Report	Report	Report	Report	µg/L	1,607	CFC	Discharge Conc > 10% WQBEL (no RP)
Hexavalent Chromium	Report	Report	Report	Report	Report	µg/L	10.4	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	0.094	0.14	9.37	14.1	14.1	µg/L	9.37	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	0.04	0.063	4.02	6.27	10.0	µg/L	4.02	THH	Discharge Conc ≥ 50% WQBEL (RP)
Dissolved Iron	3.01	4.7	301	470	753	µg/L	301	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Iron	Report	Report	Report	Report	Report	mg/L	1.51	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	1.2	1.2	120	120	120	µg/L	120	AFC	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 Antimony	N/A	N/A	Discharge Conc < TQL

Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	2,410	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Cadmium	N/A	N/A	Discharge Conc < TQL
Total Chromium (III)	N/A	N/A	Discharge Conc < TQL
Total Cobalt	N/A	N/A	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Total Lead	3.19	µg/L	Discharge Conc < TQL
Total Manganese	1.9	mg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.05	µg/L	Discharge Conc < TQL
Total Nickel	52.4	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	5.01	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	0.063	µg/L	Discharge Conc < TQL
Benzene	0.61	µg/L	Discharge Conc < TQL
Bromoform	7.4	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	0.42	µg/L	Discharge Conc < TQL
Chlorobenzene	100	µg/L	Discharge Conc < TQL
Chlorodibromomethane	0.85	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	3,514	µg/L	Discharge Conc < TQL
Chloroform	5.72	µg/L	Discharge Conc < TQL
Dichlorobromomethane	1.0	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	10.5	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	33.1	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	0.95	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	0.29	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	68.3	µg/L	Discharge Conc < TQL
Methyl Bromide	100	µg/L	Discharge Conc < TQL
Methyl Chloride	5,523	µg/L	Discharge Conc < TQL
Methylene Chloride	21.1	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	0.21	µg/L	Discharge Conc < TQL
Tetrachloroethylene	10.6	µg/L	Discharge Conc < TQL
Toluene	57.2	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	100	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	613	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	0.59	µg/L	Discharge Conc < TQL
Trichloroethylene	0.63	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.021	µg/L	Discharge Conc < TQL
2-Chlorophenol	30.1	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	10.0	µg/L	Discharge Conc < TQL

2,4-Dimethylphenol	100	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2.01	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	10.0	µg/L	Discharge Conc < TQL
2-Nitrophenol	1,607	µg/L	Discharge Conc < TQL
4-Nitrophenol	472	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.032	µg/L	Discharge Conc < TQL
Phenol	4,016	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	1.58	µg/L	Discharge Conc < TQL
Acenaphthene	17.1	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	301	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
Benzo(k)Fluoranthene	0.011	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.032	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	201	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	0.34	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	54.2	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.1	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	803	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.13	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.0001	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	161	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	7.03	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	151	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	0.053	µg/L	Discharge Conc < TQL
Diethyl Phthalate	602	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	502	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	20.1	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	0.053	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.053	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.032	µg/L	Discharge Conc < TQL
Fluoranthene	20.1	µg/L	Discharge Conc < TQL
Fluorene	50.2	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.00006	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.011	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.0	µg/L	Discharge Conc < TQL
Hexachloroethane	0.11	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.001	µg/L	Discharge Conc < TQL
Isophorone	34.1	µg/L	Discharge Conc < TQL

Naphthalene	43.2	µg/L	Discharge Conc < TQL
Nitrobenzene	10.0	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.0007	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.005	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	3.49	µg/L	Discharge Conc < TQL
Phenanthrene	1.0	µg/L	Discharge Conc < TQL
Pyrene	20.1	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.07	µg/L	Discharge Conc < TQL

Pennsylvania
Department of
Environmental Protection

October 28, 2024

Dear Gary Stetar:

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 (mg/L)	Maximum Daily (mg/L)	IMAX (mg/L)
101	Total Boron	Report	-	-
101	Hexavalent Chromium	Report	-	-
101	Total Copper	9.37	14.1	14.1
101	Free Cyanide	4.02	6.27	10.0
101	Dissolved Iron	301	470	753
101	Total Zinc	120	120	120

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

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

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

Sincerely,

John Price

John Price-Gedrites
Environmental Engineering Specialist
Clean Water Program

Pennsylvania
Department of
Environmental Protection

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

Permittee Name: **W Mifflin Sanitary Sewer & Stormwater Authority Allegheny County** Permit No.: **PA0026522**

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

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

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

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

If Yes, describe prior studies and results:

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

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

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

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

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

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

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

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Comp
Collection Method: Composite

Sample Number: 25A0524-01
Collection: 01/07/2025 12:00
Received: 01/08/2025 15:35
Matrix: NPW

Analyte	Result	DL	RL	Units	Prep Date	Analysis Date	Analyst	Method
Hexavalent Chromium								
Hexavalent Chromium	<0.005	0.001	0.005	mg/L	01/15/2025 09:30	01/15/2025 12:40	EJK	SM 3500-Cr B
Metals								
Boron	<0.10	0.01	0.10	mg/L	01/14/2025 08:00	01/14/2025 16:38	EJ	EPA 200.7
Copper	0.011	0.001	0.002	mg/L	01/14/2025 08:00	01/14/2025 13:51	EJ	EPA 200.7
Zinc	56.4	4.21	5.00	µg/L	01/15/2025 09:07	01/15/2025 11:09	MTW	EPA 200.8
Metals, Dissolved								
Iron	0.04	0.01	0.02	mg/L	01/17/2025 08:00	01/20/2025 17:22	REK	EPA 200.7

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Subcontract Analyses Performed By M J Reider - Lab ID # 06-00003

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Grab
Collection Method: Grab

Sample Number: 25A0524-02
Collection: 01/07/2025 12:00
Received: 01/08/2025 15:35
Matrix: NPW

Analyte	Result
Subcontracted Analyses	
Cyanide, Weak/Dissociable(Free)	See Attached

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

AIN OF CUSTODY
b # 03-457
#00167 Eff 01-26-22

1

CWM

101 Parkview Drive Ext Kittanning PA 16201 Phone: 724-543-3011 Fax: 724-543-6768

Client Name: West Mifflin Sanitary Sewer MA	Contact Name: Andrew Howard	PWSID#	NPDES#
Address: 1302 Lower Bull Run Rd, West Mifflin PA 15122	Phone: 412-466-6070 x 232 Cel:	Reportable Sample:	RUSH Sample:
	Email: trlab@wmssma.org	Check Sample:	See Codes Below

CWM Lab #	Sample Site	Collection Point	DATE Sampled	GRAB Time Sampled	COMPOSITE Start / End	LAB Temps °C	Test/Analysis Requested	Field Data/Comments	Preservative	Matrix	Sample Type	Bottle Type	# of Bottles
25A0524-01		Comp	1-7-25		/	5.4	B, Cu, Zn		H	NPW	C	G	1
					/		Dissolved Fe		NA	NPW	C	P	1
					/		Hexachrome		O	NPW	C	P	1
					/								
-02		Grab	1-7-25		/	4.3	Free Cyanide	**SUBBED**	OH	NPW	G	P	1
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								

25A0524

Received on ICE

	Date	Time
Sampled by [signature]	1-7-25	1200
Relinquished by [signature]	1-8-25	0850
Received by [signature]	1-8-25	0850
Relinquished by [signature]	1-8-25	15:37
Received in Lab by [signature]	1-8-25	1537

Preservative Key: ST = Sodium Thiosulfate A = Ascorbic Acid H = HNO3 C = HCL S = H2SO4 OH = NaOH O = Other NA = None

Matrix Key: DW - Drinking Water Rec - Pool/Recreation Water NPW - Non Potable Water R - Raw S - Soil, Solid, Sludge F - Fuel

Sample Type: C = Composite G = Grab M = Micropurge Bottles: P = plastic G = glass O = other

Sample Comments:

Sample Conditions: (Y) N COC w/ samples (Y) N Needs Hold Times (Y) N Containers Intact (Y) N Correct bottles for tests (Y) N Correct # of bottles listed

M.J. Reider Associates, Inc.
ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #06-00003

Certificate of Analysis

Laboratory No.: 2501766
Report: 01/21/25
Lab Contact: Bradley T Griffiths

Attention: Cassandra Tumac
Reported To: CWM Environmental, Inc.
101 Parkview Drive Extension
Kittanning, PA 16201

Project: WW Misc

Lab ID: 2501766-01 **Collected By:** Client **Sampled:** 01/07/25 12:00 **Received:** 01/13/25 15:50
Sample Desc: 25A0524-02 **Sample Type:** Grab

	Result	Unit	MDL	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry								
Cyanide, Free	0.001	mg/L	0.001	0.001	Kelada 01 Rev 1.2	01/16/25		KMS

CWM
ENVIRONMENTAL

2501766
CWM Environmental, Inc.
WW Misc

PM: BTG

SUBCONTRACT ORDER

Sending Laboratory:

CWM Environmental Kittanning
101 Parkview Drive Ext
Kittanning, PA 16201
Phone: 724.543.3011
Fax: 724.543.6768

Project Manager: Cassandra Tlumac

Subcontracted Laboratory:

M J Reider - Lab ID # 06-00003
107 Angelica Street
Reading, PA 19611
Phone: (610) 374-5129
Fax:

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Address:1302 Lower Bull Run Road West Mifflin, PA 15122
Phone:412-466-6070
Sample Point: Grab

Work Order: 25A0524

Analysis	Due	Expires	Comments
Lab Sample Number: 25A0524-02 *NPW*	***Sampled: 01/07/2025 12:00***	***Sampled by: customer/Client***	***Sample Type: Grab***
Sample Name: Grab	***Location ID:***		***Sample Type:***
Cyanide, Free	01/22/2025	01/17/2025 12:00	RL = 0.001 mg/L
Containers Supplied: 1 plastic 500mL NaOH			

Cyanide container(s) stored in black plastic bag(s) at sample reception. 1/13/25 ALR

MJRA Temp -3.2 °C NOT FROZEN

Released By	Date	Received By	Date
[signature] FedEx/UPS	1/9/25 RLR ~~1/8/25~~	FedEx/UPS [signature]	1/13/25 1950

DC#00163

Page 1 of 1

Page 2 of 3

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

M.J. Reider Associates, Inc.

MJRA Terms & Conditions

All samples submitted must be accompanied by signed documentation representing a Chain of Custody (COC). The COC Record acts as a contract between the client and MJRA. Signing the COC form gives approval for MJRA to perform the requested analyses and is an agreement to pay for the cost of such analyses. COC Records must be completed in black or blue indelible ink (must not run when wet). COC documentation begins at the time of sample collection. Client is required to document all sample details prior to releasing samples to MJRA. All samples must be placed on ice immediately after sampling and shipped or delivered to the laboratory in a manner that will maintain the sample temperature above freezing and below 6C (loose ice is preferred).

Sample Submission, Sample Acceptance & Sampling Containers

Included on the COC must be the sample description, date and time of collection (including start and stop for composites), container size and type, preservative information, sample matrix, indication of whether the sample is a grab or composite, number of containers & a list of the tests to be performed. Poor sample collection technique, inappropriate sampling containers and/or improper sample preservation may lead to sample rejection. Suitable sample containers, labels, and preservatives (as applicable), along with blank COCs are provided at no additional cost.

Turnaround Times (TAT)

Average TAT for test results range from 5 to 15 working days depending on the specific analyses and time of year submitted. Faster turnaround times (*RUSH TAT) may be available depending on the current workload in a particular department and the nature of the analyses requested. We encourage you to verify requests for expedited sample results with one of our Technical Directors prior to sample submittal. Without confirmation from a Technical Director, your results may not be completed by your deadline. *RUSH TAT Surcharges are applied for expedited turnaround times.

Analytical Results, Sample Collection Integrity & Subcontracting

Analytical values are for the sample as submitted and relate only to the item tested. The value indicates a snapshot of the constituent content of the sample at the time of sample collection. Analytical results can be impacted by poor sample collection technique and/or improper preservation. All sample collection completed by MJRA was performed in accordance with applicable regulatory protocols or as specified in customer specific sampling plans. Constituent content will vary over time based on the matrix of the sample and the physical and chemical changes to its environment. All sample results and laboratory reports are strictly confidential. Results will not be available to anyone except the primary client or authorized party representing the client unless MJRA receives additional permissions from the client. When necessary, MJRA will subcontract certain analyses to a third party accredited laboratory. If client prohibits subcontracting, it must be provided in writing and include instruction on how to proceed with client samples that require third party analyses.

Payment Terms

Payment Terms are Net 30 days. Prices are subject to change without notice. A standing monthly charge of 1.5% of the clients over-30-day-unpaid balance may be added to the balance after 30 days and each month thereafter (day 31, 61, 91 etc.). The laboratory accepts all major credit cards, ACH transactions, checks and cash. New clients must pay for all services rendered prior to sample collection and/or in some cases report processing. Clients must contact the MJRA accounting department to pursue a credit-based account. MJRA reserves the right to terminate the client's credit account and to refuse to perform additional services on a credit basis if any balance is outstanding for more than 60 days.

Warranty & Litigation

MJRA does not guarantee any results of its services but has agreed to use its best efforts, in accordance with the standards and practices of the industry, to cause such results to be accurate and complete. We disclaim any other warranties, expressed or implied, including a warranty of fitness for a particular purpose and warranty of merchantability. Clients agree that they shall reimburse MJRA for any and all fees, cost and litigation expenses, including reasonable attorney fees incurred by MJRA in obtaining payment for the services rendered. All costs associated with compliance with any subpoena for documents, testimony, or any other purpose relating to work performed by MJRA, for a client, shall be paid by that client. MJRA's aggregate liability for negligent acts and omissions and of an intentional breach by MJRA will not exceed the fee paid for the services. Client agrees to indemnify and hold MJRA harmless for any and all liabilities in excess of said amount. Neither MJRA nor the client shall be liable to the other for special, incidental consequential or punitive liability or damages included but not limited to those arising from delay, loss of use, loss of profits or revenues. MJRA will not be liable to the client unless the client has notified MJRA of the discovery of the alleged negligent act, error, omissions or breach within 30 days of the day of its discovery and within one year of the date of invoice.

Reviewed and Approved by:

Bradley T. Griffiths

Bradley T Griffiths
Project Manager

NELAP accredited by PA (PA DEP #006-00003) Visit our website to view our current NELAC accreditations for various drinking water, wastewater and solid & chemical materials analyses.
Additional accreditations by MD (261)

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Comp
Collection Method: Composite

Sample Number: 25A1445-01
Collection: 01/16/2025 12:00
Received: 01/16/2025 14:50
Matrix: npW

Analyte	Result	DL	RL	Units	Prep Date	Analysis Date	Analyst	Method
Hexavalent Chromium								
Hexavalent Chromium	<0.001	0.001	0.005	mg/L	01/22/2025 08:45	01/22/2025 10:50	EJK	SM 3500-Cr B
Metals								
Boron	0.10	0.01	0.10	mg/L	01/21/2025 08:00	01/22/2025 14:50	EJ	EPA 200.7
Copper	0.010	0.001	0.002	mg/L	01/21/2025 08:00	01/21/2025 14:11	EJ	EPA 200.7
Zinc	93.5	4.21	5.00	µg/L	01/18/2025 08:32	01/18/2025 10:17	MTW	EPA 200.8
Metals, Dissolved								
Iron	0.05	0.01	0.02	mg/L	01/21/2025 08:00	01/23/2025 16:24	REK	EPA 200.7

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

Reported: 1/24/2025 12:00:10PM

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Subcontract Analyses Performed By M J Reider - Lab ID # 06-00003

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Grab
Collection Method: Grab

Sample Number: 25A1445-02
Collection: 01/16/2025 12:00
Received: 01/16/2025 14:50
Matrix: NPW

Analyte	Result
Subcontracted Analyses	
Cyanide, Weak/Dissociable(Free)	See Attached

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

4

CWM

101 Parkview Drive Ext Kittanning PA 16201 Phone: 724-543-3011 Fax: 724-543-6768

AIN OF CUSTODY
b # 03-457
#00162 Eff 01-26-22

Client Name: West Mifflin Sanitary Sewer MA
Address: 1302 Lower Bull Run Rd
West Mifflin PA 15122

Contact Name: Andrew Howard
Phone: 412-466-6070 x 232 Cell:
Email: trlab@wmssma.org

PWSID#
NPDESA
Reportable Sample:
RUSH Sample:
Check Sample:
See Codes Below

CWM Lab #	Sample Site	Collection Point	DATE Sampled	GRAB Time Sampled	COMPOSITE Start / End	LAB Temps °C	Test/Analysis Requested	Field Data/Comments	Preservative	Matrix	Sample Type	Bottle Type	# of Bottles
25A1445-01		Comp	1-16-25	7am-7am 12-12	CMT 1/16/25	5.7	B, Cu, Zn		H	NPW	C	G	1
				Per Bottles/client	/	5.4	Dissolved Fe		NA	NPW	C	P	1
				CMT 1/16/25	/	5.6	Hexachrome		O	NPW	C	P	1
					/								
		Grab	1-16-25	12pm	/	5.5	Free Cyanide	**SUBBED**	OH	NPW	G	P	4
-02				Client CMT	/								
				1/16/25	/								
					/								
					/								
					/								
					/								
					/								
					/								

25A1445

RECEIVED on ICE

	Date	Time
Sampled by: [signature]	1-16-25	1200
Relinquished by	1-16-25	1218
Received by [signature]	1-16-25	1450
Relinquished by [signature]		
Received in Lab by CMT	1/16/25	1450

Preservative Key: ST = Sodium Thiosulfate A = Ascorbic Acid H = HNO3 C = HCL S = H2SO4 OH = NaOH O = Other NA = None

Matrix Key: DW - Drinking Water Rec - Pool/Recreation Water NPW - Non Potable Water R - Raw S - Soil, Solid, Sludge F - Fuel

Sample Type: C = Composite G = Grab M = Micropurge

Bottles: P = plastic G = glass O = other

Sample Comments:

Sample Conditions: (Y) N COC w/ samples (Y) N Meets Hold Times (Y) N Containers Intact (Y) N Correct bottles for tests (Y) N Correct # of bottles listed

Rev 07/22

M.J. Reider Associates, Inc.
ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #06-00003

Certificate of Analysis

Laboratory No.: 2502429
Report: 01/21/25
Lab Contact: Bradley T Griffiths

Attention: Caitlin Welton
Reported To: CWM Environmental, Inc.
101 Parkview Drive Extension
Kittanning, PA 16201

Project: WW Misc

Lab ID: 2502429-01 **Collected By:** Client **Sampled:** 01/16/25 12:00 **Received:** 01/17/25 10:45
Sample Desc: 25A1445-02 **Sample Type:** Grab

	Result	Unit	MDL	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry								
Cyanide, Free	0.004	mg/L	0.001	0.001	Kelada 01 Rev 1.2	01/21/25		KMS

CWM ENVIRONMENTAL

2502429 PM: BTG
CWM Environmental, Inc.
WW Misc

SUBCONTRACT ORDER

Sending Laboratory:

CWM Environmental Kittanning
101 Parkview Drive Ext
Kittanning, PA 16201
Phone: 724.543.3011
Fax: 724.543.6768

Project Manager: Cassandra Tlumac

Subcontracted Laboratory:

M J Reider - Lab ID # 06-00003
107 Angelica Street
Reading, PA 19611
Phone: (610) 374-5129
Fax:

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Address:1302 Lower Bull Run Road West Mifflin, PA 15122
Phone:412-466-6070
Sample Point: Grab

Work Order: 25A1445

Analysis	Due	Expires	Comments
Lab Sample Number: 25A1445-02 *NPW*	***Sampled: 01/16/2025 12:00***	***Sampled by: Customer/Client***	***Sample Type: Grab***
Sample Name: Grab	***Location ID:***	***Sample Type:***	-01
Cyanide, Free	01/30/2025	01/26/2025 12:00	RL = 0.001 mg/L

Containers Supplied: 1 plastic 500mL NaOH

Cyanide container(s) stored
in black plastic bag(s) at sample reception.
1/17/25 cml

Temp Blank 0.3 °C

Released By FEDEX Date 1/16/25 Received By FEDEX Date 1/17/25 1045

DC#00163

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

M.J. Reider Associates, Inc.

MJRA Terms & Conditions

All samples submitted must be accompanied by signed documentation representing a Chain of Custody (COC). The COC Record acts as a contract between the client and MJRA. Signing the COC form gives approval for MJRA to perform the requested analyses and is an agreement to pay for the cost of such analyses. COC Records must be completed in black or blue indelible ink (must not run when wet). COC documentation begins at the time of sample collection. Client is required to document all sample details prior to releasing samples to MJRA. All samples must be placed on ice immediately after sampling and shipped or delivered to the laboratory in a manner that will maintain the sample temperature above freezing and below 6C (loose ice is preferred).

Sample Submission, Sample Acceptance & Sampling Containers

Included on the COC must be the sample description, date and time of collection (including start and stop for composites), container size and type, preservative information, sample matrix, indication of whether the sample is a grab or composite, number of containers & a list of the tests to be performed. Poor sample collection technique, inappropriate sampling containers and/or improper sample preservation may lead to sample rejection. Suitable sample containers, labels, and preservatives (as applicable), along with blank COCs are provided at no additional cost.

Turnaround Times (TAT)

Average TAT for test results range from 5 to 15 working days depending on the specific analyses and time of year submitted. Faster turnaround times (*RUSH TAT) may be available depending on the current workload in a particular department and the nature of the analyses requested. We encourage you to verify requests for expedited sample results with one of our Technical Directors prior to sample submittal. Without confirmation from a Technical Director, your results may not be completed by your deadline. *RUSH TAT Surcharges are applied for expedited turnaround times.

Analytical Results, Sample Collection Integrity & Subcontracting

Analytical values are for the sample as submitted and relate only to the item tested. The value indicates a snapshot of the constituent content of the sample at the time of sample collection. Analytical results can be impacted by poor sample collection technique and/or improper preservation. All sample collection completed by MJRA was performed in accordance with applicable regulatory protocols or as specified in customer specific sampling plans. Constituent content will vary over time based on the matrix of the sample and the physical and chemical changes to its environment. All sample results and laboratory reports are strictly confidential. Results will not be available to anyone except the primary client or authorized party representing the client unless MJRA receives additional permissions from the client. When necessary, MJRA will subcontract certain analyses to a third party accredited laboratory. If client prohibits subcontracting, it must be provided in writing and include instruction on how to proceed with client samples that require third party analyses.

Payment Terms

Payment Terms are Net 30 days. Prices are subject to change without notice. A standing monthly charge of 1.5% of the clients over-30-day-unpaid balance may be added to the balance after 30 days and each month thereafter (day 31, 61, 91 etc.). The laboratory accepts all major credit cards, ACH transactions, checks and cash. New clients must pay for all services rendered prior to sample collection and/or in some cases report processing. Clients must contact the MJRA accounting department to pursue a credit-based account. MJRA reserves the right to terminate the client's credit account and to refuse to perform additional services on a credit basis if any balance is outstanding for more than 60 days.

Warranty & Litigation

MJRA does not guarantee any results of its services but has agreed to use its best efforts, in accordance with the standards and practices of the industry, to cause such results to be accurate and complete. We disclaim any other warranties, expressed or implied, including a warranty of fitness for a particular purpose and warranty of merchantability. Clients agree that they shall reimburse MJRA for any and all fees, cost and litigation expenses, including reasonable attorney fees incurred by MJRA in obtaining payment for the services rendered. All costs associated with compliance with any subpoena for documents, testimony, or any other purpose relating to work performed by MJRA, for a client, shall be paid by that client. MJRA's aggregate liability for negligent acts and omissions and of an intentional breach by MJRA will not exceed the fee paid for the services. Client agrees to indemnify and hold MJRA harmless for any and all liabilities in excess of said amount. Neither MJRA nor the client shall be liable to the other for special, incidental consequential or punitive liability or damages included but not limited to those arising from delay, loss of use, loss of profits or revenues. MJRA will not be liable to the client unless the client has notified MJRA of the discovery of the alleged negligent act, error, omissions or breach within 30 days of the day of its discovery and within one year of the date of invoice.

Reviewed and Approved by:

Bradley T. Griffiths

Bradley T Griffiths
Project Manager

NELAP accredited by PA (PADEP #006-00003) Visit our website to view our current NELAC accreditations for various drinking water, wastewater and solid & chemical materials analyses.
Additional accreditations by MD (261)

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Comp
Collection Method: Composite

Sample Number: 25A1776-01
Collection: 01/21/2025 12:00
Received: 01/22/2025 15:20
Matrix: npW

Analyte	Result	DL	RL	Units	Prep Date	Analysis Date	Analyst	Method
Hexavalent Chromium								
Hexavalent Chromium	0.001 J	0.001	0.005	mg/L	02/04/2025 10:00	02/04/2025 11:45	EJK	SM 3500-Cr B
Metals								
Boron	0.10	0.01	0.10	mg/L	01/23/2025 08:05	01/23/2025 14:57	REK	EPA 200.7
Copper	0.011	0.001	0.002	mg/L	01/23/2025 08:05	01/23/2025 11:11	REK	EPA 200.7
Zinc	74.8	4.21	5.00	µg/L	01/24/2025 09:11	01/24/2025 11:35	MTW	EPA 200.8
Metals, Dissolved								
Iron	0.04	0.01	0.02	mg/L	01/30/2025 08:00	01/30/2025 15:41	REK	EPA 200.7

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

Reported: 2/4/2025 1:35:48PM

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Subcontract Analyses Performed By M J Reider - Lab ID # 06-00003

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Grab
Collection Method: Grab

Sample Number: 25A1776-02
Collection: 01/21/2025 12:15
Received: 01/22/2025 15:20
Matrix: NPW

Analyte	Result
Subcontracted Analyses	
Cyanide, Weak/Dissociable(Free)	See Attached

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Sample Qualifiers

J	Analyte found between MDL and RL limits, result is considered estimated

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CWM

101 Parkview Drive Ext Kittanning PA 16201 Phone: 724-543-3011 Fax: 724-543-6768

AIN OF CUSTODY
b # 03-457
#00162 Eff 01-26-22

Client Name: West Mifflin Sanitary Sewer MA
Address: 1302 Lower Bull Run Rd
West Mifflin PA 15122

Contact Name: Andrew Howard
Phone: 412-466-6070 x 232 Cell:
Email: trlab@wmssma.org

PWSID#
NPDES#
Reportable Sample:
RUSH Sample:
Check Sample:

See Codes Below

CWM Lab #	Sample Site	Collection Point	DATE Sampled	GRAB Time Sampled	COMPOSITE Start / End	LAB Temps °C	Test/Analysis Requested	Field Data/Comments	Preservative	Matrix	Sample Type	Bottle Type	# of Bottles
25A1776-01		Comp	1-21-25		0400 / 1200	5.3	B, Cu, Zn		H	NPW	C	G	1
					/		Dissolved Fe		NA	NPW	C	P	1
					/		Hexachrome		O	NPW	C	P	1
					/								
-02		Grab	1-21-25	1215	/	5.4	Free Cyanide	**SUBBED**	OH	NPW	G	P	1
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								

25A1776

RECEIVED on ICE

	Date	Time
Sampled by	1-21-25	1215
Relinquished by	1-22-25	0910
Received by	1-22-25	0915
Relinquished by	1-22-25	1520
Received in Lab by CMT	1-22-25	1620

Preservative Key: ST = Sodium Thiosulfate A = Ascorbic Acid H = HNO3 C = HCL S = H2SO4 OH = NaOH O = Other NA = None

Matrix Key: DW - Drinking Water Rec - Pool/Recreation Water NPW - Non Potable Water R - Raw S - Soil, Solid, Sludge F - Fuel

Sample Type: C = Composite G = Grab M = Micropurge Bottles: P = plastic G = glass O = other

Sample Comments:

Sample Conditions: (Y) N COC w/ samples (Y) N Meets Hold Times (Y) N Containers Intact (Y) N Correct bottles for tests (Y) N Correct # of bottles listed

Rev 02/2022

M.J. Reider Associates, Inc.
ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #06-00003

Certificate of Analysis

Laboratory No.: 2503440
Report: 01/29/25
Lab Contact: Bradley T Griffiths

Attention: Caitlin Welton
Reported To: CWM Environmental, Inc.
101 Parkview Drive Extension
Kittanning, PA 16201

Project: WW Misc

Lab ID: 2503440-01 **Collected By:** Client **Sampled:** 01/21/25 12:15 **Received:** 01/24/25 11:10
Sample Desc: 25A1776-02 **Sample Type:** Grab

	Result	Unit	MDL	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry								
Cyanide, Free	0.001	mg/L	0.001	0.001	Kelada 01 Rev 1.2	01/29/25		KMS

CWM ENVIRONMENTAL

SUBCONTRACT ORDER

2503440 PM: BTG
CWM Environmental, Inc.
WW Misc

Sending Laboratory:

CWM Environmental Kittanning
101 Parkview Drive Ext
Kittanning, PA 16201
Phone: 724.543.3011
Fax: 724.543.6768

Project Manager: Cassandra Tlumac

Subcontracted Laboratory:

M J Reider - Lab ID # 06-00003
107 Angelica Street
Reading, PA 19611
Phone: (610) 374-5129
Fax:

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Address:1302 Lower Bull Run Road West Mifflin, PA 15122
Phone:412-466-6070
Sample Point: Grab

Work Order: 25A1776

Analysis	Due	Expires	Comments
Lab Sample Number: 25A1776-02 ***NPW*** ***Sampled: 01/21/2025 12:15*** ***Sampled by: Customer/Client*** ***Sample Type: Grab***			
Sample Name: Grab ***Location ID:*** ***Sample Type:*** -01			
Cyanide, Free	02/05/2025	01/31/2025 12:15	RL = 0.001 mg/L
Containers Supplied: 1 plastic 500mL NaOH			

Cyanide container(s) stored
in black plastic bag(s) at sample reception.
1/24/25 NAG

Temp @ Receipt MJRA 1.2 °C On Ice? Y or N

Released By [signature] Date 1/23/25 via FedEx Received By [signature] Date 01-24-25 11:10

DC#00163

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

M.J. Reider Associates, Inc.

MJRA Terms & Conditions

All samples submitted must be accompanied by signed documentation representing a Chain of Custody (COC). The COC Record acts as a contract between the client and MJRA. Signing the COC form gives approval for MJRA to perform the requested analyses and is an agreement to pay for the cost of such analyses. COC Records must be completed in black or blue indelible ink (must not run when wet). COC documentation begins at the time of sample collection. Client is required to document all sample details prior to releasing samples to MJRA. All samples must be placed on ice immediately after sampling and shipped or delivered to the laboratory in a manner that will maintain the sample temperature above freezing and below 6C (loose ice is preferred).

Sample Submission, Sample Acceptance & Sampling Containers

Included on the COC must be the sample description, date and time of collection (including start and stop for composites), container size and type, preservative information, sample matrix, indication of whether the sample is a grab or composite, number of containers & a list of the tests to be performed. Poor sample collection technique, inappropriate sampling containers and/or improper sample preservation may lead to sample rejection. Suitable sample containers, labels, and preservatives (as applicable), along with blank COCs are provided at no additional cost.

Turnaround Times (TAT)

Average TAT for test results range from 5 to 15 working days depending on the specific analyses and time of year submitted. Faster turnaround times (*RUSH TAT) may be available depending on the current workload in a particular department and the nature of the analyses requested. We encourage you to verify requests for expedited sample results with one of our Technical Directors prior to sample submittal. Without confirmation from a Technical Director, your results may not be completed by your deadline. *RUSH TAT Surcharges are applied for expedited turnaround times.

Analytical Results, Sample Collection Integrity & Subcontracting

Analytical values are for the sample as submitted and relate only to the item tested. The value indicates a snapshot of the constituent content of the sample at the time of sample collection. Analytical results can be impacted by poor sample collection technique and/or improper preservation. All sample collection completed by MJRA was performed in accordance with applicable regulatory protocols or as specified in customer specific sampling plans. Constituent content will vary over time based on the matrix of the sample and the physical and chemical changes to its environment. All sample results and laboratory reports are strictly confidential. Results will not be available to anyone except the primary client or authorized party representing the client unless MJRA receives additional permissions from the client. When necessary, MJRA will subcontract certain analyses to a third party accredited laboratory. If client prohibits subcontracting, it must be provided in writing and include instruction on how to proceed with client samples that require third party analyses.

Payment Terms

Payment Terms are Net 30 days. Prices are subject to change without notice. A standing monthly charge of 1.5% of the clients over-30-day-unpaid balance may be added to the balance after 30 days and each month thereafter (day 31, 61, 91 etc.). The laboratory accepts all major credit cards, ACH transactions, checks and cash. New clients must pay for all services rendered prior to sample collection and/or in some cases report processing. Clients must contact the MJRA accounting department to pursue a credit-based account. MJRA reserves the right to terminate the client's credit account and to refuse to perform additional services on a credit basis if any balance is outstanding for more than 60 days.

Warranty & Litigation

MJRA does not guarantee any results of its services but has agreed to use its best efforts, in accordance with the standards and practices of the industry, to cause such results to be accurate and complete. We disclaim any other warranties, expressed or implied, including a warranty of fitness for a particular purpose and warranty of merchantability. Clients agree that they shall reimburse MJRA for any and all fees, cost and litigation expenses, including reasonable attorney fees incurred by MJRA in obtaining payment for the services rendered. All costs associated with compliance with any subpoena for documents, testimony, or any other purpose relating to work performed by MJRA, for a client, shall be paid by that client. MJRA's aggregate liability for negligent acts and omissions and of an intentional breach by MJRA will not exceed the fee paid for the services. Client agrees to indemnify and hold MJRA harmless for any and all liabilities in excess of said amount. Neither MJRA nor the client shall be liable to the other for special, incidental consequential or punitive liability or damages included but not limited to those arising from delay, loss of use, loss of profits or revenues. MJRA will not be liable to the client unless the client has notified MJRA of the discovery of the alleged negligent act, error, omissions or breach within 30 days of the day of its discovery and within one year of the date of invoice.

Reviewed and Approved by:

Bradley T. Griffiths

Bradley T Griffiths
Project Manager

107 Angelica Street ○ Reading, PA 19611 ○ www.mjreider.com ○ (610) 374-5129 ○ fax (610) 374-7234

NELAP accredited by PA (PADEP #006-00003) Visit our website to view our current NELAC accreditations for various drinking water, wastewater and solid & chemical materials analyses.
Additional accreditations by MD (261)

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Comp
Collection Method: Composite

Sample Number: 24K1020-01
Collection: 11/12/2024 12:00
Received: 11/13/2024 15:10
Matrix: npW

Cert	Analyte	Result	DL	RL	Units	Prep Date	Analysis Date	Analyst	Method
Hexavalent Chromium									
	Hexavalent Chromium	<0.005	0.001	0.005	mg/L	11/16/2024 07:50	11/16/2024 11:00	EJK	SM 3500-Cr B
Metals									
	Boron	0.15	0.01	0.10	mg/L	11/26/2024 08:05	11/26/2024 13:12	EJ	EPA 200.7
	Copper	0.007	0.001	0.002	mg/L	11/26/2024 08:05	11/27/2024 10:09	EJ	EPA 200.7
	Zinc	59.8	4.21	5.00	µg/L	11/15/2024 12:01	11/15/2024 14:31	MTW	EPA 200.8
Metals, Dissolved									
	Iron	0.05	0.01	0.02	mg/L	12/06/2024 07:35	12/09/2024 14:52	EJ	EPA 200.7

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Subcontract Analyses Performed By M J Reider - Lab ID # 06-00003

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Grab
Collection Method: Grab

Sample Number: 24K1020-02
Collection: 11/12/2024 12:30
Received: 11/13/2024 15:10
Matrix: npW

Cert	Analyte	Result	Reporting Limit	Units	Analysis Date	Analyst	Method
Subcontracted Analyses							
NA	Cyanide, Weak/Dissociable(Free)	See attached					Subcontracted analysis

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

NPDES Permit No. PA0026522

NPDES Permit Fact Sheet
New England STP

CHAIN OF CUSTODY
Lab # 03-457
DCW00162 EFF 01-26-22

1

CWM

101 Parkview Drive Ext Kittanning PA 16201 Phone: 724-543-3011 Fax: 724-543-6768

Client Name: West Mifflin Sanitary Sewer MA	Contact Name: Andrew Howard	PWSID#	NPDES#
Address: 1302 Lower Bull Run Rd West Mifflin PA 15122	Phone: 412-466-6070 x 232 Cell	Reportable Sample:	RUSH Sample:
	Email: trlab@wmssma.org	Check Sample:	See Codes Below

CWM Lab #	Sample Site	Collection Point	DATE Sampled	GRAB Time Sampled	COMPOSITE Start / End	LAB Temps °C	Test/Analysis Requested	Field Data/Comments	Preservative	Matrix	Sample Type	Bottle Type	# of Bottles
24K1020-01		Comp	11-12-24		0800 / 1200	3	B, Cu, Zn		H	NPW	C	G	1
			11-12-24		0800 / 1200	3	Dissolved Fe		NA	NPW	C	P	1
			11-12-24		0800 / 1200	3	Hexachrome		O	NPW	C	P	1
					/								
-02		Grab	11-12-24	~~1129~~ 1230	/		Free Cyanide	**SUBBED**	OH	NPW	G	P	1
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								

24K1020

Sampled by:	Date: 11-12-24	Time: 1230
Relinquished by:	11-13-24	0855
Received by:	11.13.24	0855
Relinquished by:	11.13.24	1510
Received in Lab by:	11.13.24	1510

Preservative Key: ST = Sodium Thiosulfate A = Ascorbic Acid H = HNO3 C = HCL S = H2SO4 OH = NaOH O = Other NA = None

Matrix Key: DW - Drinking Water Rec - Foul/Recreation Water NPW - Non Potable Water R - Raw S - Soil, Solid, Sludge I - Fuel

Sample Type: C = Composite G = Grab M = Micropurge

Bottles: P = plastic G = glass O = other

Sample Comments:

Sample Conditions: (Y) N COC w/ samples (Y) N Vials Void Times (Y) N Containers Intact (Y) N Correct Bottles for tests (Y) N Correct # of bottles listed

Rev 011322

M.J. Reider Associates, Inc.
ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #06-00003

Certificate of Analysis

Laboratory No.: 2450126
Report: 11/19/24
Lab Contact: Bradley T Griffiths

Attention: Amanda Zimmerman
Reported To: CWM Environmental, Inc.
101 Parkview Drive Extension
Kittanning, PA 16201

Project: WW Misc

Lab ID: 2450126-01 **Collected By:** Client **Sampled:** 11/12/24 12:30 **Received:** 11/15/24 10:19
Sample Desc: 24K1020-02 - Grab **Sample Type:** Grab

	Result	Unit	MDL	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry								
Cyanide, Free	<0.001	mg/L	0.001	0.001	Kelada 01 Rev 1.2	11/18/24		NJG

CWM ENVIRONMENTAL

2450126 PM: BTG
CWM Environmental, Inc.
WW Misc

SUBCONTRACT ORDER

Sending Laboratory:

CWM Environmental Kittanning
101 Parkview Drive Ext
Kittanning, PA 16201
Phone: 724.543.3011
Fax: 724.543.6768

Project Manager: Cassandra Tlumac

Subcontracted Laboratory:

M J Reider - Lab ID # 06-00003
107 Angelica Street
Reading, PA 19611
Phone: (610) 374-5129
Fax:

Work Order Client:

West Mifflin Sanitary Sewer & Stormwater Authority
Additional Permit Testing 2024

Work Order: 24K1020

Analysis	Due	Expires	Comments
Sample ID: 24K1020-02 *npW* ***Sampled: 11/12/2024 12:30*** ***Sampled by: Customer/Client*** ***Sample Type:*** ***Sample Name: Grab***			-01
Cyanide, Free	11/27/2024	11/22/2024 12:30	RL = 0.001 mg/L
Containers Supplied: 1 plastic 500 mL NaOH			

Cyanide container(s) stored
in black plastic bag(s) at sample reception.
11/15/24 CML

-2.1 °C NOT FROZEN

Released By FedEx/UPS — Date 11/14/24
Received By — Date NOV 15 2024 1019

DC#00163

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

M.J. Reider Associates, Inc.

MJRA Terms & Conditions

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Sample Submission, Sample Acceptance & Sampling Containers

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Turnaround Times (TAT)

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Payment Terms

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Warranty & Litigation

MJRA does not guarantee any results of its services but has agreed to use its best efforts, in accordance with the standards and practices of the industry, to cause such results to be accurate and complete. We disclaim any other warranties, expressed or implied, including a warranty of fitness for a particular purpose and warranty of merchantability. Clients agree that they shall reimburse MJRA for any and all fees, cost and litigation expenses, including reasonable attorney fees incurred by MJRA in obtaining payment for the services rendered. All costs associated with compliance with any subpoena for documents, testimony, or any other purpose relating to work performed by MJRA, for a client, shall be paid by that client. MJRA's aggregate liability for negligent acts and omissions and of an intentional breach by MJRA will not exceed the fee paid for the services. Client agrees to indemnify and hold MJRA harmless for any and all liabilities in excess of said amount. Neither MJRA nor the client shall be liable to the other for special, incidental consequential or punitive liability or damages included but not limited to those arising from delay, loss of use, loss of profits or revenues. MJRA will not be liable to the client unless the client has notified MJRA of the discovery of the alleged negligent act, error, omissions or breach within 30 days of the day of its discovery and within one year of the date of invoice.

Reviewed and Approved by:

Bradley T. Griffiths

Bradley T Griffiths
Project Manager

107 Angelica Street ○ Reading, PA 19611 ○ www.mjreider.com ○ (610) 374-5129 ○ fax (610) 374-7234

NELAP accredited by PA (PADEP #006-00003) Visit our website to view our current
NELAC accreditations for various drinking water, wastewater and solid & chemical materials analyses.
Additional accreditations by MD (261)

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Comp
Collection Method: Composite

Sample Number: 24K1645-01
Collection: 11/19/2024 12:00
Received: 11/20/2024 14:10
Matrix: npW

Analyte	Result		DL	RL	Units	Prep Date	Analysis Date	Analyst	Method
Hexavalent Chromium									
Hexavalent Chromium	<0.005		0.001	0.005	mg/L	11/23/2024 08:40	11/23/2024 11:10	EJK	SM 3500-Cr B
Metals									
Boron	0.17	R1	0.01	0.10	mg/L	11/26/2024 08:05	11/26/2024 14:41	EJ	EPA 200.7
Copper	0.012		0.001	0.002	mg/L	11/26/2024 08:05	11/27/2024 11:45	EJ	EPA 200.7
Zinc	85.7		4.21	5.00	µg/L	11/23/2024 11:37	11/23/2024 15:14	MTW	EPA 200.8

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Subcontract Analyses Performed By M J Reider - Lab ID # 06-00003

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Grab
Collection Method: Grab

Sample Number: 24K1645-02
Collection: 11/19/2024 12:10
Received: 11/20/2024 14:10
Matrix: npW

Analyte	Result
Subcontracted Analyses	
Cyanide, Weak/Dissociable(Free)	See Attached

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Sample Qualifiers

J	Analyte found between MDL and RL limits, result is considered estimated
R1	Continuing Calibration Verification (CCV) was outside established control limits failing high

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

24K1645

CHAIN
Lab #
DC#01

CWM

101 Parkview Drive Ext Kittanning PA 16201 Phone: 724-543-3011 Fax: 724-543-6768

Client Name: West Mifflin Sanitary Sewer MA	Contact Name: Andrew Howard	PWSID#	NPDES#
Address: 1302 Lower Bull Run Rd West Mifflin PA 15122	Phone: 412-466-6070 x 232 Cell:	Reportable Sample:	RUSH Sample:
	Email: trlab@wmssma.org	Check Sample:	See Codes Below

CWM Lab #	Sample Site	Collection Point	DATE Sampled	GRAB Time Sampled	COMPOSITE Start / End	LAB Temps °C	Test/Analysis Requested	Field Data/Comments	Preservative	Matrix	Sample Type	Bottle Type	# of Bottles
24K1645 01		Comp	11-19-24		0700/1200	3.0	B, Cu, Zn		H	NPW	C	G	1
		CMT			/		~~Dissolved Fe~~		~~NA~~	~~NPW~~	~~C~~	~~P~~	~~1~~
		Wrong bottle. Called Client			/		Hexachrome		O	NPW	C	P	1
		CMT 11/21/24			/								
02		Grab	11-19-24	1210	/	5.6	Free Cyanide	**SUBBED**	OH	NPW	G	P	1
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								

RECEIVED on ICE

Sampled by	Date: 11-19-24	Time: 1210
Relinquished by	11-20-24	0815
Received by	11.20.24	0835
Relinquished by	11.20.24	1410
Received by Lab by CMT	11.20.24	1410

Preservative Key: ST = Sodium Thiosulfate A = Ascorbic Acid H = HNO3 C = HCL S = H2SO4 OH = NaOH O = Other NA = None

Matrix Key: DW - Drinking Water Rec - Pool/Recreation Water NPW - Non Potable Water R - Raw S - Soil, Solid, Sludge F - Fuel

Sample Type: C = Composite G = Grab M = Micropurge Bottles: P = plastic G = glass O = other

Sample Comments:

Sample Conditions: (Y) N COC w/ samples (Y) N Meets Hold Times (Y) N Containers Intact (Y) N Correct bottles for tests (Y) N Correct # of bottles listed

Rev 08/2022

M.J. Reider Associates, Inc.
ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #06-00003

Certificate of Analysis

Laboratory No.: 2455002
Report: 12/20/24
Lab Contact: Bradley T Griffiths

Attention: Caitlin Welton
Reported To: CWM Environmental, Inc.
101 Parkview Drive Extension
Kittanning, PA 16201

Project: WW Misc

Lab ID: 2455002-01 **Collected By:** Client **Sampled:** 11/19/24 12:10 **Received:** 12/19/24 11:30
Sample Desc: 24K1645-02 **Sample Type:** Grab
Notes: L-12

	Result	Unit	MDL	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry								
Cyanide, Free	0.003	mg/L	0.001	0.001	Kelada 01 Rev 1.2	12/20/24	HT1	NJG

Notes and Definitions

HT1 The sample was analyzed beyond the required hold time.
L-12 Sample received beyond the acceptable holding time for CN-F.

CWM ENVIRONMENTAL

2455002 PM: BTG
CWM Environmental, Inc.
WW Misc

SUBCONTRACT ORDER

Sending Laboratory:

CWM Environmental Kittanning
101 Parkview Drive Ext
Kittanning, PA 16201
Phone: 724.543.3011
Fax: 724.543.6768

Project Manager: Cassandra Tlumac

Subcontracted Laboratory:

M J Reider - Lab ID # 06-00003
107 Angelica Street
Reading, PA 19611
Phone: (610) 374-5129
Fax:

Work Order Client:

West Mifflin Sanitary Sewer & Stormwater Authority
Additional Permit Testing 2024

Work Order: 24K1645

Analysis	Due	Expires	Comments
Sample ID: 24K1645-02 *npW* ***Sampled: 11/19/2024 12:10*** ***Sampled by: Customer/Client*** ***Sample Type: Grab*** ***Sample Name: Grab***			-01
Cyanide, Free	12/05/2024	11/29/2024 12:10	RL = 0.001 mg/L
Containers Supplied: 1 Plastic 500 mL NaOH			

Cyanide container(s) stored
in black plastic bag(s) at sample reception.
12/19/24 CML

MJRA Temp 0.5°C Read On Ice/Cold

Released By _____ Date 12/18/24

FedEx/UPS

Received By _____ Date DEC 19 2024

DC#00163

FedEx/UPS

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

M.J. Reider Associates, Inc.

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Sample Submission, Sample Acceptance & Sampling Containers

Included on the COC must be the sample description, date and time of collection (including start and stop for composites), container size and type, preservative information, sample matrix, indication of whether the sample is a grab or composite, number of containers & a list of the tests to be performed. Poor sample collection technique, inappropriate sampling containers and/or improper sample preservation may lead to sample rejection. Suitable sample containers, labels, and preservatives (as applicable), along with blank COCs are provided at no additional cost.

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Analytical Results, Sample Collection Integrity & Subcontracting

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Warranty & Litigation

MJRA does not guarantee any results of its services but has agreed to use its best efforts, in accordance with the standards and practices of the industry, to cause such results to be accurate and complete. We disclaim any other warranties, expressed or implied, including a warranty of fitness for a particular purpose and warranty of merchantability. Clients agree that they shall reimburse MJRA for any and all fees, cost and litigation expenses, including reasonable attorney fees incurred by MJRA in obtaining payment for the services rendered. All costs associated with compliance with any subpoena for documents, testimony, or any other purpose relating to work performed by MJRA, for a client, shall be paid by that client. MJRA's aggregate liability for negligent acts and omissions and of an intentional breach by MJRA will not exceed the fee paid for the services. Client agrees to indemnify and hold MJRA harmless for any and all liabilities in excess of said amount. Neither MJRA nor the client shall be liable to the other for special, incidental consequential or punitive liability or damages included but not limited to those arising from delay, loss of use, loss of profits or revenues. MJRA will not be liable to the client unless the client has notified MJRA of the discovery of the alleged negligent act, error, omissions or breach within 30 days of the day of its discovery and within one year of the date of invoice.

Reviewed and Approved by:

Bradley T. Griffiths

Bradley T Griffiths
Project Manager

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Comp
Collection Method: Composite

Sample Number: 24K2334-01
Collection: 11/26/2024 12:00
Received: 11/27/2024 15:05
Matrix: npW

Cert	Analyte	Result	DL	RL	Units	Prep Date	Analysis Date	Analyst	Method
Hexavalent Chromium									
	Hexavalent Chromium	<0.005	0.001	0.005	mg/L	12/09/2024 09:00	12/09/2024 11:50	EJK	SM 3500-Cr B
Metals									
	Boron	0.13	0.01	0.10	mg/L	12/10/2024 08:00	12/11/2024 12:06	REK	EPA 200.7
	Copper	0.016	0.001	0.002	mg/L	12/10/2024 08:00	12/10/2024 13:56	REK	EPA 200.7
	Zinc	90.7	4.21	5.00	µg/L	12/04/2024 08:00	12/04/2024 10:04	MTW	EPA 200.8
Metals, Dissolved									
	Iron	0.04	0.01	0.02	mg/L	12/06/2024 07:35	12/09/2024 16:10	EJ	EPA 200.7

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

Reported: 12/12/2024 1:31:58PM

Confidential
Page 1 of 6

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Subcontract Analyses Performed By M J Reider - Lab ID # 06-00003

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Grab
Collection Method: Grab

Sample Number: 24K2334-02
Collection: 11/26/2024 12:30
Received: 11/27/2024 15:05
Matrix: npW

Cert	Analyte	Result	Reporting Limit	Units	Analysis Date	Analyst	Method
Subcontracted Analyses							
NA	Cyanide, Weak/Dissociable(Free)	See Attached					Subcontracted

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CHAIN OF CUSTODY
Lab # 03-457
QC# 00162 Eff 01-26-22

2

CWM

101 Parkview Drive Ext Kittanning PA 16201 Phone: 724-543-3011 Fax: 724-543-6768

Client Name: West Mifflin Sanitary Sewer MA	Contact Name: Andrew Howard	PWSID#	NPDES#
Address: 1302 Lower Bull Run Rd West Mifflin PA 15122	Phone: 412-466-6070 x 232 Cell:	Reportable Sample:	RUSH Sample:
	Email: trlab@wmssma.org	Check Sample:	See Codes Below

CWM Lab #	Sample Site	Collection Point	DATE Sampled	GRAB Time Sampled	COMPOSITE Start / End	LAB Temps °C	Test/Analysis Requested	Field Data/Comments	Preservative	Matrix	Sample Type	Bottle Type	# of Bottles
24K2334-01	New England	Comp	11-26-24	~~1250~~	0400 / 1250	5.5	B, Cu, Zn		H	NPW	C	G	1
					/		Dissolved Fe		NA	NPW	C	P	1
					/		Hexachrome		O	NPW	C	P	1
					/								
-02		Grab	11-26-24	1230	/	5.4	Free Cyanide	**SUBBED**	OH	NPW	G	P	1
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								

24K2334

Received on ICE

Sampled by	Date: 11-26-24	Time: 1250	Preservative Key: ST = Sodium Thiosulfate A = Ascorbic Acid H = HNO3 C = HCL S = H2SO4 OH = NaOH O = Other NA = None
Relinquished by	11-27-24	0855	Matrix Key: DW - Drinking Water Rec - Pool/Recreation Water NPW - Non Potable Water R - Raw S - Soil, Solid, Sludge F - Fuel
Received by	11-27-24	0855	Sample Type: C = Composite G = Grab M = Micropurge Bottles: P = plastic G = glass O = other
Relinquished by	11-27-24	1505	Sample Comments:
Received In Lab By	11-27-24	1505	Sample Conditions: Y N COC w/ samples Y N Needs Hold times Y N Containers Intact Y N Correct bottles for tests Y N Correct # of bottles listed

Rev 030122

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Certificate of Analysis

M.J. Reider Associates, Inc.
ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #06-00003

Laboratory No.: 2452593
Report: 12/04/24
Lab Contact: Bradley T Griffiths

Attention: Cassandra Tumac
Reported To: CWM Environmental, Inc.
101 Parkview Drive Extension
Kittanning, PA 16201

Project: WW Misc

Lab ID: 2452593-01 **Collected By:** Client **Sampled:** 11/26/24 12:30 **Received:** 12/03/24 11:45
Sample Desc: 24K2334-02 **Sample Type:** Grab

	Result	Unit	MDL	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry								
Cyanide, Free	<0.001	mg/L	0.001	0.001	Kelada 01 Rev 1.2	12/05/24		NJG

CWM ENVIRONMENTAL

2452593 PM: STG
CWM Environmental, Inc.
WW Misc

SUBCONTRACT ORDER

Sending Laboratory:

CWM Environmental Kittanning
101 Parkview Drive Ext
Kittanning, PA 16201
Phone: 724.543.3011
Fax: 724.543.6768

Project Manager: Cassandra Tlumac

Subcontracted Laboratory:

M J Reider - Lab ID # 06-00003
107 Angelica Street
Reading, PA 19611
Phone: (610) 374-5129
Fax:

Work Order Client:

West Mifflin Sanitary Sewer & Stormwater Authority
Additional Permit Testing 2024

Work Order: 24K2334

Analysis	Due	Expires	Comments
Sample ID: 24K2334-02 *npW* ***Sampled: 11/26/2024 12:30*** ***Sampled by: Customer/Client*** ***Sample Type: Grab*** ***Sample Name: Grab***			-01
Cyanide, Free	12/12/2024	12/06/2024 12:30	RL = 0.001 mg/L
Containers Supplied: 1 Plastic 500 mL NaOH			

Cyanide container(s) stored
in black plastic bag(s) at sample reception.
12/3/24 CML

Temp & Records M.J.R.A. 0.3 °C On Ice (Y) or N

Released By FEDEX — Date 12/3/24

Received By FEDEX — Date DEC 03 2024 1145

DC#00163

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Page 2 of 3

CML

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

M.J. Reider Associates, Inc.

MJRA Terms & Conditions

All samples submitted must be accompanied by signed documentation representing a Chain of Custody (COC). The COC Record acts as a contract between the client and MJRA. Signing the COC form gives approval for MJRA to perform the requested analyses and is an agreement to pay for the cost of such analyses. COC Records must be completed in black or blue indelible ink (must not run when wet). COC documentation begins at the time of sample collection. Client is required to document all sample details prior to releasing samples to MJRA. All samples must be placed on ice immediately after sampling and shipped or delivered to the laboratory in a manner that will maintain the sample temperature above freezing and below 6C (loose ice is preferred).

Sample Submission, Sample Acceptance & Sampling Containers

Included on the COC must be the sample description, date and time of collection (including start and stop for composites), container size and type, preservative information, sample matrix, indication of whether the sample is a grab or composite, number of containers & a list of the tests to be performed. Poor sample collection technique, inappropriate sampling containers and/or improper sample preservation may lead to sample rejection. Suitable sample containers, labels, and preservatives (as applicable), along with blank COCs are provided at no additional cost.

Turnaround Times (TAT)

Average TAT for test results range from 5 to 15 working days depending on the specific analyses and time of year submitted. Faster turnaround times (*RUSH TAT) may be available depending on the current workload in a particular department and the nature of the analyses requested. We encourage you to verify requests for expedited sample results with one of our Technical Directors prior to sample submittal. Without confirmation from a Technical Director, your results may not be completed by your deadline. *RUSH TAT Surcharges are applied for expedited turnaround times.

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Warranty & Litigation

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Reviewed and Approved by:

Bradley T. Griffiths

Bradley T Griffiths
Project Manager

NELAP accredited by PA (PADEP #006-00003) Visit our website to view our current NELAC accreditations for various drinking water, wastewater and solid & chemical materials analyses.
Additional accreditations by MD (261)

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Comp
Collection Method: Composite

Sample Number: 24L0932-01
Collection: 12/10/2024 12:00
Received: 12/11/2024 15:30
Matrix: npW

Analyte	Result	DL	RL	Units	Prep Date	Analysis Date	Analyst	Method
Hexavalent Chromium								
Hexavalent Chromium	<0.005	0.001	0.005	mg/L	01/07/2025 08:30	01/07/2025 10:55	EJK	SM 3500-Cr B
Metals								
Boron	<0.10	0.01	0.10	mg/L	12/17/2024 08:00	12/17/2024 17:08	REK	EPA 200.7
Copper	0.011	0.001	0.002	mg/L	12/17/2024 08:00	12/17/2024 13:26	REK	EPA 200.7
Zinc	60.8	4.21	5.00	µg/L	12/13/2024 11:44	12/13/2024 13:17	MTW	EPA 200.8
Metals, Dissolved								
Iron	0.03	0.01	0.02	mg/L	12/18/2024 08:00	12/18/2024 16:11	REK	EPA 200.7

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

Reported: 1/9/2025 1:34:11PM

Confidential
Page 1 of 6

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Subcontract Analyses Performed By M J Reider - Lab ID # 06-00003

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Grab
Collection Method: Grab

Sample Number: 24L0932-02
Collection: 12/10/2024 12:00
Received: 12/11/2024 15:30
Matrix: npW

Analyte	Result
Subcontracted Analyses	
Cyanide, Weak/Dissociable(Free)	See Attached

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CHAIN OF CUSTODY
Lab # 03-457
DCN00162 Eff 01-26-22

2

CWM

101 Parkview Drive Ext Kittanning PA 16201 Phone: 724-543-3011 Fax: 724-543-6768

Client Name: West Mifflin Sanitary Sewer MA	Contact Name: Andrew Howard	PWSID#	NPDES#
Address: 1302 Lower Bull Run Rd West Mifflin PA 15122	Phone: 412-466-6070 x 232 Cell:	Reportable Sample:	RUSH Sample:
	Email: trlab@wmssma.org	Check Sample:	See Codes Below

CWM Lab #	Sample Site	Collection Point	DATE Sampled	GRAB Time Sampled	COMPOSITE Start / End	LAB Temps °C	Test/Analysis Requested	Field Data/Comments	Preservative	Matrix	Sample Type	Bottle Type	# of Bottles
24L0932-01		Comp	12-10-24		0900 / 1200	3	B, Cu, Zn		H	NPW	C	G	1
					/		Dissolved Fe		NA	NPW	C	P	1
					/		Hexachrome		O	NPW	C	P	1
					/								
02		Grab	12-10-24	1200	/	5.7	Free Cyanide	**SUBBED**	OH	NPW	G	P	1
					/								
					/								
					/								
					/								
					/								
					/								

24L0932

RECEIVED on ICE

Sampled by		Date: 12-10-24	Time: 1200
Relinquished by		12-11-24	0941
Received by		12-11-24	0941
Relinquished by		12-11-24	1530
Received in Lab by		12-11-24	1530

Preservative Key: ST = Sodium Thiosulfate A = Ascorbic Acid H = HNO3 C = HCL S = H2SO4 CH = NaOH O = Other NA = None

Matrix Key: DW - Drinking Water Rec - Pool/Recreation Water NPW - Non Potable Water R - Raw S - Soil, Solid, Sludge F - Fuel

Sample Type: C = Composite G = Grab M = Micropurge

Bottles: P = plastic G = glass O = other

Sample Comments:

Sample Conditions: Y N COC w/ samples Y N Meets Hold Times Y N Containers Intact Y N Correct bottles for tests Y N Correct # of bottles listed

Rev 081322

M.J. Reider Associates, Inc.
ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

Laboratory No.: 2454271
Report: 12/17/24
Lab Contact: Bradley T Griffiths

Attention: Cassandra Tumac
Reported To: CWM Environmental, Inc.
101 Parkview Drive Extension
Kittanning, PA 16201

Project: WW Misc

Lab ID: 2454271-01 **Collected By:** Client **Sampled:** 12/10/24 12:00 **Received:** 12/13/24 10:35
Sample Desc: 241.0932-02 **Sample Type:** Grab

	Result	Unit	MDL	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry								
Cyanide, Free	<0.001	mg/L	0.001	0.001	Kelada 01 Rev 1.2	12/16/24		NJG

CWM ENVIRONMENTAL

2454271 PM: BTG
CWM Environmental, Inc.
WW Misc

SUBCONTRACT ORDER

Sending Laboratory:

CWM Environmental Kittanning
101 Parkview Drive Ext
Kittanning, PA 16201
Phone: 724.543.3011
Fax: 724.543.6768

Project Manager: Cassandra Tlumac

Subcontracted Laboratory:

M J Reider - Lab ID # 06-00003
107 Angelica Street
Reading, PA 19611
Phone: (610) 374-5129
Fax:

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Address:1302 Lower Bull Run Road West Mifflin, PA 15122
Phone:412-466-6070
Sample Point: Grab

Work Order: 24L0932

Analysis	Due	Expires	Comments
Lab Sample Number: 24L0932-02 *npW* ***Sampled: 12/10/2024 12:00*** ***Sampled by: customer/Client*** ***Sample Type: Grab***			
Sample Name: Grab ***Location ID:*** ***Sample Type:***			
Cyanide, Free	12/26/2024	12/20/2024 12:00	RL = 0.001 mg/L

Containers Supplied: 1 plastic 500 mL NaOH

Cyanide container(s) stored
in black plastic bag(s) at sample reception.
12/13/24 CML

Temp @ Receipt M.J.R. 0.8 °C On Ice? Yes No NOT FROZEN

Released By FedEx — Date 12/12/24

Received By — Date 12/18/24 1035

DC#00163

Page 1 of 1
Page 5 of 6

Page 2 of 3

CML

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

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Reviewed and Approved by:

Bradley T. Griffiths

Bradley T Griffiths
Project Manager

NELAP accredited by PA (PADEP #006-00003) Visit our website to view our current
NELAC accreditations for various drinking water, wastewater and solid & chemical materials analyses.
Additional accreditations by MD (261)

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Comp
Collection Method: Composite

Sample Number: 24L1550-01
Collection: 12/17/2024 12:00
Received: 12/18/2024 14:25
Matrix: npW

Analyte	Result	DL	RL	Units	Prep Date	Analysis Date	Analyst	Method
Hexavalent Chromium								
Hexavalent Chromium	<0.005	0.001	0.005	mg/L	01/07/2025 08:30	01/07/2025 10:55	EJK	SM 3500-Cr B
Metals								
Boron	<0.10	0.01	0.10	mg/L	12/20/2024 08:00	12/23/2024 12:50	EJ	EPA 200.7
Copper	0.017	0.001	0.002	mg/L	12/20/2024 08:00	12/20/2024 14:22	REK	EPA 200.7
Zinc	52.5	4.21	5.00	µg/L	12/20/2024 09:05	12/20/2024 11:14	MTW	EPA 200.8
Metals, Dissolved								
Iron	0.04	0.01	0.02	mg/L	12/26/2024 08:00	12/27/2024 10:07	REK	EPA 200.7

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

Reported: 1/9/2025 1:33:09PM

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Subcontract Analyses Performed By M J Reider - Lab ID # 06-00003

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Grab
Collection Method: Grab

Sample Number: 24L1550-02
Collection: 12/17/2024 12:00
Received: 12/18/2024 14:25
Matrix: npW

Analyte	Result
Subcontracted Analyses	
Cyanide, Weak/Dissociable(Free)	See Attached

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CHAIN OF CUSTODY
Lab # 03-457
DC#00162 EH 01-26-22

CWM

101 Parkview Drive Ext Kittanning PA 16201 Phone:
724-543-3011 Fax: 724-543-6788

Client Name: West Mifflin Sanitary Sewer MA	Contact Name: Andrew Howard	PWSID#	NPDES#
Address: 1302 Lower Bull Run Rd West Mifflin PA 15122	Phone: 412-466-6070 x 232 Cell	Reportable Sample:	RUSH Sample:
	Email: trlab@wmssma.org	Check Sample:	See Codes Below

CWM Lab #	Sample Site	Collection Point	DATE Sampled	GRAB Time Sampled	COMPOSITE Start / End	Lab Temps °C	Test/Analysis Requested	Field Data/Comments	Preservative	Matrix	Sample Type	Bottle Type	# of Bottles
24L1550-01		Comp	12-17-24		0900 / 1200	3.1	B, Cu, Zn		H	NPW	C	G	1
					/		Dissolved Fe		NA	NPW	C	P	1
					/		Hexachrome		O	NPW	C	P	1
					/								
C2		Grab	12-17-24	1200	/	5.4	Free Cyanide	**SUBBED**	OH	NPW	G	P	1
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								

24L1550

Received on ICE

Sampled by:	Date: 12-17-24	Time: 1200	Preservative Key: ST = Sodium Thiosulfate A = Ascorbic Acid H = HNO3 C = HCL S = H2SO4 OH = NaOH O = Other NA = None
Relinquished by	12-18-24	0825	Matrix Key: DW - Drinking Water Rec - Pool/Recreation Water NPW - Non Potable Water R - Raw S - Soil, Solid, Sludge F - Fuel
Received by	12-18-24	0825	Sample Type: C = Composite G = Grab M = Micropurge Bottles: P = plastic G = glass O = other
Relinquished by	12-18-24	1425	Sample Comments:
Received in Lab by	12-18-24	1425	Sample Conditions: Y N COC w/ samples Y N Meets Hold Times Y N Containers Intact Y N Correct bottles for tests Y N Correct # of bottles listed

Rev 000122

M.J. Reider Associates, Inc.
ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

Laboratory No.: 2455003
Report: 12/20/24
Lab Contact: Bradley T Griffiths

Attention: Caitlin Welton
Reported To: CWM Environmental, Inc.
101 Parkview Drive Extension
Kittanning, PA 16201

Project: WW Misc

Lab ID: 2455003-01 **Collected By:** Client **Sampled:** 12/17/24 12:00 **Received:** 12/19/24 11:30
Sample Desc: 241.1550-02 **Sample Type:** Grab

	Result	Unit	MDL	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry								
Cyanide, Free	0.001	mg/L	0.001	0.001	Kelada 01 Rev 1.2	12/20/24		NJG

CWM ENVIRONMENTAL

2455003 PM: BTG
CWM Environmental, Inc.
WW Misc

SUBCONTRACT ORDER

Sending Laboratory:

CWM Environmental Kittanning
101 Parkview Drive Ext
Kittanning, PA 16201
Phone: 724.543.3011
Fax: 724.543.6768

Project Manager: Cassandra Tlumac

Subcontracted Laboratory:

M J Reider - Lab ID # 06-00003
107 Angelica Street
Reading, PA 19611
Phone: (610) 374-5129
Fax:

Work Order Client:

West Mifflin Sanitary Sewer & Stormwater Authority
Additional Permit Testing 2024

Work Order: 24L1550

Analysis	Due	Expires	Comments
Sample ID: 24L1550-02 *npW* ***Sampled: 12/17/2024 12:00*** ***Sampled by: Customer/Client*** ***Sample Type: Grab*** ***Sample Name: Grab***			-01
Cyanide, Free	01/03/2025	12/27/2024 12:00	RL = 0.001 mg/L
Containers Supplied: 1 Plastic 500mL NaOH			

Cyanide container(s) stored
in black plastic bag(s) at sample reception.
12/19/24 CML

MJRA Temp 0.6°C Received On Ice

FedEx/UPS

Released By 12/18/24 Date

Received By Date DEC 19 2024

DC#00163 FedEx/UPS

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

M.J. Reider Associates, Inc.

MJRA Terms & Conditions

All samples submitted must be accompanied by signed documentation representing a Chain of Custody (COC). The COC Record acts as a contract between the client and MJRA. Signing the COC form gives approval for MJRA to perform the requested analyses and is an agreement to pay for the cost of such analyses. COC Records must be completed in black or blue indelible ink (must not run when wet). COC documentation begins at the time of sample collection. Client is required to document all sample details prior to releasing samples to MJRA. All samples must be placed on ice immediately after sampling and shipped or delivered to the laboratory in a manner that will maintain the sample temperature above freezing and below 6C (loose ice is preferred).

Sample Submission, Sample Acceptance & Sampling Containers

Included on the COC must be the sample description, date and time of collection (including start and stop for composites), container size and type, preservative information, sample matrix, indication of whether the sample is a grab or composite, number of containers & a list of the tests to be performed. Poor sample collection technique, inappropriate sampling containers and/or improper sample preservation may lead to sample rejection. Suitable sample containers, labels, and preservatives (as applicable), along with blank COCs are provided at no additional cost.

Turnaround Times (TAT)

Average TAT for test results range from 5 to 15 working days depending on the specific analyses and time of year submitted. Faster turnaround times (*RUSH TAT) may be available depending on the current workload in a particular department and the nature of the analyses requested. We encourage you to verify requests for expedited sample results with one of our Technical Directors prior to sample submittal. Without confirmation from a Technical Director, your results may not be completed by your deadline. *RUSH TAT Surcharges are applied for expedited turnaround times.

Analytical Results, Sample Collection Integrity & Subcontracting

Analytical values are for the sample as submitted and relate only to the item tested. The value indicates a snapshot of the constituent content of the sample at the time of sample collection. Analytical results can be impacted by poor sample collection technique and/or improper preservation. All sample collection completed by MJRA was performed in accordance with applicable regulatory protocols or as specified in customer specific sampling plans. Constituent content will vary over time based on the matrix of the sample and the physical and chemical changes to its environment. All sample results and laboratory reports are strictly confidential. Results will not be available to anyone except the primary client or authorized party representing the client unless MJRA receives additional permissions from the client. When necessary, MJRA will subcontract certain analyses to a third party accredited laboratory. If client prohibits subcontracting, it must be provided in writing and include instruction on how to proceed with client samples that require third party analyses.

Payment Terms

Payment Terms are Net 30 days. Prices are subject to change without notice. A standing monthly charge of 1.5% of the clients over-30-day-unpaid balance may be added to the balance after 30 days and each month thereafter (day 31, 61, 91 etc.). The laboratory accepts all major credit cards, ACH transactions, checks and cash. New clients must pay for all services rendered prior to sample collection and/or in some cases report processing. Clients must contact the MJRA accounting department to pursue a credit-based account. MJRA reserves the right to terminate the client's credit account and to refuse to perform additional services on a credit basis if any balance is outstanding for more than 60 days.

Warranty & Litigation

MJRA does not guarantee any results of its services but has agreed to use its best efforts, in accordance with the standards and practices of the industry, to cause such results to be accurate and complete. We disclaim any other warranties, expressed or implied, including a warranty of fitness for a particular purpose and warranty of merchantability. Clients agree that they shall reimburse MJRA for any and all fees, cost and litigation expenses, including reasonable attorney fees incurred by MJRA in obtaining payment for the services rendered. All costs associated with compliance with any subpoena for documents, testimony, or any other purpose relating to work performed by MJRA, for a client, shall be paid by that client. MJRA's aggregate liability for negligent acts and omissions and of an intentional breach by MJRA will not exceed the fee paid for the services. Client agrees to indemnify and hold MJRA harmless for any and all liabilities in excess of said amount. Neither MJRA nor the client shall be liable to the other for special, incidental consequential or punitive liability or damages included but not limited to those arising from delay, loss of use, loss of profits or revenues. MJRA will not be liable to the client unless the client has notified MJRA of the discovery of the alleged negligent act, error, omissions or breach within 30 days of the day of its discovery and within one year of the date of invoice.

Reviewed and Approved by:

Bradley T. Griffiths

Bradley T Griffiths
Project Manager

NELAP accredited by PA (PADEP #006-00003) Visit our website to view our current
NELAC accreditations for various drinking water, wastewater and solid & chemical materials analyses.
Additional accreditations by MD (261)

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Comp
Collection Method: Composite

Sample Number: 24L2217-01
Collection: 12/24/2024 10:00
Received: 12/26/2024 15:00
Matrix: npW

Analyte	Result	DL	RL	Units	Prep Date	Analysis Date	Analyst	Method
Hexavalent Chromium								
Hexavalent Chromium	<0.005	0.001	0.005	mg/L	01/07/2025 08:30	01/07/2025 10:55	EJK	SM 3500-Cr B
Metals								
Boron	<0.10	0.01	0.10	mg/L	12/31/2024 07:52	01/02/2025 13:45	REK	EPA 200.7
Copper	0.006	0.001	0.002	mg/L	01/03/2025 08:00	01/03/2025 13:37	REK	EPA 200.7
Zinc	70.6	4.21	5.00	µg/L	12/28/2024 08:31	12/28/2024 11:03	MTW	EPA 200.8
Metals, Dissolved								
Iron	0.03	0.01	0.02	mg/L	12/26/2024 08:00	12/27/2024 10:36	REK	EPA 200.7

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

Reported: 1/9/2025 4:56:31PM

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Subcontract Analyses Performed By M J Reider - Lab ID # 06-00003

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Grab
Collection Method: Grab

Sample Number: 24L2217-02
Collection: 12/24/2024 10:00
Received: 12/26/2024 15:00
Matrix: NPW

Analyte	Result
Subcontracted Analyses	
Cyanide, Weak/Dissociable(Free)	See attached

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CHAIN OF CUSTODY
Lab # 03-457
DC#00162 Eff 01-26-22

CWM

5

101 Parkview Drive Ext Kittanning PA 16201 Phone:
724-543-3011 Fax: 724-543-6768

Client Name: West Mifflin Sanitary Sewer MA	Contact Name: Andrew Howard	PWSID#	NPDES#
Address: 1302 Lower Bull Run Rd West Mifflin PA 15122	Phone: 412-466-6070 x 232 Cell	Reportable Sample:	TLSII Sample:
	Email: trlab@wmssma.org	Check Sample:	See Codes Below

CWM Lab #	Sample Site	Collection Point	DATE Sampled	Time Sampled	COMPOSITE Start / End	LAB Temps °C	Test/Analysis Requested	Field Data/Comments	Preservative	Matrix	Sample Type	Bottle Type	# of Bottles
24L2217-01		Comp	12-24-24		1254 / 1500	5.4	B, Cu, Zn		H	NPW	C	G	1
					/	5.6	Dissolved Fe		NA	NPW	C	P	1
					/	5.8	Hexachrome		O	NPW	C	P	1
					/								
-02		Grab	12-24-24	1500	/	5.5	Free Cyanide	**SUBBED**	OH	NPW	G	P	1
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								

24L2217

RECEIVED on ICE

Sampled by:	Date: 12-24-24	Time: 1500	Preservative Key: ST = Sodium Thiosulfate A = Ascorbic Acid H = HNO3 C = HCL S = H2SO4 OH = NaOH O = Other NA = None
Relinquished by:	12-26-24	1254	Matrix Key: DW - Drinking Water Rec - Pool/Recreation Water NPW - Non Potable Water R - Raw S - Soil, Solid, Sludge F - Fuel
Received by:	12-26-24	1254	Sample Type: C = Composite G = Grab M = Microperge Bottles: P = plastic G = glass O = other
Relinquished by:	12-26-24	1500	Sample Comments:
Received in Lab by:	12/26/24	1500	Sample Conditions: Y N COC w/ samples Y N Meets Hold Times Y N Containers Intact Y N Correct bottles for tests Y N Correct # of bottles listed

Rev 011922

M.J. Reider Associates, Inc.
ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #06-00003

Certificate of Analysis

Laboratory No.: 2455934
Report: 12/31/24
Lab Contact: Bradley T Griffiths

Attention: Amanda Zimmerman
Reported To: CWM Environmental, Inc.
101 Parkview Drive Extension
Kittanning, PA 16201

Project: WW Misc

Lab ID: 2455934-01 **Collected By:** Client **Sampled:** 12/24/24 10:00 **Received:** 12/27/24 11:15
Sample Desc: 241.2217-02 **Sample Type:** Grab

	Result	Unit	MDL	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry								
Cyanide, Free	<0.001	mg/L	0.001	0.001	Kelada 01 Rev 1.2	12/30/24		NJG

CWM ENVIRONMENTAL

2455934 PM: BTG
CWM Environmental, Inc.
WW Misc

SUBCONTRACT ORDER

Sending Laboratory:

CWM Environmental Kittanning
101 Parkview Drive Ext
Kittanning, PA 16201
Phone: 724.543.3011
Fax: 724.543.6768

Project Manager: Cassandra Tlumac

Subcontracted Laboratory:

M J Reider - Lab ID # 06-00003
107 Angelica Street
Reading, PA 19611
Phone: (610) 374-5129
Fax:

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Address:1302 Lower Bull Run Road West Mifflin, PA 15122
Phone:412-466-6070
Sample Point: Grab

Work Order: 24L2217

Analysis	Due	Expires	Comments
Lab Sample Number: 24L2217-02 *NPW* *Sampled: 12/24/2024 10:00* *Sampled by: Customer/Client* *Sample Type: Grab*			
Sample Name: Grab *Location ID:* *Sample Type:* -01			
Cyanide, Free	01/10/2025	01/03/2025 10:00	RL = 0.001 mg/L
Containers Supplied: 1 plastic 500ml NaOH			

Cyanide container(s) stored
in black plastic bag(s) at sample reception.
12/27/24 CML

Temp @ Receipt MJR -0.4 °C NOT FROZEN

Released By FedEx 12/26/24 Date

Received By FedEx Date 12/27/24 11:15

DC#00163

Page 1 of 1

Page 5 of 6

Page 2 of 3

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

M.J. Reider Associates, Inc.

MJRA Terms & Conditions

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Sample Submission, Sample Acceptance & Sampling Containers

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Turnaround Times (TAT)

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Warranty & Litigation

MJRA does not guarantee any results of its services but has agreed to use its best efforts, in accordance with the standards and practices of the industry, to cause such results to be accurate and complete. We disclaim any other warranties, expressed or implied, including a warranty of fitness for a particular purpose and warranty of merchantability. Clients agree that they shall reimburse MJRA for any and all fees, cost and litigation expenses, including reasonable attorney fees incurred by MJRA in obtaining payment for the services rendered. All costs associated with compliance with any subpoena for documents, testimony, or any other purpose relating to work performed by MJRA, for a client, shall be paid by that client. MJRA's aggregate liability for negligent acts and omissions and of an intentional breach by MJRA will not exceed the fee paid for the services. Client agrees to indemnify and hold MJRA harmless for any and all liabilities in excess of said amount. Neither MJRA nor the client shall be liable to the other for special, incidental consequential or punitive liability or damages included but not limited to those arising from delay, loss of use, loss of profits or revenues. MJRA will not be liable to the client unless the client has notified MJRA of the discovery of the alleged negligent act, error, omissions or breach within 30 days of the day of its discovery and within one year of the date of invoice.

Reviewed and Approved by:

Bradley T. Griffiths

Bradley T Griffiths
Project Manager

NELAP accredited by PA (PADEP #006-00003) Visit our website to view our current
NELAC accreditations for various drinking water, wastewater and solid & chemical materials analyses.
Additional accreditations by MD (261)

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Comp
Collection Method: Composite

Sample Number: 25A0126-01
Collection: 12/31/2024 09:00
Received: 01/02/2025 14:20
Matrix: npW

Analyte	Result	DL	RL	Units	Prep Date	Analysis Date	Analyst	Method
Hexavalent Chromium								
Hexavalent Chromium	<0.005	0.001	0.005	mg/L	01/07/2025 08:30	01/07/2025 10:55	EJK	SM 3500-Cr B
Metals								
Boron	<0.10	0.01	0.10	mg/L	01/08/2025 08:00	01/13/2025 11:40	EJ	EPA 200.7
Copper	0.011	0.001	0.002	mg/L	01/08/2025 08:00	01/09/2025 15:01	REK	EPA 200.7
Zinc	75.4	4.21	5.00	µg/L	01/09/2025 08:45	01/09/2025 10:40	MTW	EPA 200.8
Metals, Dissolved								
Iron	0.03	0.01	0.02	mg/L	01/11/2025 12:16	01/13/2025 17:21	EJ	EPA 200.7

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

CWM Environmental
101 Parkview Drive Ext.
Kittanning, Pennsylvania 16201
724-543-3011
Lab # 03-457

Lab Analysis Report

Subcontract Analyses Performed By M J Reider - Lab ID # 06-00003

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Project: Additional Permit Testing 2024
Sample: Grab
Collection Method: Grab

Sample Number: 25A0126-02
Collection: 12/31/2024 09:00
Received: 01/02/2025 14:20
Matrix: npW

Analyte	Result
Subcontracted Analyses	
Cyanide, Weak/Dissociable(Free)	See Attached

Paul Bookmyer, Technical Director

PA DEP/TNI Accreditation # 03-00457. All analytes accredited unless otherwise specified.

NPDES Permit No. PA0026522

NPDES Permit Fact Sheet
New England STP

CHAIN OF CUSTODY
Lab # 03-457
DC#00162 Eff 01-26-22

CWM

4

101 Parkview Drive Ext Kittanning PA 16201 Phone: 724-543-3011 Fax: 724-543-6758

Client Name: West Mifflin Sanitary Sewer MA	Contact Name: Andrew Howard	PWSID#	NPDES#
Address: 1302 Lower Bull Run Rd West Mifflin PA 15122	Phone: 412-466-6070 x 232 Cell:	Reportable Sample:	RUSH Sample:
	Email: trlab@wmssma.org	Check Sample:	See Codes Below

CWM Lab #	Sample Site	Collection Point	DATE Sampled	GRAB Time Sampled	COMPOSITE Start / End	LAB Temps °C	Test/Analysis Requested	Field Data/Comments	Preservative	Matrix	Sample Type	Bottle Type	# of Bottles
25A0126-01		Comp	12-31-24		0800 / 0745	5.4	B, Cu, Zn		H	NPW	C	G	1
					/	5.5	Dissolved Fe		NA	NPW	C	P	1
					/	5.7	Hexachrome		O	NPW	C	P	1
					/								
02		Grab	12-31-24	0900	/	5.4	Free Cyanide	**SUBBED**	OH	NPW	G	P	1
			1-2-25	0900	/	5.6	"		"	"	"	"	1
					/								
					/								
					/								
					/								
					/								
					/								
					/								
					/								

25A0126

RECEIVED on ICE

Sampled by:	Date: 12-31-24	Time: 0900	Preservative Key: S1 = Sodium Thiosulfate A = Ascorbic Acid H = HNO3 C = HCL S = H2SO4 OH = NaOH O = Other NA = None
Relinquished by:	1-2-25	1143	Matrix Key: DW - Drinking Water Rec - Pool/Recreation Water NPW - Non Potable Water R - Raw S - Soil, Solid, Sludge F - Fuel
Received by:	1-2-25	1143	Sample Type: C = Composite G = Grab M = Micropurge Bottles: P = plastic G = glass O = other
Relinquished by:	1-2-25	1420	Sample Comments:
Received in Lab by:	1/2/25	1420	Sample Conditions: Y N COC w/ samples Y N Meets Hold Times Y N Containers Intact Y N Correct bottles for tests Y N Correct # of bottles listed

Rev 08/22

M.J. Reider Associates, Inc.
ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #06-00003

Certificate of Analysis

Laboratory No.: 2500343
Report: 01/07/25
Lab Contact: Bradley T Griffiths

Attention: Cassandra Tumac
Reported To: CWM Environmental, Inc.
101 Parkview Drive Extension
Kittanning, PA 16201

Project: WW Misc

Lab ID: 2500343-01 **Collected By:** Client **Sampled:** 12/31/24 09:00 **Received:** 01/03/25 10:34
Sample Desc: 25A0126-02 **Sample Type:** Grab

	Result	Unit	MDL	Rep. Limit	Analysis Method	Analyzed	Notes	Analyst
General Chemistry								
Cyanide, Free	<0.001	mg/L	0.001	0.001	Kelada 01 Rev 1.2	01/06/25		NJG

CWM ENVIRONMENTAL

2500343
CWM Environmental, Inc.
WW Misc

PM: BTG

SUBCONTRACT ORDER

Sending Laboratory:

CWM Environmental Kittanning
101 Parkview Drive Ext
Kittanning, PA 16201
Phone: 724.543.3011
Fax: 724.543.6768

Project Manager: Cassandra Tlumac

Subcontracted Laboratory:

M J Reider - Lab ID # 06-00003
107 Angelica Street
Reading, PA 19611
Phone: (610) 374-5129
Fax:

Customer: West Mifflin Sanitary Sewer & Stormwater Authority
Address:1302 Lower Bull Run Road West Mifflin, PA 15122
Phone:412-466-6070
Sample Point: Grab

Work Order: 25A0126

Analysis	Due	Expires	Comments
Lab Sample Number: 25A0126-02 *npW* *Sampled: 12/31/2024 09:00*		*Sampled by: Customer/Client*	*Sample Type: Grab*
Sample Name: Grab	*Location ID:*		*Sample Type:*
Cyanide, Free	01/16/2025	01/10/2025 09:00	RL = 0.001 mg/L
Containers Supplied:	1 plastic 500mL NaOH		

Cyanide container(s) stored
in black plastic bag(s) at sample reception.
1/3/25 ALR

MJRA Temp 6.5 °C Received on Ice

Released By	Date	Received By	Date
[signature]	1/2/25	FedEx	
FedEx		[signature]	1/[illegible]

DC#00163

Page 5 of 6

Page 2 of 3

ENVIRONMENTAL TESTING LABORATORY
U.S. EPA/PA DEP #006-00003

Certificate of Analysis

M.J. Reider Associates, Inc.

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Sample Submission, Sample Acceptance & Sampling Containers

Included on the COC must be the sample description, date and time of collection (including start and stop for composites), container size and type, preservative information, sample matrix, indication of whether the sample is a grab or composite, number of containers & a list of the tests to be performed. Poor sample collection technique, inappropriate sampling containers and/or improper sample preservation may lead to sample rejection. Suitable sample containers, labels, and preservatives (as applicable), along with blank COCs are provided at no additional cost.

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Average TAT for test results range from 5 to 15 working days depending on the specific analyses and time of year submitted. Faster turnaround times (*RUSH TAT) may be available depending on the current workload in a particular department and the nature of the analyses requested. We encourage you to verify requests for expedited sample results with one of our Technical Directors prior to sample submittal. Without confirmation from a Technical Director, your results may not be completed by your deadline. *RUSH TAT Surcharges are applied for expedited turnaround times.

Analytical Results, Sample Collection Integrity & Subcontracting

Analytical values are for the sample as submitted and relate only to the item tested. The value indicates a snapshot of the constituent content of the sample at the time of sample collection. Analytical results can be impacted by poor sample collection technique and/or improper preservation. All sample collection completed by MJRA was performed in accordance with applicable regulatory protocols or as specified in customer specific sampling plans. Constituent content will vary over time based on the matrix of the sample and the physical and chemical changes to its environment. All sample results and laboratory reports are strictly confidential. Results will not be available to anyone except the primary client or authorized party representing the client unless MJRA receives additional permissions from the client. When necessary, MJRA will subcontract certain analyses to a third party accredited laboratory. If client prohibits subcontracting, it must be provided in writing and include instruction on how to proceed with client samples that require third party analyses.

Payment Terms

Payment Terms are Net 30 days. Prices are subject to change without notice. A standing monthly charge of 1.5% of the clients over-30-day-unpaid balance may be added to the balance after 30 days and each month thereafter (day 31, 61, 91 etc.). The laboratory accepts all major credit cards, ACH transactions, checks and cash. New clients must pay for all services rendered prior to sample collection and/or in some cases report processing. Clients must contact the MJRA accounting department to pursue a credit-based account. MJRA reserves the right to terminate the client's credit account and to refuse to perform additional services on a credit basis if any balance is outstanding for more than 60 days.

Warranty & Litigation

MJRA does not guarantee any results of its services but has agreed to use its best efforts, in accordance with the standards and practices of the industry, to cause such results to be accurate and complete. We disclaim any other warranties, expressed or implied, including a warranty of fitness for a particular purpose and warranty of merchantability. Clients agree that they shall reimburse MJRA for any and all fees, cost and litigation expenses, including reasonable attorney fees incurred by MJRA in obtaining payment for the services rendered. All costs associated with compliance with any subpoena for documents, testimony, or any other purpose relating to work performed by MJRA, for a client, shall be paid by that client. MJRA's aggregate liability for negligent acts and omissions and of an intentional breach by MJRA will not exceed the fee paid for the services. Client agrees to indemnify and hold MJRA harmless for any and all liabilities in excess of said amount. Neither MJRA nor the client shall be liable to the other for special, incidental consequential or punitive liability or damages included but not limited to those arising from delay, loss of use, loss of profits or revenues. MJRA will not be liable to the client unless the client has notified MJRA of the discovery of the alleged negligent act, error, omissions or breach within 30 days of the day of its discovery and within one year of the date of invoice.

Reviewed and Approved by:

Bradley T. Griffiths

Bradley T Griffiths
Project Manager

NELAP accredited by PA (PADEP #006-00003) Visit our website to view our current
NELAC accreditations for various drinking water, wastewater and solid & chemical materials analyses.
Additional accreditations by MD (261)

...bury Sewer & Stormwater Authority (WMSSA)
...age Treatment Plant (STP)
...2 RENEWAL APPLICATION
... Analytical

...INPUT - DISCHARGE TO THE SHENANGO RIVER (Per NPDES Permit Renewal Application of June 2023)

...MS DESIGN ...D	2023 EFF MAX DAILY MGD	2023 EFF MAX 3-MO AVG MGD	DEP INPUT EFF FLOW	Hydraulic Design Capacity (MGD)
...2	0.580	0.525	1.2	1.2

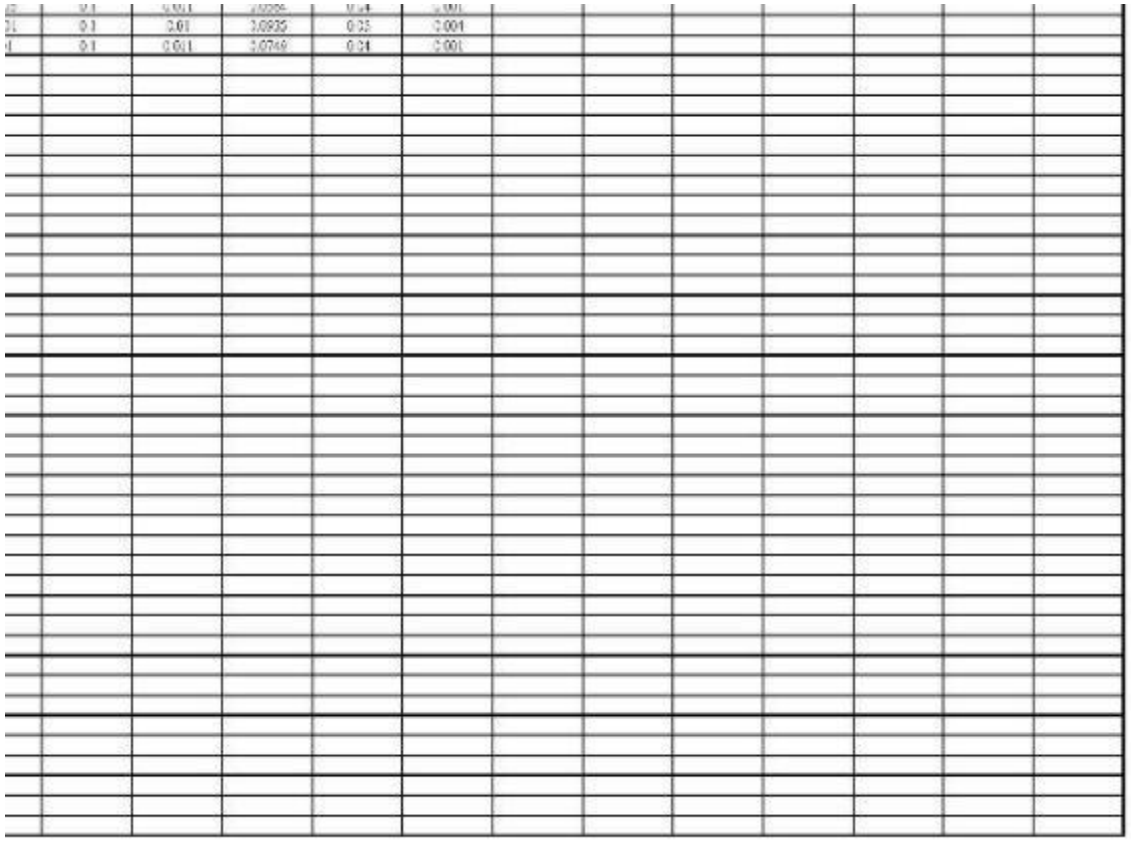
...CONCERN - PER PADEP - OCTOBER 28 2024

...TANT	November 12, 2024 Event 1 Design Flow = 1.2 MGD		November 19, 2024 Event 2 Design Flow = 1.2 MGD		November 26, 2024 Event 3 Design Flow = 1.2 MGD		December 10, 2024** Event 4 Design Flow = 1.2 MGD		December 17, 2024 Event 5 Design Flow = 1.2 MGD	
	mg/l	lbs/day	mg/l	lbs/day	mg/l	lbs/day	mg/l	lbs/day	mg/l	lbs/day
	0.15	1.5012	0.17	1.7014	0.15	1.5010	< 0.1	< 1.0008	< 0.1000	1.0008
...um	< 0.005	< 0.0500	< 0.005	< 0.0500	< 0.005	< 0.0500	< 0.005	< 0.0500	< 0.0050	0.0500
	0.007	0.0701	0.012	0.1201	0.016	0.1601	0.011	0.1101	0.0170	0.1701
	< 0.001	< 0.0100	0.003	0.0300	< 0.001	< 0.0100	< 0.001	< 0.0100	0.0010	0.0100
	0.06	0.6005			0.04	0.4003	0.04	0.3400	0.0500	0.4005
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

...TANT	December 24, 2024 Event 6 Design Flow = 1.2 MGD		December 31, 2024 Event 7 Design Flow = 1.2 MGD		January 7, 2025 Event 8 Design Flow = 1.2 MGD		January 16, 2025 Event 9 Design Flow = 1.2 MGD		January 21, 2025 Event 10 Design Flow = 1.2 MGD	
	mg/l	lbs/day	mg/l	lbs/day	mg/l	lbs/day	mg/l	lbs/day	mg/l	lbs/day
	< 0.1000	1.0008	< 0.1000	1.0008	0.1	1.0008	0.1	1.0008	0.1	1.0008
...um	< 0.0050	0.0500	< 0.0050	0.0500	< 0.005	< 0.0500	< 0.001	< 0.0100	0.001	0.0100
	0.0080	0.0801	0.0110	0.1101	0.011	0.1101	0.01	0.1001	0.011	0.1101
	< 0.0010	0.0100	< 0.0010	0.0100	0.001	0.0100	0.004	0.0400	0.001	0.0100
	0.0300	0.3002	[illegible]	[illegible]	0.04	0.4003	0.05	0.5004	0.04	0.4003
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

...TANT	AVERAGE RESULTS		MAXIMUM RESULTS		Proposed WQBEL Avg. Mo.	Proposed WQBEL Max. daily	QL REPORTED	Target QL REQUIRED	LAB METHOD	SAMPLE TYPE	COMMENTS
	mg/l	lbs/day	mg/l	lbs/day	mg/l	mg/l	mg/l	mg/l			
	< 0.1550	1.1509	0.1700	1.7014	Report	Report	0.1	0.2	EPA 200.7	24 HC	
...um	< 0.0042	0.0420	0.0050	0.0500	Report	Report	0.005	0.001	SM 3500-Cr B	24 HC	01/21/2025 sample result estimated
	0.0114	0.1141	0.0170	0.1701	0.00957	0.01410	0.002	0.004	EPA 200.7	24 HC	
	< 0.0015	0.0150	0.0048	0.0400	0.00402	0.00627	0.001	0.001	Kelada-01 Rev 1.2	Grab	
	0.0600	0.4003	0.0500	0.6005	0.32500	0.47000	0.02	0.02	EPA 200.7	24 HC	*Due. Fe sample of 11/19/2024, unable to run due to wrong sample bottle.
	[illegible]	[illegible]	[illegible]	[illegible]	0.12000	0.12000	0.006	0.008	EPA 200.8	24 HC	

...KEN ONE WEEK APART PER PADEP REQUEST.
... PRE-DRAFT NPDES PERMIT WQBELs PER PADEP 10-28-2024 LETTER FOR ABOVE PARAMETERS.



eter	Distribution Applied	Coefficient of Variation (daily)	Avg. Monthly
mium (mg/	Delta-Lognormal	#DIV/0!	#DIV/0!
n (mg/L)	Delta-Lognormal	0.2280644	0.1460097
er (mg/L)	Lognormal	0.2741385	0.0155691
(mg/L)	Lognormal	0.2062612	0.0912023
on (mg/L)	Delta-Lognormal	0.2891681	0.0523221
de (mg/L)	Delta-Lognormal	0.8222927	0.0032491

Attachment 4
TMS Report used for Reasonable Potential Analysis

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **W. Mifflin Sanitary Auth** NPDES Permit No.: **PA0026522** Outfall No.: **101**

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

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
1.2	100	7						

					0 if left blank		*0.5 if left blank*		*0 if left blank*			*1 if left blank*	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		1370									
	Chloride (PWS)	mg/L		661									
	Bromide	mg/L		0.1									
	Sulfate (PWS)	mg/L		73.9									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		146.5			0.42						
	Total Antimony	µg/L	<	0.5									
	Total Arsenic	µg/L		2									
	Total Barium	µg/L		58.6									
	Total Beryllium	µg/L	<	1									
	Total Boron	µg/L		146			0.22						
	Total Cadmium	µg/L	<	0.2									
	Total Chromium (III)	µg/L	<	2									
	Hexavalent Chromium	µg/L	<	5									
	Total Cobalt	µg/L	<	1									
	Total Copper	µg/L		15.5			0.27						
	Free Cyanide	µg/L		3			0.822						
	Total Cyanide	µg/L	<	10									
	Dissolved Iron	µg/L		52.3			0.28						
	Total Iron	µg/L		123.6			0.28						
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		54.7			0.61						
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		3.62									
	Total Phenols (Phenolics) (PWS)	µg/L		21									
	Total Selenium	µg/L	<	5									
	Total Silver	µg/L	<	0.4									
	Total Thallium	µg/L	<	2									
	Total Zinc	µg/L		91.2			0.2						
	Total Molybdenum	µg/L		2.67									
	Acrolein	µg/L	<	1									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	0.5									
	Benzene	µg/L	<	0.5									
	Bromoform	µg/L	<	0.5									

Group 3	Carbon Tetrachloride	µg/L	<	0.5									
	Chlorobenzene	µg/L	<	0.5									
	Chlorodibromomethane	µg/L	<	0.5									
	Chloroethane	µg/L	<	0.5									
	2-Chloroethyl Vinyl Ether	µg/L	<	0.5									
	Chloroform	µg/L	<	0.5									
	Dichlorobromomethane	µg/L	<	0.5									
	1,1-Dichloroethane	µg/L	<	0.5									
	1,2-Dichloroethane	µg/L	<	0.5									
	1,1-Dichloroethylene	µg/L	<	0.5									
	1,2-Dichloropropane	µg/L	<	0.5									
	1,3-Dichloropropylene	µg/L	<	0.5									
	1,4-Dioxane	µg/L	<	0.1									
	Ethylbenzene	µg/L	<	0.5									
	Methyl Bromide	µg/L	<	0.5									
	Methyl Chloride	µg/L	<	0.5									
	Methylene Chloride	µg/L		3.77									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5									
	Tetrachloroethylene	µg/L	<	0.5									
	Toluene	µg/L	<	0.5									
	1,2-trans-Dichlorcethylene	µg/L	<	0.5									
	1,1,1-Trichlorcethane	µg/L	<	0.5									
	1,1,2-Trichlorcethane	µg/L	<	0.5									
	Trichloroethylene	µg/L	<	0.5									
	Vinyl Chloride	µg/L	<	0.5									
Group 4	2-Chlorophenol	µg/L	<	0.21									
	2,4-Dichlorophenol	µg/L	<	0.21									
	2,4-Dimethylphenol	µg/L	<	0.21									
	4,6-Dinitro-o-Cresol	µg/L	<	1.04									
	2,4-Dinitrophenol	µg/L	<	1.04									
	2-Nitrophenol	µg/L	<	0.52									
	4-Nitrophenol	µg/L	<	0.52									
	p-Chloro-m-Cresol	µg/L	<	0.1									
	Pentachlorophenol	µg/L	<	0.52									
	Phenol	µg/L	<	0.21									
	2,4,6-Trichlorophenol	µg/L	<	0.21									
Group 5	Acenaphthene	µg/L	<	0.1									
	Acenaphthylene	µg/L	<	0.1									
	Anthracene	µg/L	<	0.1									
	Benzidine	µg/L	<	1									
	Benzo(a)Anthracene	µg/L	<	0.1									
	Benzo(a)Pyrene	µg/L	<	0.1									
	3,4-Benzofluoranthene	µg/L	<	0.1									
	Benzo(ghi)Perylene	µg/L	<	0.1									
	Benzo(k)Fluoranthene	µg/L	<	0.1									
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.1									
	Bis(2-Chloroethyl)Ether	µg/L	<	0.1									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.1									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	2.9									
	4-Bromophenyl Phenyl Ether	µg/L	<	0.1									
	Butyl Benzyl Phthalate	µg/L	<	1.04									
	2-Chloronaphthalene	µg/L	<	0.1									
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.1									
	Chrysene	µg/L	<	0.1									
	Dibenzo(a,h)Anthrancene	µg/L	<	0.1									
	1,2-Dichlorobenzene	µg/L	<	0.1									
	1,3-Dichlorobenzene	µg/L	<	0.1									
	1,4-Dichlorobenzene	µg/L	<	0.1									
	3,3-Dichlorobenzidine	µg/L	<	0.52									
	Diethyl Phthalate	µg/L	<	1.04									
	Dimethyl Phthalate	µg/L	<	1.04									
	Di-n-Butyl Phthalate	µg/L	<	1.04									
	2,4-Dinitrotoluene	µg/L	<	0.21									

	2,6-Dinitrotoluene	µg/L	<	0.21									
	Di-n-Octyl Phthalate	µg/L	<	1.04									
	1,2-Diphenylhydrazine	µg/L	<	0.1									
	Fluoranthene	µg/L	<	0.1									
	Fluorene	µg/L	<	0.1									
	Hexachlorobenzene	µg/L	<	0.1									
	Hexachlorobutadiene	µg/L	<	0.1									
	Hexachlorocyclopentadiene	µg/L	<	0.52									
	Hexachloroethane	µg/L	<	0.1									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.1									
	Isophorone	µg/L	<	0.21									
	Naphthalene	µg/L	<	0.1									
	Nitrobenzene	µg/L	<	0.1									
	n-Nitrosodimethylamine	µg/L	<	0.1									
	n-Nitrosodi-n-Propylamine	µg/L	<	0.1									
	n-Nitrosodiphenylamine	µg/L	<	0.1									
	Phenanthrene	µg/L	<	0.1									
	Pyrene	µg/L	<	0.1									
	1,2,4-Trichlorobenzene	µg/L	<	0.1									
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

W. Mifflin Sanitary Auth, NPDES Permit No. PA0026522, Outfall 101

Instructions | Discharge | Stream

Receiving Surface Water Name: **UNT to Monongahela River**

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	039422	1.63	815.25	0.97			Yes
End of Reach 1	039422	1.25	1.25	1.24			Yes

Q_{7-10}

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		WD Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	1.63	0.008			10							100	7		
End of Reach 1	1.25	0.008			10										

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		WD Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	1.63														
End of Reach 1	1.25														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

W. Mifflin Sanitary Auth, NPDES Permit No. PA0026522, Outfall 101

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)
1.63	0.01		0.01	1.856	0.456	1.355	13.551	10.	0.436	0.053	0.
1.25	0.01		0.01					10.000			

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)
1.63	0.11		0.11	1.866	0.456	1.386	13.551	9.778	0.449	0.052	0.00067
1.25	0.132		0.13								

Wasteload Allocations

AFC CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	753	
Total Antimony	0	0		0	1,100	1,100	1,105	
Total Arsenic	0	0		0	340	340	341	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	21,088	
Total Boron	0	0		0	8,100	8,100	8,134	
Total Cadmium	0	0		0	2.014	2.13	2.14	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	569.763	1,803	1,811	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	16.4	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	95.4	
Total Copper	0	0		0	13.439	14.0	14.1	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	22.1	

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	82.0	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	1.65	Chem Translator of 0.85 applied
Total Nickel	0	0		0	468.236	469	471	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	3.8	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	65.3	
Total Zinc	0	0		0	117.180	120	120	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	3.01	
Acrylonitrile	0	0		0	650	650	653	
Benzene	0	0		0	640	640	643	
Bromoform	0	0		0	1,800	1,800	1,808	
Carbon Tetrachloride	0	0		0	2,800	2,800	2,812	
Chlorobenzene	0	0		0	1,200	1,200	1,205	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	18,075	
Chloroform	0	0		0	1,900	1,900	1,908	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	15,063	
1,1-Dichloroethylene	0	0		0	7,500	7,500	7,531	
1,2-Dichloropropane	0	0		0	11,000	11,000	11,046	
1,3-Dichloropropylene	0	0		0	310	310	311	
Ethylbenzene	0	0		0	2,900	2,900	2,912	
Methyl Bromide	0	0		0	550	550	552	
Methyl Chloride	0	0		0	28,000	28,000	28,117	
Methylene Chloride	0	0		0	12,000	12,000	12,050	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	1,004	
Tetrachloroethylene	0	0		0	700	700	703	
Toluene	0	0		0	1,700	1,700	1,707	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	6,828	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	3,013	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	3,414	
Trichloroethylene	0	0		0	2,300	2,300	2,310	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	562	
2,4-Dichlorophenol	0	0		0	1,700	1,700	1,707	
2,4-Dimethylphenol	0	0		0	660	660	663	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	80.3	
2,4-Dinitrophenol	0	0		0	660	660	663	
2-Nitrophenol	0	0		0	8,000	8,000	8,033	
4-Nitrophenol	0	0		0	2,300	2,300	2,310	
p-Chloro-m-Cresol	0	0		0	160	160	161	
Pentachlorophenol	0	0		0	8.723	8.72	8.76	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	462	

Acenaphthene	0	0		0	83	83.0	83.3	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	301	
Benzo(a)Anthracene	0	0		0	0.5	0.5	0.5	
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	30,125	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	4,519	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	271	
Butyl Benzyl Phthalate	0	0		0	140	140	141	
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	823	
1,3-Dichlorobenzene	0	0		0	350	350	351	
1,4-Dichlorobenzene	0	0		0	730	730	733	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	4,017	
Dimethyl Phthalate	0	0		0	2,500	2,500	2,510	
Di-n-Butyl Phthalate	0	0		0	110	110	110	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	1,607	
2,6-Dinitrotoluene	0	0		0	990	990	994	
1,2-Diphenylhydrazine	0	0		0	15	15.0	15.1	
Fluoranthene	0	0		0	200	200	201	
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	10.0	
Hexachlorocyclopentadiene	0	0		0	5	5.0	5.02	
Hexachloroethane	0	0		0	60	60.0	60.3	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	10,042	
Naphthalene	0	0		0	140	140	141	
Nitrobenzene	0	0		0	4,000	4,000	4,017	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	17,071	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	301	
Phenanthrene	0	0		0	5	5.0	5.02	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	131	

CFC CCT (min): 0.000 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

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

Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	221	
Total Arsenic	0	0		0	150	150	151	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	4,117	
Total Boron	0	0		0	1,600	1,600	1,607	
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	86.5	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	10.4	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	19.1	
Total Copper	0	0		0	8.956	9.33	9.37	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	5.22	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	1,506	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.517	3.18	3.19	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	0.91	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.007	52.2	52.4	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	5.01	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	13.1	
Total Zinc	0	0		0	118.139	120	120	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	3.01	
Acrylonitrile	0	0		0	130	130	131	
Benzene	0	0		0	130	130	131	
Bromoform	0	0		0	370	370	372	
Carbon Tetrachloride	0	0		0	560	560	562	
Chlorobenzene	0	0		0	240	240	241	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	3,515	
Chloroform	0	0		0	390	390	392	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	3,113	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,506	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,209	
1,3-Dichloropropylene	0	0		0	61	61.0	61.3	
Ethylbenzene	0	0		0	580	580	582	
Methyl Bromide	0	0		0	110	110	110	
Methyl Chloride	0	0		0	5,500	5,500	5,523	
Methylene Chloride	0	0		0	2,400	2,400	2,410	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	211	
Tetrachloroethylene	0	0		0	140	140	141	
Toluene	0	0		0	330	330	331	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	1,406	

1,1,1-Trichloroethane	0	0		0	610	610	613	
1,1,2-Trichloroethane	0	0		0	680	680	683	
Trichloroethylene	0	0		0	450	450	452	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	110	
2,4-Dichlorophenol	0	0		0	340	340	341	
2,4-Dimethylphenol	0	0		0	130	130	131	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	16.1	
2,4-Dinitrophenol	0	0		0	130	130	131	
2-Nitrophenol	0	0		0	1,600	1,600	1,607	
4-Nitrophenol	0	0		0	470	470	472	
p-Chloro-m-Cresol	0	0		0	500	500	502	
Pentachlorophenol	0	0		0	6.693	6.69	6.72	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	91.4	
Acenaphthene	0	0		0	17	17.0	17.1	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	59.2	
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	6,025	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	914	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	54.2	
Butyl Benzyl Phthalate	0	0		0	35	35.0	35.1	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	160	160	161	
1,3-Dichlorobenzene	0	0		0	69	69.0	69.3	
1,4-Dichlorobenzene	0	0		0	150	150	151	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	803	
Dimethyl Phthalate	0	0		0	500	500	502	
Di-n-Butyl Phthalate	0	0		0	21	21.0	21.1	
2,4-Dinitrotoluene	0	0		0	320	320	321	
2,6-Dinitrotoluene	0	0		0	200	200	201	
1,2-Diphenylhydrazine	0	0		0	3	3.0	3.01	
Fluoranthene	0	0		0	40	40.0	40.2	
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	2.01	
Hexachlorocyclopentadiene	0	0		0	1	1.0	1.0	

Hexachloroethane	0	0		0	12	12.0	12.1	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	2,109	
Naphthalene	0	0		0	43	43.0	43.2	
Nitrobenzene	0	0		0	810	810	813	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	3,414	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	59.2	
Phenanthrene	0	0		0	1	1.0	1.0	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	26.1	

THH CCT (min): 0.000 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	5.62	
Total Arsenic	0	0		0	10	10.0	10.0	
Total Barium	0	0		0	2,400	2,400	2,410	
Total Boron	0	0		0	3,100	3,100	3,113	
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	4.02	
Dissolved Iron	0	0		0	300	300	301	
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	1,004	
Total Mercury	0	0		0	0.050	0.05	0.05	
Total Nickel	0	0		0	610	610	613	
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	3.01	
Acrylonitrile	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	
Bromoform	0	0		0	N/A	N/A	N/A	

Carbon Tetrachloride	0	0		0	N/A	N/A	N/A	
Chlorobenzene	0	0		0	100	100.0	100	
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	5.72	
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	33.1	
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	68.3	
Methyl Bromide	0	0		0	100	100.0	100	
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	57.2	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	100	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	10,042	
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	30.1	
2,4-Dichlorophenol	0	0		0	10	10.0	10.0	
2,4-Dimethylphenol	0	0		0	100	100.0	100	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	2.01	
2,4-Dinitrophenol	0	0		0	10	10.0	10.0	
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	4,017	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	70.3	
Anthracene	0	0		0	300	300	301	
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	201	
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	803	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	1,004	
1,3-Dichlorobenzene	0	0		0	7	7.0	7.03	
1,4-Dichlorobenzene	0	0		0	300	300	301	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	603	
Dimethyl Phthalate	0	0		0	2,000	2,000	2,008	
Di-n-Butyl Phthalate	0	0		0	20	20.0	20.1	
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	20.1	
Fluorene	0	0		0	50	50.0	50.2	
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	4.02	
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	34.1	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	10.0	
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	20.1	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.07	

☐ **CRL** CCT (min): 0.001 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

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

Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Free Cyanide	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	0.06	0.06	0.053	
Benzene	0	0		0	0.58	0.58	0.51	
Bromoform	0	0		0	7	7.0	7.4	
Carbon Tetrachloride	0	0		0	0.4	0.4	0.42	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	0.85	
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	1.0	
1,2-Dichloroethane	0	0		0	9.9	9.9	10.6	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	0.95	
1,3-Dichloropropylene	0	0		0	0.27	0.27	0.29	
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	21.1	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	0.21	
Tetrachloroethylene	0	0		0	10	10.0	10.6	
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	0.58	
Trichloroethylene	0	0		0	0.6	0.6	0.63	
Vinyl Chloride	0	0		0	0.02	0.02	0.021	
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	0.032	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	1.59	
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	0.011	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.032	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	0.34	
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	0.13	
Dibenzo(a,h)Anthrancene	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	0.053	
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	0.053	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.053	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.032	
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	0.00008	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.011	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	0.11	
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	0.0007	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.005	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	3.49	
Phenanthrene	0	0		0	N/A	N/A	N/A	

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

Recommended WQBELs & Monitoring Requirements

No. Samples/Month: 4

	Mass Limits		Concentration Limits						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	Report	Report	Report	Report	Report	µg/L	750	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Arsenic	Report	Report	Report	Report	Report	µg/L	10.0	THH	Discharge Conc > 10% WQBEL (no RP)
Hexavalent Chromium	Report	Report	Report	Report	Report	µg/L	10.4	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	0.094	0.14	9.37	14.0	14.0	µg/L	9.37	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	0.04	0.071	4.02	7.12	10.0	µg/L	4.02	THH	Discharge Conc ≥ 50% WQBEL (RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	301	THH	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	1.2	1.2	120	120	120	µg/L	120	AFC	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 Antimony	N/A	N/A	Discharge Conc < TQL
Total Barium	2,410	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	1,607	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	0.27	µg/L	Discharge Conc < TQL
Total Chromium (III)	86.5	µg/L	Discharge Conc < TQL
Total Cobalt	19.1	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Total Iron	1,506	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	3.19	µg/L	Discharge Conc < TQL
Total Manganese	1,004	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.05	µg/L	Discharge Conc < TQL
Total Nickel	52.4	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	5.01	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	0.063	µg/L	Discharge Conc < TQL
Benzene	0.61	µg/L	Discharge Conc < TQL
Bromoform	7.4	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	0.42	µg/L	Discharge Conc < TQL
Chlorobenzene	100	µg/L	Discharge Conc < TQL
Chlorodibromomethane	0.85	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	3,515	µg/L	Discharge Conc < TQL
Chloroform	5.72	µg/L	Discharge Conc < TQL
Dichlorobromomethane	1.0	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	10.5	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	33.1	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	0.95	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	0.29	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	68.3	µg/L	Discharge Conc < TQL
Methyl Bromide	100	µg/L	Discharge Conc < TQL
Methyl Chloride	5,523	µg/L	Discharge Conc < TQL
Methylene Chloride	21.1	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	0.21	µg/L	Discharge Conc < TQL
Tetrachloroethylene	10.6	µg/L	Discharge Conc < TQL
Toluene	57.2	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	100	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	613	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	0.58	µg/L	Discharge Conc < TQL
Trichloroethylene	0.63	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.021	µg/L	Discharge Conc < TQL
2-Chlorophenol	30.1	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	10.0	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	100	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2.01	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	10.0	µg/L	Discharge Conc < TQL
2-Nitrophenol	1,607	µg/L	Discharge Conc < TQL
4-Nitrophenol	472	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.032	µg/L	Discharge Conc < TQL
Phenol	4,017	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	1.59	µg/L	Discharge Conc < TQL
Acenaphthene	17.1	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	301	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
Benzo(k)Fluoranthene	0.011	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.032	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	201	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	0.34	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	54.2	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.1	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	803	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.13	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.0001	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	161	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	7.03	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	151	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	0.053	µg/L	Discharge Conc < TQL
Diethyl Phthalate	603	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	502	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	20.1	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	0.053	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.053	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.032	µg/L	Discharge Conc < TQL
Fluoranthene	20.1	µg/L	Discharge Conc < TQL
Fluorene	50.2	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.00008	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.011	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.0	µg/L	Discharge Conc < TQL
Hexachloroethane	0.11	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.001	µg/L	Discharge Conc < TQL
Isophorone	34.1	µg/L	Discharge Conc < TQL
Naphthalene	43.2	µg/L	Discharge Conc < TQL
Nitrobenzene	10.0	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.0007	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.005	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	3.49	µg/L	Discharge Conc < TQL
Phenanthrene	1.0	µg/L	Discharge Conc < TQL
Pyrene	20.1	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.07	µg/L	Discharge Conc < TQL

Attachment 5
WET Testing Sheets

3800-FM-BPNPSM0485 Rev. 10/2013
Cover Sheet

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	08/26/19-0800	001	1.7°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	08/28/19-0800	001	4.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	08/30/19-0800	001	3.4°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **08/27/19-1015** Date/Time of Test Termination: **09/03/19-1055**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **93%**

Age of Organisms at Start of Tests: **10.25-18.25 hrs**

Number of Replicates: **10** Number of Organisms per Replicate: **1**

Source of Organisms: **EnviroScience** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **08/29/19** Conductivity: **313** µmhos/cm

pH: **7.3** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: **100%** Survival:

Percent that produced 3 broods (if applicable): **70 %** Mean Dry Weight of Survivors (if applicable):

Young per Surviving Female (if applicable): **25.0**

REFERENCE TOXICITY TESTS

Date of most recent test: **08/20/19** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☒ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Katherine L. Hansler		09/16/19	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

3800-FM-BPNPSM0485 Rev. 10/2013
Cover Sheet

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☐ *Ceriodaphnia dubia* ☒ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: ____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	08/26/19-0800	001	1.7°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	08/28/19-0800	001	4.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	08/30/19-0800	001	3.4°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **08/27/19-1015**
Date/Time of Test Termination: **09/03/19-0915**
☒ Renewal Test ☐ Non-Renewal Test
Frequency of Renewals: **daily**
Dilution Series: **23, 47, 93, 97, 100**
Target Instream Waste Concentration (TIWC): **100%**
Age of Organisms at Start of Tests: **<24hrs**
Number of Replicates: **4**
Number of Organisms per Replicate: **10**
Source of Organisms: **ES**
Feeding Regimen: **none**
Light Intensity: **50-100fc**
Photoperiod: **16/8 light/dark**
Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)
DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)
Were the test chambers aerated? ☐ Yes ☒ No Rate:
pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)
Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No
Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **08/31/19**
Conductivity: **176** µmhos/cm
pH: **7.3**
TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia
Survival:
Percent that produced 3 broods (if applicable): %
Young per Surviving Female (if applicable):

Pimephales promelas
Survival: **90%**
Mean Dry Weight of Survivors (if applicable): **0.382**

REFERENCE TOXICITY TESTS

Date of most recent test: **08/20/19**
Same conditions as test? ☒ Yes ☐ No
Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:
Survival: ☒ Pass ☐ Fail Growth: ☒ Pass ☐ Fail Reproduction: ☐ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Katherine L. Hansler		09/16/19	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 10/25/2016

Replicate No.	Control	TIWC
1	35	29
2	28	35
3	31	36
4	36	26
5	33	37
6	33	34
7	36	30
8	36	36
9	35	32
10	41	32
11		
12		
13		
14		
15		
Mean	34.600	32.700
Std Dev.	3.627	3.561
# Replicates	10	10

T-Test Result	4.7637
Deg. of Freedom	16
Critical T Value	0.8647
Pass or Fail	**PASS**

Test Completion Date: 10/10/2017

Replicate No.	Control	TIWC
1	14	23
2	24	19
3	26	22
4	27	17
5	30	19
6	25	30
7	25	33
8	20	5
9	25	33
10	26	35
11		
12		
13		
14		
15		
Mean	24.200	23.600
Std Dev.	4.367	9.324
# Replicates	10	10

T-Test Result	1.7440
Deg. of Freedom	13
Critical T Value	0.8702
Pass or Fail	**PASS**

Test Completion Date: 8/7/2018

Replicate No.	Control	TIWC
1	36	29
2	33	31
3	34	35
4	38	34
5	39	38
6	37	33
7	33	32
8	31	33
9	35	34
10	31	35
11		
12		
13		
14		
15		
Mean	34.700	33.400
Std Dev.	2.791	2.459
# Replicates	10	10

T-Test Result	7.2229
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	**PASS**

Test Completion Date: 9/3/2019

Replicate No.	Control	TIWC
1	24	11
2	30	29
3	21	27
4	13	28
5	30	26
6	29	27
7	33	32
8	30	37
9	26	30
10	12	27
11		
12		
13		
14		
15		
Mean	25.000	27.400
Std Dev.	7.409	6.620
# Replicates	10	10

T-Test Result	3.1649
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date 10/25/2016

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

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

Test Completion Date 10/10/2017

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

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

Test Completion Date 8/7/2018

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

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

Test Completion Date 9/3/2019

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

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

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 9/6/2016

Replicate No.	Control	TIWC
1	1	0.6
2	0.9	0.9
3	1	0.9
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.975	0.850
Std Dev.	0.050	0.173
# Replicates	4	4

T-Test Result	3.4170
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 10/10/2017

Replicate No.	Control	TIWC
1	1	1
2	1	0.8
3	1	0.8
4	1	0.9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.875
Std Dev.	0.000	0.096
# Replicates	4	4

T-Test Result	6.9887
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 8/7/2018

Replicate No.	Control	TIWC
1	1	0.9
2	0.8	1
3	0.9	0.7
4	0.9	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.900
Std Dev.	0.082	0.141
# Replicates	4	4

T-Test Result	5.4772
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 9/3/2019

Replicate No.	Control	TIWC
1	1	0.9
2	0.9	0.9
3	0.8	0.9
4	0.9	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.925
Std Dev.	0.082	0.050
# Replicates	4	4

T-Test Result	11.7701
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date 9/6/2016

Replicate No.	Control	TIWC
1	0.452	0.297
2	0.413	0.3109
3	0.431	0.368
4	0.464	0.396
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.440	0.348
Std Dev.	0.023	0.051
# Replicates	4	4

T-Test Result	0.6660
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	FAIL

Test Completion Date 10/10/2017

Replicate No.	Control	TIWC
1	0.525	0.514
2	0.423	0.405
3	0.485	0.402
4	0.409	0.401
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.461	0.431
Std Dev.	0.054	0.056
# Replicates	4	4

T-Test Result	2.4689
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

Test Completion Date 8/7/2018

Replicate No.	Control	TIWC
1	0.413	0.265
2	0.349	0.293
3	0.423	0.1889
4	0.386	0.217
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.393	0.241
Std Dev.	0.033	0.047
# Replicates	4	4

T-Test Result	-2.0232
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	FAIL

Test Completion Date 9/3/2019

Replicate No.	Control	TIWC
1	0.473	0.528
2	0.302	0.512
3	0.314	0.558
4	0.293	0.591
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.348	0.547
Std Dev.	0.085	0.035
# Replicates	4	4

T-Test Result	7.9006
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	10/28/19-0800	001	2.6°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	10/30/19-0800	001	1.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	11/01/19-0800	001	3.1°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **10/29/19-1215** Date/Time of Test Termination: **11/05/19-1225**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **93%**

Age of Organisms at Start of Tests: **12.25-20.25 hrs**

Number of Replicates: **10** Number of Organisms per Replicate: **1**

Source of Organisms: **EnviroScience** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **10/30/19** Conductivity: **300** µmhos/cm

pH: **7.3** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: **100%** Survival:

Percent that produced 3 broods (if applicable): **100 %** Mean Dry Weight of Survivors (if applicable):

Young per Surviving Female (if applicable): **33.1**

REFERENCE TOXICITY TESTS

Date of most recent test: **10/15/19** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☒ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Katherine L. Hansler		11/14/19	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

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Cover Sheet

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☐ *Ceriodaphnia dubia* ☒ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	10/28/19-0800	001	2.6°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	10/30/19-0800	001	1.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	11/01/19-0800	001	3.1°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **10/29/19-1200** Date/Time of Test Termination: **11/05/19-1300**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **100%**

Age of Organisms at Start of Tests: **<24hrs**

Number of Replicates: **4** Number of Organisms per Replicate: **10**

Source of Organisms: **ES** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **11/03/19** Conductivity: **180** µmhos/cm

pH: **7.2** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: Survival: **95%**

Percent that produced 3 broods (if applicable): % Mean Dry Weight of Survivors (if applicable): **0.280**

Young per Surviving Female (if applicable):

REFERENCE TOXICITY TESTS

Date of most recent test: **10/15/19** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☒ Pass ☐ Fail Reproduction: ☐ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Katherine L. Hansler		11/14/19	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 10/10/2017

Replicate No.	Control	TIWC
1	14	23
2	24	19
3	26	22
4	27	17
5	30	19
6	25	30
7	25	33
8	20	5
9	25	33
10	26	35
11		
12		
13		
14		
15		
Mean	24.200	23.600
Std Dev.	4.367	9.324
# Replicates	10	10

T-Test Result	1.7440
Deg. of Freedom	13
Critical T Value	0.8702
Pass or Fail	PASS

Test Completion Date: 8/7/2018

Replicate No.	Control	TIWC
1	36	29
2	33	31
3	34	35
4	38	34
5	39	38
6	37	33
7	33	32
8	31	33
9	35	34
10	31	35
11		
12		
13		
14		
15		
Mean	34.700	33.400
Std Dev.	2.791	2.459
# Replicates	10	10

T-Test Result	7.2229
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	PASS

Test Completion Date: 9/3/2019

Replicate No.	Control	TIWC
1	24	11
2	30	29
3	21	27
4	13	28
5	30	26
6	29	27
7	33	32
8	30	37
9	28	30
10	12	27
11		
12		
13		
14		
15		
Mean	25.000	27.400
Std Dev.	7.409	6.620
# Replicates	10	10

T-Test Result	3.1649
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	PASS

Test Completion Date: 11/5/2019

Replicate No.	Control	TIWC
1	32	31
2	34	31
3	37	36
4	34	11
5	28	18
6	30	30
7	33	34
8	33	25
9	38	28
10	32	34
11		
12		
13		
14		
15		
Mean	33.100	27.800
Std Dev.	2.961	7.857
# Replicates	10	10

T-Test Result	1.1522
Deg. of Freedom	12
Critical T Value	0.8726
Pass or Fail	PASS

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 10/10/2017

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

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

Test Completion Date: 6/7/2018

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

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

Test Completion Date: 9/3/2019

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

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

Test Completion Date: 11/5/2019

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

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

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 10/10/2017

Replicate No.	Control	TIWC
1	1	1
2	1	0.8
3	1	0.8
4	1	0.9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.875
Std Dev.	0.000	0.096
# Replicates	4	4

T-Test Result	6.9887
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 8/7/2018

Replicate No.	Control	TIWC
1	1	0.9
2	0.8	1
3	0.9	0.7
4	0.9	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.900
Std Dev.	0.082	0.141
# Replicates	4	4

T-Test Result	5.4772
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 9/3/2019

Replicate No.	Control	TIWC
1	1	0.9
2	0.9	0.9
3	0.8	0.9
4	0.9	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.925
Std Dev.	0.082	0.050
# Replicates	4	4

T-Test Result	11.7701
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 11/5/2019

Replicate No.	Control	TIWC
1	0.9	0.8
2	0.9	0.6
3	1	0.6
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	0.750
Std Dev.	0.058	0.191
# Replicates	4	4

T-Test Result	2.2424
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 10/10/2017

Replicate No.	Control	TIWC
1	0.525	0.514
2	0.423	0.405
3	0.485	0.402
4	0.409	0.401
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.461	0.431
Std Dev.	0.054	0.056
# Replicates	4	4

T-Test Result	2.4689
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 8/7/2018

Replicate No.	Control	TIWC
1	0.413	0.265
2	0.349	0.293
3	0.423	0.1889
4	0.386	0.217
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.393	0.241
Std Dev.	0.033	0.047
# Replicates	4	4

T-Test Result	-2.0232
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**FAIL**

Test Completion Date: 9/3/2019

Replicate No.	Control	TIWC
1	0.473	0.528
2	0.302	0.512
3	0.314	0.558
4	0.293	0.591
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.346	0.547
Std Dev.	0.085	0.035
# Replicates	4	4

T-Test Result	7.9006
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 11/5/2019

Replicate No.	Control	TIWC
1	0.278	0.239
2	0.25	0.221
3	0.253	0.192
4	0.279	0.321
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.265	0.243
Std Dev.	0.016	0.055
# Replicates	4	4

T-Test Result	1.5735
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	03/23/20-0700	001	1.1°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	03/25/20-0700	001	1.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	03/27/20-0700	001	0.6°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **03/24/20-1050** Date/Time of Test Termination: **03/30/20-1000**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **93%**

Age of Organisms at Start of Tests: **18.75-22.75 hrs**

Number of Replicates: **10** Number of Organisms per Replicate: **1**

Source of Organisms: **EnviroScience** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **03/26/20** Conductivity: **297** µmhos/cm

pH: **7.2** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: **100%** Survival:

Percent that produced 3 broods (if applicable): **90 %** Mean Dry Weight of Survivors (if applicable):

Young per Surviving Female (if applicable): **19.3**

REFERENCE TOXICITY TESTS

Date of most recent test: **03/24/20** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☒ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Katherine L. Hansler		04/09/20	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☐ *Ceriodaphnia dubia* ☒ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	03/23/20-0700	001	1.1°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	03/25/20-0700	001	1.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	03/27/20-0700	001	0.6°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **03/24/20-1135**
Date/Time of Test Termination: **03/31/20-1035**

☒ Renewal Test ☐ Non-Renewal Test
Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100**
Target Instream Waste Concentration (TIWC): **100%**

Age of Organisms at Start of Tests: **<24hrs**

Number of Replicates: **4**
Number of Organisms per Replicate: **10**

Source of Organisms: **ES**
Feeding Regimen: **none**

Light Intensity: **50-100fc**
Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **03/27/20**
Conductivity: **176** µmhos/cm

pH: **7.4**
TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia
Survival:
Percent that produced 3 broods (if applicable): %
Young per Surviving Female (if applicable):

Pimephales promelas
Survival: **95%**
Mean Dry Weight of Survivors (if applicable): **0.405**

REFERENCE TOXICITY TESTS

Date of most recent test: **03/24/20**
Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☒ Pass ☐ Fail Reproduction: ☐ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Katherine L. Hansler		04/09/20	**68-01628**
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Replicate No.	Test Completion Date: 8/7/2018 Control	TIWC
1	36	29
2	33	31
3	34	35
4	38	34
5	39	38
6	37	33
7	33	32
8	31	33
9	35	34
10	31	35
11		
12		
13		
14		
15		
Mean	34.700	33.400
Std Dev.	2.791	2.459
# Replicates	10	10

T-Test Result	7.2229
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	**PASS**

Replicate No.	Test Completion Date: 9/3/2019 Control	TIWC
1	24	11
2	30	29
3	21	27
4	13	28
5	30	26
6	29	27
7	33	32
8	30	37
9	28	30
10	12	27
11		
12		
13		
14		
15		
Mean	25.000	27.400
Std Dev.	7.409	6.620
# Replicates	10	10

T-Test Result	3.1649
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	**PASS**

Replicate No.	Test Completion Date: 11/5/2019 Control	TIWC
1	32	31
2	34	31
3	37	36
4	34	11
5	28	18
6	30	30
7	33	34
8	33	25
9	38	28
10	32	34
11		
12		
13		
14		
15		
Mean	33.100	27.800
Std Dev.	2.961	7.857
# Replicates	10	10

T-Test Result	1.1522
Deg. of Freedom	12
Critical T Value	0.8726
Pass or Fail	**PASS**

Replicate No.	Test Completion Date: 3/30/2020 Control	TIWC
1	18	19
2	17	15
3	24	19
4	18	23
5	20	23
6	19	26
7	20	25
8	19	16
9	22	31
10	16	22
11		
12		
13		
14		
15		
Mean	19.300	21.900
Std Dev.	2.359	4.841
# Replicates	10	10

T-Test Result	4.5556
Deg. of Freedom	13
Critical T Value	0.8702
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 8/7/2018

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

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

Test Completion Date: 9/3/2019

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

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

Test Completion Date: 11/5/2019

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

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

Test Completion Date: 3/30/2020

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

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

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 8/7/2018

Replicate No.	Control	TIWC
1	1	0.9
2	0.8	1
3	0.9	0.7
4	0.9	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.900
Std Dev.	0.082	0.141
# Replicates	4	4

T-Test Result	5.4772
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 9/3/2019

Replicate No.	Control	TIWC
1	1	0.9
2	0.9	0.9
3	0.8	0.9
4	0.9	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.925
Std Dev.	0.082	0.050
# Replicates	4	4

T-Test Result	11.7701
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 11/5/2019

Replicate No.	Control	TIWC
1	0.9	0.8
2	0.9	0.6
3	1	0.6
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	0.750
Std Dev.	0.058	0.191
# Replicates	4	4

T-Test Result	2.2424
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 3/31/2020

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	0.8	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	1.000
Std Dev.	0.100	0.000
# Replicates	4	4

T-Test Result	13.2593
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 8/7/2018

Replicate No.	Control	TIWC
1	0.413	0.265
2	0.349	0.293
3	0.423	0.1869
4	0.386	0.217
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.393	0.241
Std Dev.	0.033	0.047
# Replicates	4	4

T-Test Result	-2.0232
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**FAIL**

Test Completion Date: 9/3/2019

Replicate No.	Control	TIWC
1	0.473	0.528
2	0.302	0.512
3	0.314	0.558
4	0.293	0.591
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.346	0.547
Std Dev.	0.085	0.035
# Replicates	4	4

T-Test Result	7.9006
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 11/5/2019

Replicate No.	Control	TIWC
1	0.276	0.239
2	0.25	0.221
3	0.253	0.192
4	0.279	0.321
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.265	0.243
Std Dev.	0.016	0.055
# Replicates	4	4

T-Test Result	1.5735
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 3/31/2020

Replicate No.	Control	TIWC
1	0.411	0.481
2	0.375	0.568
3	0.371	0.431
4	0.37	0.47
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.382	0.488
Std Dev.	0.020	0.058
# Replicates	4	4

T-Test Result	6.7468
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	06/22/20-0700	001	2.6°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	06/24/20-0700	001	2.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	06/26/20-0700	001	1.5°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **06/23/20-1230** Date/Time of Test Termination: **06/30/20-1230**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **93%**

Age of Organisms at Start of Tests: **12.5-20.5 hrs**

Number of Replicates: **10** Number of Organisms per Replicate: **1**

Source of Organisms: **EnviroScience** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **06/27/20** Conductivity: **293** µmhos/cm

pH: **7.3** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: **100%** Survival:

Percent that produced 3 broods (if applicable): **100 %** Mean Dry Weight of Survivors (if applicable):

Young per Surviving Female (if applicable): **27.9**

REFERENCE TOXICITY TESTS

Date of most recent test: **06/23/20** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☒ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Katherine L. Hansler		07/09/20	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☐ *Ceriodaphnia dubia* ☒ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	06/22/20-0700	001	2.6°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	06/24/20-0700	001	2.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	06/26/20-0700	001	1.5°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **06/23/20-1255**
Date/Time of Test Termination: **06/30/20-1330**
☒ Renewal Test ☐ Non-Renewal Test
Frequency of Renewals: **daily**
Dilution Series: **23, 47, 93, 97, 100**
Target Instream Waste Concentration (TIWC): **100%**
Age of Organisms at Start of Tests: **<24hrs**
Number of Replicates: **4**
Number of Organisms per Replicate: **10**
Source of Organisms: **ES**
Feeding Regimen: **none**
Light Intensity: **50-100fc**
Photoperiod: **16/8 light/dark**
Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)
DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)
Were the test chambers aerated? ☐ Yes ☒ No Rate:
pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)
Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No
Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **06/28/20**
Conductivity: **181** µmhos/cm
pH: **7.2**
TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia
Survival:
Percent that produced 3 broods (if applicable): %
Young per Surviving Female (if applicable):

Pimephales promelas
Survival: **92%**
Mean Dry Weight of Survivors (if applicable): **0.382**

REFERENCE TOXICITY TESTS

Date of most recent test: **06/23/20**
Same conditions as test? ☒ Yes ☐ No
Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:
Survival: ☒ Pass ☐ Fail Growth: ☒ Pass ☐ Fail Reproduction: ☐ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Katherine L. Hansler		07/09/20	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 9/3/2019

Replicate No.	Control	TIWC
1	24	11
2	30	29
3	21	27
4	13	28
5	30	26
6	29	27
7	33	32
8	30	37
9	28	30
10	12	27
11		
12		
13		
14		
15		
Mean	25.000	27.400
Std Dev.	7.409	6.620
# Replicates	10	10

T-Test Result	3.1649
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	**PASS**

Test Completion Date: 11/5/2019

Replicate No.	Control	TIWC
1	32	31
2	34	31
3	37	36
4	34	11
5	28	18
6	30	30
7	33	34
8	33	25
9	38	28
10	32	34
11		
12		
13		
14		
15		
Mean	33.100	27.800
Std Dev.	2.961	7.857
# Replicates	10	10

T-Test Result	1.1522
Deg. of Freedom	12
Critical T Value	0.8726
Pass or Fail	**PASS**

Test Completion Date: 3/30/2020

Replicate No.	Control	TIWC
1	18	19
2	17	15
3	24	19
4	18	23
5	20	23
6	19	26
7	20	25
8	19	16
9	22	31
10	16	22
11		
12		
13		
14		
15		
Mean	19.300	21.900
Std Dev.	2.359	4.841
# Replicates	10	10

T-Test Result	4.5556
Deg. of Freedom	13
Critical T Value	0.8702
Pass or Fail	**PASS**

Test Completion Date: 6/30/2020

Replicate No.	Control	TIWC
1	28	20
2	22	30
3	32	32
4	22	23
5	29	33
6	30	35
7	29	31
8	28	29
9	27	34
10	32	33
11		
12		
13		
14		
15		
Mean	27.900	30.000
Std Dev.	3.510	4.876
# Replicates	10	10

T-Test Result	5.1786
Deg. of Freedom	15
Critical T Value	0.8662
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 9/3/2019

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

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

Test Completion Date: 11/5/2019

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

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

Test Completion Date: 3/30/2020

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

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

Test Completion Date: 6/30/2020

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

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

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 9/3/2019

Replicate No.	Control	TIWC
1	1	0.9
2	0.9	0.9
3	0.8	0.9
4	0.9	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.925
Std Dev.	0.082	0.050
# Replicates	4	4

T-Test Result	11.7701
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 11/5/2019

Replicate No.	Control	TIWC
1	0.9	0.8
2	0.9	0.6
3	1	0.6
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	0.750
Std Dev.	0.058	0.191
# Replicates	4	4

T-Test Result	2.2424
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 3/31/2020

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	0.8	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	1.000
Std Dev.	0.100	0.000
# Replicates	4	4

T-Test Result	13.2593
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 6/30/2020

Replicate No.	Control	TIWC
1	0.7	0.7
2	1	0.9
3	1	1
4	1	0.8
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.850
Std Dev.	0.150	0.129
# Replicates	4	4

T-Test Result	4.1571
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 9/3/2019

Replicate No.	Control	TIWC
1	0.473	0.528
2	0.302	0.512
3	0.314	0.558
4	0.293	0.591
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.346	0.547
Std Dev.	0.085	0.035
# Replicates	4	4

T-Test Result	7.9006
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 11/5/2019

Replicate No.	Control	TIWC
1	0.278	0.239
2	0.25	0.221
3	0.253	0.192
4	0.279	0.321
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.265	0.243
Std Dev.	0.016	0.055
# Replicates	4	4

T-Test Result	1.5735
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 3/31/2020

Replicate No.	Control	TIWC
1	0.411	0.481
2	0.375	0.568
3	0.371	0.431
4	0.37	0.47
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.382	0.486
Std Dev.	0.020	0.058
# Replicates	4	4

T-Test Result	6.7468
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 6/30/2020

Replicate No.	Control	TIWC
1	0.303	0.309
2	0.377	0.319
3	0.388	0.385
4	0.332	0.255
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.350	0.317
Std Dev.	0.040	0.053
# Replicates	4	4

T-Test Result	1.7853
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	10/11/21-0000	001	0.9°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	10/13/21-0000	001	0.7°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	10/15/21-0000	001	0.9°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **10/12/21-1130** Date/Time of Test Termination: **10/18/21-1030**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **93%**

Age of Organisms at Start of Tests: **11.5-19.5hrs**

Number of Replicates: **10** Number of Organisms per Replicate: **1**

Source of Organisms: **EnviroScience** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **10/15/21** Conductivity: **287** µmhos/cm

pH: **7.3** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: **100%** Survival:

Percent that produced 3 broods (if applicable): **80 %** Mean Dry Weight of Survivors (if applicable):

Young per Surviving Female (if applicable): **21.4**

REFERENCE TOXICITY TESTS

Date of most recent test: **10/12/21** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☐ Pass ☒ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		10/27/21	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

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Cover Sheet

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☐ *Ceriodaphnia dubia* ☒ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	10/11/21-0000	001	0.9°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	10/13/21-0000	001	0.7°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	10/15/21-0000	001	0.9°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **10/12/21-1135** Date/Time of Test Termination: **10/19/21-1035**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **100%**

Age of Organisms at Start of Tests: **<24hrs**

Number of Replicates: **4** Number of Organisms per Replicate: **10**

Source of Organisms: **ES** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **10/16/21** Conductivity: **180** µmhos/cm

pH: **7.2** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: Survival: **90%**

Percent that produced 3 broods (if applicable): % Mean Dry Weight of Survivors (if applicable): **0.289**

Young per Surviving Female (if applicable):

REFERENCE TOXICITY TESTS

Date of most recent test: **10/12/21** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☒ Pass ☐ Fail Reproduction: ☐ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		**10/27/21**	**68-01628**
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA New England

Permit No.: PA0026522

Test Completion Date: 11/5/2019

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

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

Test Completion Date: 3/30/2020

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

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

Test Completion Date: 6/30/2020

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

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

Test Completion Date: 10/12/2021

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

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

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Replicate No.	Test Completion Date 11/5/2019 Control	TIWC
1	32	31
2	34	31
3	37	36
4	34	11
5	28	18
6	30	30
7	33	34
8	33	25
9	36	28
10	32	34
11		
12		
13		
14		
15		
Mean	33.100	27.800
Std Dev.	2.961	7.857
# Replicates	10	10

T-Test Result	1.1522
Deg. of Freedom	12
Critical T Value	0.8726
Pass or Fail	PASS

Replicate No.	Test Completion Date 3/30/2020 Control	TIWC
1	18	19
2	17	15
3	24	19
4	18	23
5	20	23
6	19	26
7	20	25
8	19	16
9	22	31
10	16	22
11		
12		
13		
14		
15		
Mean	19.300	21.900
Std Dev.	2.359	4.841
# Replicates	10	10

T-Test Result	4.5556
Deg. of Freedom	13
Critical T Value	0.8702
Pass or Fail	PASS

Replicate No.	Test Completion Date 6/30/2020 Control	TIWC
1	28	20
2	22	30
3	32	32
4	22	23
5	29	33
6	30	35
7	29	31
8	28	29
9	27	34
10	32	33
11		
12		
13		
14		
15		
Mean	27.900	30.000
Std Dev.	3.510	4.876
# Replicates	10	10

T-Test Result	5.1756
Deg. of Freedom	15
Critical T Value	0.8652
Pass or Fail	PASS

Replicate No.	Test Completion Date 10/18/2021 Control	TIWC
1	25	11
2	21	2
3	31	9
4	25	5
5	20	9
6	20	4
7	14	
8	20	14
9	26	5
10	12	11
11		
12		
13		
14		
15		
Mean	21.400	7.778
Std Dev.	5.661	3.962
# Replicates	10	9

T-Test Result	-4.3927
Deg. of Freedom	16
Critical T Value	0.8647
Pass or Fail	FAIL

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 11/5/2019

Replicate No.	Control	TIWC
1	0.9	0.8
2	0.9	0.6
3	1	0.6
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	0.750
Std Dev.	0.058	0.191
# Replicates	4	4

T-Test Result	2.2424
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	PASS

Test Completion Date: 3/31/2020

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	0.8	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	1.000
Std Dev.	0.100	0.000
# Replicates	4	4

T-Test Result	13.2593
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	PASS

Test Completion Date: 6/30/2020

Replicate No.	Control	TIWC
1	0.7	0.7
2	1	0.9
3	1	1
4	1	0.8
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.850
Std Dev.	0.150	0.129
# Replicates	4	4

T-Test Result	4.1571
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	PASS

Test Completion Date: 10/19/2021

Replicate No.	Control	TIWC
1	1	0.9
2	1	0.9
3	0.8	0.5
4	0.8	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.825
Std Dev.	0.115	0.222
# Replicates	4	4

T-Test Result	2.6643
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	PASS

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Replicate No.	Test Completion Date: 11/5/2019 Control	TIWC
1	0.278	0.239
2	0.26	0.221
3	0.253	0.192
4	0.279	0.321
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.265	0.243
Std Dev.	0.016	0.055
# Replicates	4	4
T-Test Result	1.5736	
Deg. of Freedom	3	
Critical T Value	0.7649	
Pass or Fail	PASS	

Replicate No.	Test Completion Date: 3/31/2020 Control	TIWC
1	0.411	0.481
2	0.375	0.568
3	0.371	0.431
4	0.37	0.47
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.382	0.488
Std Dev.	0.020	0.058
# Replicates	4	4
T-Test Result	6.7468	
Deg. of Freedom	4	
Critical T Value	0.7407	
Pass or Fail	PASS	

Replicate No.	Test Completion Date: 6/30/2020 Control	TIWC
1	0.303	0.309
2	0.377	0.319
3	0.386	0.385
4	0.332	0.255
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.350	0.317
Std Dev.	0.040	0.053
# Replicates	4	4
T-Test Result	1.7853	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	PASS	

Replicate No.	Test Completion Date: 6/30/2020 Control	TIWC
1	0.298	0.296
2	0.301	0.287
3	0.266	0.212
4	0.292	0.289
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.289	0.271
Std Dev.	0.016	0.040
# Replicates	4	4
T-Test Result	2.6186	
Deg. of Freedom	4	
Critical T Value	0.7407	
Pass or Fail	PASS	

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Cover Sheet

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☒ Yes ☐ No (If Yes, indicate the date of original test completion: 10/18/21)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	11/29/21-0700	001	3.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	12/01/21-0700	001	2.4°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	12/03/21-0700	001	0.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **11/30/21-1135** Date/Time of Test Termination: **12/07/21-1035**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **93%**

Age of Organisms at Start of Tests: **11.5-19.5hrs**

Number of Replicates: **10** Number of Organisms per Replicate: **1**

Source of Organisms: **EnviroScience** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **12/03/21** Conductivity: **303** µmhos/cm

pH: **7.4** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: **90%** Survival:

Percent that produced 3 broods (if applicable): **90%** % Mean Dry Weight of Survivors (if applicable):

Young per Surviving Female (if applicable): **18.1**

REFERENCE TOXICITY TESTS

Date of most recent test: **11/16/21** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☐ Pass ☒ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☒ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		12/14/21	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 3/30/2020

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

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

Test Completion Date: 6/30/2020

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

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

Test Completion Date: 10/12/2021

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

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

Test Completion Date: 12/7/2021

Replicate No.	Control	TIWC
1	1	1
2	1	0
3	1	1
4	1	1
5	1	0
6	0	0
7	1	1
8	1	0
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	0.900	0.600
Std Dev.	0.316	0.516
# Replicates	10	10

T-Test Result: -0.4174
Deg. of Freedom: 14
Critical T Value: 0.8681
Pass or Fail: FAIL

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 3/30/2020

Replicate No.	Control	TIWC
1	18	19
2	17	15
3	24	19
4	18	23
5	20	23
6	19	26
7	20	25
8	19	16
9	22	31
10	16	22
11		
12		
13		
14		
15		
Mean	19.300	21.900
Std Dev.	2.359	4.841
# Replicates	10	10
T-Test Result	4.5556	
Deg. of Freedom	13	
Critical T Value	0.8702	
Pass or Fail	PASS	

Test Completion Date: 6/30/2020

Replicate No.	Control	TIWC
1	28	20
2	22	30
3	32	32
4	22	23
5	29	33
6	30	35
7	29	31
8	28	29
9	27	34
10	32	33
11		
12		
13		
14		
15		
Mean	27.900	30.000
Std Dev.	3.510	4.876
# Replicates	10	10
T-Test Result	5.1786	
Deg. of Freedom	15	
Critical T Value	0.8662	
Pass or Fail	PASS	

Test Completion Date: 10/18/2021

Replicate No.	Control	TIWC
1	25	11
2	21	2
3	31	9
4	25	5
5	20	9
6	20	4
7	14	
8	20	14
9	26	5
10	12	11
11		
12		
13		
14		
15		
Mean	21.400	7.778
Std Dev.	5.861	3.962
# Replicates	10	9
T-Test Result	-4.3927	
Deg. of Freedom	16	
Critical T Value	0.8647	
Pass or Fail	FAIL	

Test Completion Date: 12/7/2021

Replicate No.	Control	TIWC
1	19	18
2	21	6
3	22	18
4	18	17
5	26	10
6	0	9
7	15	21
8	20	13
9	20	21
10	20	25
11		
12		
13		
14		
15		
Mean	18.100	15.800
Std Dev.	6.951	6.088
# Replicates	10	10
T-Test Result	0.8778	
Deg. of Freedom	17	
Critical T Value	0.8633	
Pass or Fail	PASS	

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	03/28/22-0900	001	1.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	03/30/22-0900	001	1.7°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	04/01/22-0800	001	0.7°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **03/29/22-0950** Date/Time of Test Termination: **04/04/22-1040**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **93%**

Age of Organisms at Start of Tests: **17.75-21.75 hrs**

Number of Replicates: **10** Number of Organisms per Replicate: **1**

Source of Organisms: **EnviroScience** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **03/30/22** Conductivity: **297** µmhos/cm

pH: **7.3** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: **100%** Survival:

Percent that produced 3 broods (if applicable): **100 %** Mean Dry Weight of Survivors (if applicable):

Young per Surviving Female (if applicable): **24.3**

REFERENCE TOXICITY TESTS

Date of most recent test: **03/22/22** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☒ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		04/11/22	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☐ *Ceriodaphnia dubia* ☒ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	03/28/22-0900	001	1.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	03/30/22-0900	001	1.7°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	04/01/22-080	001	0.7°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **03/29/22-1050** Date/Time of Test Termination: **04/05/22-1000**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **100%**

Age of Organisms at Start of Tests: **<24hrs**

Number of Replicates: **4** Number of Organisms per Replicate: **10**

Source of Organisms: **ES** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **03/30/22** Conductivity: **181** µmhos/cm

pH: **7.4** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: Survival: **92%**

Percent that produced 3 broods (if applicable): % Mean Dry Weight of Survivors (if applicable): **0.401**

Young per Surviving Female (if applicable):

REFERENCE TOXICITY TESTS

Date of most recent test: **03/22/22** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☒ Pass ☐ Fail Reproduction: ☐ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		04/11/22	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date 6/30/2020

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

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

Test Completion Date 10/12/2021

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

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

Test Completion Date 12/7/2021

Replicate No.	Control	TIWC
1	1	1
2	1	0
3	1	1
4	1	1
5	1	0
6	0	0
7	1	1
8	1	0
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	0.900	0.600
Std Dev.	0.316	0.516
# Replicates	10	10

T-Test Result -0.4174
Deg. of Freedom 14
Critical T Value 0.6581
Pass or Fail **FAIL**

Test Completion Date 4/4/2022

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

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

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name

West Mifflin SA-New England

Permit No.

PA0026522

Replicate No.	Test Completion Date 6/30/2020 Control	TIWC
1	28	20
2	22	30
3	32	32
4	22	23
5	29	33
6	30	35
7	29	31
8	28	29
9	27	34
10	32	33
11		
12		
13		
14		
15		
Mean	27.900	30.000
Std Dev.	3.510	4.876
# Replicates	10	10
T-Test Result	5.1786	
Deg. of Freedom	16	
Critical T Value	0.8662	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date 10/18/2021 Control	TIWC
1	25	11
2	21	2
3	31	9
4	25	5
5	20	9
6	20	4
7	14	
8	20	14
9	26	5
10	12	11
11		
12		
13		
14		
15		
Mean	21.400	7.778
Std Dev.	5.661	3.962
# Replicates	10	9
T-Test Result	-4.3927	
Deg. of Freedom	16	
Critical T Value	0.8647	
Pass or Fail	**FAIL**	

Replicate No.	Test Completion Date 12/7/2021 Control	TIWC
1	19	18
2	21	6
3	22	18
4	18	17
5	26	10
6	0	9
7	15	21
8	20	13
9	20	21
10	20	25
11		
12		
13		
14		
15		
Mean	18.100	15.800
Std Dev.	6.951	6.088
# Replicates	10	10
T-Test Result	0.8778	
Deg. of Freedom	17	
Critical T Value	0.8633	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date 4/4/2022 Control	TIWC
1	23	27
2	22	33
3	25	35
4	31	24
5	21	33
6	28	27
7	16	33
8	25	32
9	25	34
10	29	28
11		
12		
13		
14		
15		
Mean	24.300	30.600
Std Dev.	4.191	3.748
# Replicates	10	10
T-Test Result	8.0004	
Deg. of Freedom	17	
Critical T Value	0.8633	
Pass or Fail	**PASS**	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date: 3/31/2020

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	0.8	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	1.000
Std Dev.	0.100	0.000
# Replicates	4	4

T-Test Result	13.2593
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 6/30/2020

Replicate No.	Control	TIWC
1	0.7	0.7
2	1	0.9
3	1	1
4	1	0.8
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.850
Std Dev.	0.150	0.129
# Replicates	4	4

T-Test Result	4.1571
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 10/19/2021

Replicate No.	Control	TIWC
1	1	0.9
2	1	0.9
3	0.8	0.6
4	0.8	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.825
Std Dev.	0.115	0.222
# Replicates	4	4

T-Test Result	2.6843
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 4/5/2022

Replicate No.	Control	TIWC
1	1	0.7
2	0.9	0.7
3	0.8	0.6
4	1	0.4
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.600
Std Dev.	0.096	0.141
# Replicates	4	4

T-Test Result	0.8617
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 3/31/2020

Replicate No.	Control	TIWC
1	0.411	0.481
2	0.375	0.568
3	0.371	0.431
4	0.37	0.47
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.382	0.488
Std Dev.	0.020	0.058
# Replicates	4	4

T-Test Result	6.7466
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 6/30/2020

Replicate No.	Control	TIWC
1	0.303	0.309
2	0.377	0.319
3	0.388	0.385
4	0.332	0.255
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.350	0.317
Std Dev.	0.040	0.053
# Replicates	4	4

T-Test Result	1.7853
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 10/19/2021

Replicate No.	Control	TIWC
1	0.298	0.296
2	0.301	0.287
3	0.266	0.212
4	0.292	0.269
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.289	0.271
Std Dev.	0.018	0.040
# Replicates	4	4

T-Test Result	2.6186
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 4/5/2022

Replicate No.	Control	TIWC
1	0.445	0.376
2	0.37	0.318
3	0.361	0.427
4	0.428	0.418
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.401	0.385
Std Dev.	0.042	0.050
# Replicates	4	4

T-Test Result	2.8585
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

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Cover Sheet

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	06/27/22-0830	001	2.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	06/29/22-0830	001	2.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	07/01/22-0830	001	0.7°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **06/28/22-1000** Date/Time of Test Termination: **07/04/22-1100**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **93%**

Age of Organisms at Start of Tests: **18-22 hrs**

Number of Replicates: **10** Number of Organisms per Replicate: **1**

Source of Organisms: **EnviroScience** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **07/01/22** Conductivity: **303** µmhos/cm

pH: **7.2** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: **100%** Survival:

Percent that produced 3 broods (if applicable): **100 %** Mean Dry Weight of Survivors (if applicable):

Young per Surviving Female (if applicable): **23.6**

REFERENCE TOXICITY TESTS

Date of most recent test: **06/21/22** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☒ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		07/18/22	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☐ *Ceriodaphnia dubia* ☒ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, Indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	06/27/22-0830	001	2.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	06/29/22-0830	001	2.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	07/01/22-0830	001	0.7°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **06/28/22-1100** Date/Time of Test Termination: **07/05/22-1100**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **100%**

Age of Organisms at Start of Tests: **<24hrs**

Number of Replicates: **4** Number of Organisms per Replicate: **10**

Source of Organisms: **ES** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **06/30/22** Conductivity: **187** µmhos/cm

pH: **7.2** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: Survival: **100%**

Percent that produced 3 broods (if applicable): % Mean Dry Weight of Survivors (if applicable): **0.353**

Young per Surviving Female (if applicable):

REFERENCE TOXICITY TESTS

Date of most recent test: **06/21/22** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☒ Pass ☐ Fail Reproduction: ☐ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		07/18/22	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 10/12/2021

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

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

Test Completion Date: 12/7/2021

Replicate No.	Control	TIWC
1	1	1
2	1	0
3	1	1
4	1	1
5	1	0
6	0	0
7	1	1
8	1	0
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	0.900	0.600
Std Dev.	0.316	0.516
# Replicates	10	10

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

Test Completion Date: 4/4/2022

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

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

Test Completion Date: 7/4/2022

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

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

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Replicate No.	Test Completion Date: 10/18/2021 Control	TIWC
1	25	11
2	21	2
3	31	9
4	25	5
5	20	9
6	20	4
7	14	
8	20	14
9	26	5
10	12	11
11		
12		
13		
14		
15		
Mean	21.400	7.778
Std Dev.	5.661	3.962
# Replicates	10	9
T-Test Result	-4.3927	
Deg. of Freedom	16	
Critical T Value	0.8647	
Pass or Fail	**FAIL**	

Replicate No.	Test Completion Date: 12/7/2021 Control	TIWC
1	19	18
2	21	6
3	22	18
4	18	17
5	26	10
6	0	9
7	15	21
8	20	13
9	20	21
10	20	25
11		
12		
13		
14		
15		
Mean	18.100	15.800
Std Dev.	6.951	6.088
# Replicates	10	10
T-Test Result	0.8778	
Deg. of Freedom	17	
Critical T Value	0.8633	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 4/4/2022 Control	TIWC
1	23	27
2	22	33
3	25	35
4	31	24
5	21	33
6	26	27
7	16	33
8	25	32
9	25	34
10	29	28
11		
12		
13		
14		
15		
Mean	24.300	30.600
Std Dev.	4.191	3.748
# Replicates	10	10
T-Test Result	8.0004	
Deg. of Freedom	17	
Critical T Value	0.8633	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 7/4/2022 Control	TIWC
1	21	25
2	21	10
3	22	15
4	27	25
5	19	19
6	26	29
7	22	23
8	26	24
9	26	27
10	26	20
11		
12		
13		
14		
15		
Mean	23.600	21.700
Std Dev.	2.875	5.794
# Replicates	10	10
T-Test Result	2.0461	
Deg. of Freedom	13	
Critical T Value	0.8702	
Pass or Fail	**PASS**	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date 6/30/2020

Replicate No.	Control	TIWC
1	0.7	0.7
2	1	0.9
3	1	1
4	1	0.8
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.850
Std Dev.	0.150	0.129
# Replicates	4	4

T-Test Result	4.1571
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date 10/19/2021

Replicate No.	Control	TIWC
1	1	0.9
2	1	0.9
3	0.8	0.5
4	0.8	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.825
Std Dev.	0.115	0.222
# Replicates	4	4

T-Test Result	2.6643
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date 4/5/2022

Replicate No.	Control	TIWC
1	1	0.7
2	0.9	0.7
3	0.8	0.6
4	1	0.4
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.600
Std Dev.	0.096	0.141
# Replicates	4	4

T-Test Result	3.8617
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date 7/5/2022

Replicate No.	Control	TIWC
1	1	0.9
2	1	0.9
3	1	0.6
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.850
Std Dev.	0.000	0.173
# Replicates	4	4

T-Test Result	3.2856
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Replicate No.	Test Completion Date: 6/30/2020 Control	TIWC
1	0.303	0.309
2	0.377	0.319
3	0.366	0.385
4	0.332	0.255
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.350	0.317
Std Dev.	0.040	0.053
# Replicates	4	4
T-Test Result	1.7853	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 10/19/2021 Control	TIWC
1	0.298	0.298
2	0.301	0.287
3	0.266	0.212
4	0.292	0.289
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.289	0.271
Std Dev.	0.016	0.040
# Replicates	4	4
T-Test Result	2.6186	
Deg. of Freedom	4	
Critical T Value	0.7407	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 4/5/2022 Control	TIWC
1	0.445	0.376
2	0.37	0.318
3	0.361	0.427
4	0.428	0.418
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.401	0.385
Std Dev.	0.042	0.060
# Replicates	4	4
T-Test Result	2.8585	
Deg. of Freedom	5	
Critical T Value	0.7267	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date: 7/5/2022 Control	TIWC
1	0.331	0.357
2	0.356	0.317
3	0.339	0.25
4	0.385	0.37
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.353	0.324
Std Dev.	0.024	0.054
# Replicates	4	4
T-Test Result	2.0738	
Deg. of Freedom	4	
Critical T Value	0.7407	
Pass or Fail	**PASS**	

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: ____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	09/19/22-0830	001	0.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	09/21/22-0830	001	2.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	09/23/22-0830	001	3.6°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **09/20/22-1200** Date/Time of Test Termination: **09/27/22-1255**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **93%**

Age of Organisms at Start of Tests: **12-20 hrs**

Number of Replicates: **10** Number of Organisms per Replicate: **1**

Source of Organisms: **EnviroScience** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **09/24/22** Conductivity: **295** µmhos/cm

pH: **7.5** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: **90%** Survival:

Percent that produced 3 broods (if applicable): **90 %** Mean Dry Weight of Survivors (if applicable):

Young per Surviving Female (if applicable): **21.2**

REFERENCE TOXICITY TESTS

Date of most recent test: **09/13/22** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☒ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		10/05/22	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☐ *Ceriodaphnia dubia* ☒ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	09/19/22-0830	001	0.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	09/21/22-0830	001	2.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	09/23/22-0830	001	3.6°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **09/20/22-1230** Date/Time of Test Termination: **09/27/22-1250**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **100%**

Age of Organisms at Start of Tests: **<24hrs**

Number of Replicates: **4** Number of Organisms per Replicate: **10**

Source of Organisms: **ES** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **09/24/22** Conductivity: **182** µmhos/cm

pH: **7.6** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: Survival: **100%**

Percent that produced 3 broods (if applicable): % Mean Dry Weight of Survivors (if applicable): **0.400**

Young per Surviving Female (if applicable):

REFERENCE TOXICITY TESTS

Date of most recent test: **09/13/22** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☒ Pass ☐ Fail Reproduction: ☐ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		10/05/22	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date 12/7/2021

Replicate No.	Control	TIWC
1	1	1
2	1	0
3	1	1
4	1	1
5	1	0
6	0	0
7	1	1
8	1	0
9	1	1
10	1	1
11		
12		
13		
14		
15		
Mean	0.900	0.600
Std Dev.	0.316	0.516
# Replicates	10	10

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

Test Completion Date 4/4/2022

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

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

Test Completion Date 7/4/2022

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

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

Test Completion Date 9/27/2022

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

T-Test Result 4.3333
Deg. of Freedom 9
Critical T Value 0.8834
Pass or Fail **PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date: 12/7/2021

Replicate No.	Control	TIWC
1	19	18
2	21	6
3	22	18
4	18	17
5	26	10
6	0	9
7	15	21
8	20	13
9	20	21
10	20	25
11		
12		
13		
14		
15		
Mean	18.100	15.800
Std Dev.	6.951	8.088
# Replicates	10	10
T-Test Result	0.9778	
Deg. of Freedom	17	
Critical T Value	0.8633	
Pass or Fail	**PASS**	

Test Completion Date: 4/4/2022

Replicate No.	Control	TIWC
1	23	27
2	22	33
3	25	35
4	31	24
5	21	33
6	26	27
7	16	33
8	25	32
9	25	34
10	29	28
11		
12		
13		
14		
15		
Mean	24.300	30.600
Std Dev.	4.191	3.748
# Replicates	10	10
T-Test Result	6.0004	
Deg. of Freedom	17	
Critical T Value	0.8633	
Pass or Fail	**PASS**	

Test Completion Date: 7/4/2022

Replicate No.	Control	TIWC
1	21	25
2	21	10
3	22	15
4	27	25
5	19	19
6	26	29
7	22	23
8	26	24
9	26	27
10	26	20
11		
12		
13		
14		
15		
Mean	23.600	21.700
Std Dev.	2.875	5.794
# Replicates	10	10
T-Test Result	2.0461	
Deg. of Freedom	13	
Critical T Value	0.8702	
Pass or Fail	**PASS**	

Test Completion Date: 9/27/2022

Replicate No.	Control	TIWC
1	16	25
2	27	24
3	22	23
4	4	25
5	21	21
6	23	20
7	23	18
8	21	27
9	34	30
10	21	18
11		
12		
13		
14		
15		
Mean	21.200	23.100
Std Dev.	7.657	3.900
# Replicates	10	10
T-Test Result	3.2800	
Deg. of Freedom	17	
Critical T Value	0.8633	
Pass or Fail	**PASS**	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 10/19/2021

Replicate No.	Control	TIWC
1	1	0.9
2	1	0.9
3	0.8	0.5
4	0.8	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.900	0.825
Std Dev.	0.115	0.222
# Replicates	4	4

T-Test Result	2.6643
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 4/5/2022

Replicate No.	Control	TIWC
1	1	0.7
2	0.9	0.7
3	0.8	0.6
4	1	0.4
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.600
Std Dev.	0.096	0.141
# Replicates	4	4

T-Test Result	0.6617
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 7/5/2022

Replicate No.	Control	TIWC
1	1	0.9
2	1	0.9
3	1	0.6
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.850
Std Dev.	0.000	0.173
# Replicates	4	4

T-Test Result	3.2856
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 9/27/2022

Replicate No.	Control	TIWC
1	1	0.9
2	1	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.975
Std Dev.	0.000	0.050
# Replicates	4	4

T-Test Result	17.8623
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date: 10/19/2021

Replicate No.	Control	TIWC
1	0.298	0.296
2	0.301	0.287
3	0.286	0.212
4	0.292	0.289
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.289	0.271
Std Dev.	0.016	0.040
# Replicates	4	4

T-Test Result	2.6186
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 4/5/2022

Replicate No.	Control	TIWC
1	0.445	0.376
2	0.37	0.318
3	0.361	0.427
4	0.428	0.418
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.401	0.385
Std Dev.	0.042	0.050
# Replicates	4	4

T-Test Result	2.8585
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 7/5/2022

Replicate No.	Control	TIWC
1	0.331	0.357
2	0.356	0.317
3	0.339	0.25
4	0.365	0.37
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.353	0.324
Std Dev.	0.024	0.054
# Replicates	4	4

T-Test Result	2.0738
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 9/27/2022

Replicate No.	Control	TIWC
1	0.395	0.365
2	0.409	0.409
3	0.402	0.439
4	0.393	0.43
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.400	0.416
Std Dev.	0.007	0.024
# Replicates	4	4

T-Test Result	9.4037
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: ____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	12/19/22-0830	001	1.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	12/21/22-0830	001	0.6°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	12/23/22-0830	001	1.2°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **12/20/22-0930**
Date/Time of Test Termination: **12/26/22-0955**
☒ Renewal Test ☐ Non-Renewal Test
Frequency of Renewals: **daily**
Dilution Series: **23, 47, 93, 97, 100**
Target Instream Waste Concentration (TIWC): **93%**
Age of Organisms at Start of Tests: **13.5-17.5 hrs**
Number of Replicates: **10**
Number of Organisms per Replicate: **1**
Source of Organisms: **EnviroScience**
Feeding Regimen: **none**
Light Intensity: **50-100fc**
Photoperiod: **16/8 light/dark**
Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)
DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)
Were the test chambers aerated? ☐ Yes ☒ No Rate:
pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)
Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No
Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **12/21/22**
Conductivity: **307** µmhos/cm
pH: **7.4**
TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia
Survival: **100%**
Percent that produced 3 broods (if applicable): **100 %**
Young per Surviving Female (if applicable): **28.4**

Pimephales promelas
Survival:
Mean Dry Weight of Survivors (if applicable):

REFERENCE TOXICITY TESTS

Date of most recent test: **12/20/22**
Same conditions as test? ☒ Yes ☐ No
Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:
Survival: ☒ Pass ☐ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☒ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		01/06/23	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

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Cover Sheet

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☐ *Ceriodaphnia dubia* ☒ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	12/19/22-0830	001	1.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	12/21/22-0830	001	0.6°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	12/23/22-0830	001	1.2°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **12/20/22-0950** Date/Time of Test Termination: **12/27/22-0915**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **100%**

Age of Organisms at Start of Tests: **<24hrs**

Number of Replicates: **4** Number of Organisms per Replicate: **10**

Source of Organisms: **ES** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **12/23/22** Conductivity: **178 µmhos/cm**

pH: **7.3** TRC: **<0.02 mg/L**

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: Survival: **100%**

Percent that produced 3 broods (if applicable): % Mean Dry Weight of Survivors (if applicable): **0.400**

Young per Surviving Female (if applicable):

REFERENCE TOXICITY TESTS

Date of most recent test: **12/20/22** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☒ Pass ☐ Fail Reproduction: ☐ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		01/06/23	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date 4/5/2022

Replicate No.	Control	TIWC
1	1	0.7
2	0.9	0.7
3	0.8	0.6
4	1	0.4
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.600
Std Dev.	0.096	0.141
# Replicates	4	4

T-Test Result	0.8617
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date 7/5/2022

Replicate No.	Control	TIWC
1	1	0.9
2	1	0.9
3	1	0.6
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.850
Std Dev.	0.000	0.173
# Replicates	4	4

T-Test Result	3.2856
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date 9/27/2022

Replicate No.	Control	TIWC
1	1	0.9
2	1	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.975
Std Dev.	0.000	0.050
# Replicates	4	4

T-Test Result	17.8623
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date 12/27/2022

Replicate No.	Control	TIWC
1	1	0.6
2	1	1
3	1	0.9
4	1	0.9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.850
Std Dev.	0.000	0.173
# Replicates	4	4

T-Test Result	3.2856
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Replicate No.	Test Completion Date 4/4/2022 Control	TIWC
1	23	27
2	22	33
3	25	35
4	31	24
5	21	33
6	26	27
7	16	33
8	25	32
9	25	34
10	29	28
11		
12		
13		
14		
15		
Mean	24.300	30.600
Std Dev.	4.191	3.748
# Replicates	10	10

T-Test Result	8.0004
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	**PASS**

Replicate No.	Test Completion Date 7/4/2022 Control	TIWC
1	21	25
2	21	10
3	22	15
4	27	25
5	19	19
6	26	29
7	22	23
8	26	24
9	26	27
10	26	20
11		
12		
13		
14		
15		
Mean	23.600	21.700
Std Dev.	2.875	5.794
# Replicates	10	10

T-Test Result	2.0461
Deg. of Freedom	13
Critical T Value	0.8702
Pass or Fail	**PASS**

Replicate No.	Test Completion Date 9/27/2022 Control	TIWC
1	16	25
2	27	24
3	22	23
4	4	25
5	21	21
6	23	20
7	23	18
8	21	27
9	34	30
10	21	18
11		
12		
13		
14		
15		
Mean	21.200	23.100
Std Dev.	7.657	3.900
# Replicates	10	10

T-Test Result	3.2800
Deg. of Freedom	17
Critical T Value	0.8633
Pass or Fail	**PASS**

Replicate No.	Test Completion Date 12/26/2022 Control	TIWC
1	27	20
2	31	5
3	24	31
4	27	27
5	30	27
6	30	32
7	29	32
8	31	31
9	31	26
10	24	22
11		
12		
13		
14		
15		
Mean	28.400	25.300
Std Dev.	2.757	8.247
# Replicates	10	10

T-Test Result	1.4378
Deg. of Freedom	12
Critical T Value	0.8726
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date: 4/5/2022

Replicate No.	Control	TIWC
1	1	0.7
2	0.9	0.7
3	0.8	0.6
4	1	0.4
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.925	0.600
Std Dev.	0.096	0.141
# Replicates	4	4

T-Test Result	0.8617
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 7/5/2022

Replicate No.	Control	TIWC
1	1	0.9
2	1	0.9
3	1	0.6
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.850
Std Dev.	0.000	0.173
# Replicates	4	4

T-Test Result	3.2856
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 9/27/2022

Replicate No.	Control	TIWC
1	1	0.9
2	1	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.975
Std Dev.	0.000	0.050
# Replicates	4	4

T-Test Result	17.8623
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 12/27/2022

Replicate No.	Control	TIWC
1	1	0.6
2	1	1
3	1	0.9
4	1	0.9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.850
Std Dev.	0.000	0.173
# Replicates	4	4

T-Test Result	3.2856
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name
West Mifflin SA-New England

Permit No.
PA0026522

Test Completion Date: 4/5/2022

Replicate No.	Control	TIWC
1	0.445	0.376
2	0.37	0.318
3	0.361	0.427
4	0.428	0.418
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.401	0.385
Std Dev.	0.042	0.060
# Replicates	4	4

T-Test Result	2.6585
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 7/5/2022

Replicate No.	Control	TIWC
1	0.331	0.357
2	0.356	0.317
3	0.339	0.25
4	0.385	0.37
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.353	0.324
Std Dev.	0.024	0.054
# Replicates	4	4

T-Test Result	2.0738
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 9/27/2022

Replicate No.	Control	TIWC
1	0.396	0.386
2	0.409	0.409
3	0.402	0.439
4	0.393	0.43
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.400	0.416
Std Dev.	0.007	0.024
# Replicates	4	4

T-Test Result	9.4037
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 12/27/2022

Replicate No.	Control	TIWC
1	0.489	0.353
2	0.575	0.51
3	0.468	0.43
4	0.583	0.435
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.529	0.432
Std Dev.	0.059	0.064
# Replicates	4	4

T-Test Result	0.9109
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

3800-FM-BPNPSM0485 Rev. 10/2013
Cover Sheet

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☒ *Ceriodaphnia dubia* ☐ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	11/06/23-0830	001	0.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	11/08/23-0830	001	1.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	11/10/23-0830	001	2.2°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **11/07/23-1045** Date/Time of Test Termination: **11/14/23-0955**

☒ Renewal Test ☐ Non-Renewal Test Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100** Target Instream Waste Concentration (TIWC): **93%**

Age of Organisms at Start of Tests: **10.75-18.75 hrs**

Number of Replicates: **10** Number of Organisms per Replicate: **1**

Source of Organisms: **EnviroScience** Feeding Regimen: **none**

Light Intensity: **50-100fc** Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)

DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were the test chambers aerated? ☐ Yes ☒ No Rate:

pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **11/10/23** Conductivity: **282** µmhos/cm

pH: **7.3** TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia ***Pimephales promelas***

Survival: **90%** Survival:

Percent that produced 3 broods (if applicable): **90 %** Mean Dry Weight of Survivors (if applicable):

Young per Surviving Female (if applicable): **21.8**

REFERENCE TOXICITY TESTS

Date of most recent test: **10/03/23** Same conditions as test? ☒ Yes ☐ No

Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:

Survival: ☒ Pass ☐ Fail Growth: ☐ Pass ☐ Fail Reproduction: ☒ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		11/22/23	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

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Cover Sheet

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF POINT AND NON-POINT SOURCE MANAGEMENT

WHOLE EFFLUENT TOXICITY (WET) TEST SUMMARY REPORT
COVER SHEET

NPDES Permit Number: **PA0026522** Facility Name: **West Mifflin Sanitary Authority**

Species Tested: ☐ *Ceriodaphnia dubia* ☒ *Pimephales promelas* Test Type: ☒ Chronic ☐ Acute

Re-Test? ☐ Yes ☒ No (If Yes, indicate the date of original test completion: _____)

SAMPLE INFORMATION

	Date/Time	Sample Source	Temperature	Holding Time	Chlorine	Dechlorinated?
1.	11/06/23-0830	001	0.8°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
2.	11/08/23-0830	001	1.0°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No
3.	11/10/23-0830	001	2.2°C	<36hrs	<0.02 mg/L	☐ Yes ☒ No

TEST CONDITIONS

Date/Time of Test Initiation: **11/07/23-1130**
Date/Time of Test Termination: **11/14/23-1030**

☒ Renewal Test ☐ Non-Renewal Test
Frequency of Renewals: **daily**

Dilution Series: **23, 47, 93, 97, 100**
Target Instream Waste Concentration (TIWC): **100%**

Age of Organisms at Start of Tests: **<24hrs**

Number of Replicates: **4**
Number of Organisms per Replicate: **10**

Source of Organisms: **ABS**
Feeding Regimen: **none**

Light Intensity: **50-100fc**
Photoperiod: **16/8 light/dark**

Temperature measurements made at least once per 24-hour period? ☒ Yes ☐ No (attach log sheet)
DO measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)
Were the test chambers aerated? ☐ Yes ☒ No Rate:
pH measured daily in at least one replicate of each concentration? ☒ Yes ☐ No (attach log sheet)
Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No
Were there any modifications to or deviations from EPA methods (if Yes, explain on separate sheet)? ☐ Yes ☒ No

DILUTION / REAGENT WATER

Date of Last Test for Chemistry: **11/11/23**
Conductivity: **171** µmhos/cm

pH: **7.5**
TRC: **<0.02** mg/L

CONTROL RESULTS

Ceriodaphnia dubia
Survival:
Percent that produced 3 broods (if applicable): %
Young per Surviving Female (if applicable):

Pimephales promelas
Survival: **98%**
Mean Dry Weight of Survivors (if applicable): **0.252**

REFERENCE TOXICITY TESTS

Date of most recent test: **10/03/23**
Same conditions as test? ☒ Yes ☐ No
Were test acceptability criteria in the EPA method met? ☒ Yes ☐ No

TEST RESULTS

Control compared to: ☒ TIWC Dilution ☐ Other:
Survival: ☒ Pass ☐ Fail Growth: ☒ Pass ☐ Fail Reproduction: ☐ Pass ☐ Fail

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of the individuals personally responsible for obtaining the information, I believe the attached information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine or imprisonment as provided by 18 Pa. C.S. §4904.

Alexandria M. Tite		11/22/23	68-01628
Name of Laboratory Manager	Signature of Laboratory Manager	Date	DEP Lab ID No.

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 7/4/2022

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

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

Test Completion Date: 9/27/2022

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

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

Test Completion Date: 12/26/2022

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

T-Test Result: 1.5000
Deg. of Freedom: 9
Critical T Value: 0.8834
Pass or Fail: **PASS**

Test Completion Date: 12/26/2022

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

T-Test Result: 4.3333
Deg. of Freedom: 9
Critical T Value: 0.8834
Pass or Fail: **PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Replicate No.	Test Completion Date 7/4/2022 Control	TIWC
1	21	25
2	21	10
3	22	15
4	27	25
5	19	19
6	26	29
7	22	23
8	26	24
9	26	27
10	26	20
11		
12		
13		
14		
15		
Mean	23.600	21.700
Std Dev.	2.875	5.794
# Replicates	10	10
T-Test Result	2.0461	
Deg. of Freedom	13	
Critical T Value	0.8702	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date 9/27/2022 Control	TIWC
1	16	25
2	27	24
3	22	23
4	4	25
5	21	21
6	23	20
7	23	18
8	21	27
9	34	30
10	21	18
11		
12		
13		
14		
15		
Mean	21.200	23.100
Std Dev.	7.667	3.900
# Replicates	10	10
T-Test Result	3.2600	
Deg. of Freedom	17	
Critical T Value	0.6633	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date 12/26/2022 Control	TIWC
1	27	20
2	31	5
3	24	31
4	27	27
5	30	27
6	30	32
7	29	32
8	31	31
9	31	26
10	24	22
11		
12		
13		
14		
15		
Mean	28.400	25.300
Std Dev.	2.757	8.247
# Replicates	10	10
T-Test Result	1.4878	
Deg. of Freedom	12	
Critical T Value	0.8726	
Pass or Fail	**PASS**	

Replicate No.	Test Completion Date 11/14/2023 Control	TIWC
1	28	33
2	22	26
3	25	27
4	27	35
5	0	27
6	27	26
7	21	28
8	28	24
9	19	27
10	23	33
11		
12		
13		
14		
15		
Mean	21.800	28.600
Std Dev.	8.203	3.688
# Replicates	10	10
T-Test Result	5.4006	
Deg. of Freedom	17	
Critical T Value	0.6633	
Pass or Fail	**PASS**	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 7/5/2022

Replicate No.	Control	TIWC
1	1	0.9
2	1	0.9
3	1	0.8
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.850
Std Dev.	0.000	0.173
# Replicates	4	4
T-Test Result	3.2856	
Deg. of Freedom	3	
Critical T Value	0.7649	
Pass or Fail	**PASS**	

Test Completion Date: 9/27/2022

Replicate No.	Control	TIWC
1	1	0.9
2	1	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.975
Std Dev.	0.000	0.050
# Replicates	4	4
T-Test Result	17.8623	
Deg. of Freedom	3	
Critical T Value	0.7649	
Pass or Fail	**PASS**	

Test Completion Date: 12/27/2022

Replicate No.	Control	TIWC
1	1	0.8
2	1	1
3	1	0.9
4	1	0.9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	0.850
Std Dev.	0.000	0.173
# Replicates	4	4
T-Test Result	3.2856	
Deg. of Freedom	3	
Critical T Value	0.7649	
Pass or Fail	**PASS**	

Test Completion Date: 11/14/2023

Replicate No.	Control	TIWC
1	1	1
2	0.9	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.975	1.000
Std Dev.	0.050	0.000
# Replicates	4	4
T-Test Result	26.1497	
Deg. of Freedom	3	
Critical T Value	0.7649	
Pass or Fail	**PASS**	

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

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

Facility Name: West Mifflin SA-New England

Permit No.: PA0026522

Test Completion Date: 7/5/2022

Replicate No.	Control	TIWC
1	0.331	0.357
2	0.358	0.317
3	0.339	0.25
4	0.385	0.37
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.353	0.324
Std Dev.	0.024	0.054
# Replicates	4	4

T-Test Result	2.0738
Deg. of Freedom	4
Critical T Value	0.7407
Pass or Fail	**PASS**

Test Completion Date: 9/27/2022

Replicate No.	Control	TIWC
1	0.395	0.385
2	0.409	0.409
3	0.402	0.439
4	0.393	0.43
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.400	0.416
Std Dev.	0.007	0.024
# Replicates	4	4

T-Test Result	9.4037
Deg. of Freedom	3
Critical T Value	0.7649
Pass or Fail	**PASS**

Test Completion Date: 12/27/2022

Replicate No.	Control	TIWC
1	0.489	0.353
2	0.575	0.51
3	0.468	0.43
4	0.583	0.435
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.529	0.432
Std Dev.	0.059	0.064
# Replicates	4	4

T-Test Result	0.9109
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Test Completion Date: 11/14/2023

Replicate No.	Control	TIWC
1	0.249	0.279
2	0.24	0.26
3	0.241	0.228
4	0.277	0.233
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.252	0.250
Std Dev.	0.017	0.024
# Replicates	4	4

T-Test Result	4.4991
Deg. of Freedom	5
Critical T Value	0.7267
Pass or Fail	**PASS**

Attachment 6
Unnamed Tributary 39422 to the Monongahela River Watershed TMDL Endpoint

TMDL Endpoints

One of the major components of a TMDL is the establishment of an instream numeric endpoint, which is used to evaluate the attainment of applicable water quality. An instream numeric endpoint, therefore, represents the water quality goal that is to be achieved by implementing the load reductions specified in the TMDL. The endpoint allows for a comparison between observed instream conditions and conditions that are expected to restore designated uses. The endpoint is based on either the narrative or numeric criteria available in water quality standards.

Because all of the pollution sources in the watershed are nonpoint sources, the TMDLs component makeup will be load allocations (LAs). All allocations will be specified as long-term average daily concentrations. These long-term average concentrations are expected to meet water-quality criteria 99% of the time as required in PA Title 25 § 96.3(c). The following table shows the applicable water-quality criteria for the selected parameters. Total manganese, while a metal associated with abandoned mine drainage, is not included in this TMDL analysis. The critical use for which the total manganese criterion is protective in PA Code 25 § 93.7 is potable water supply; there is no aquatic life use total manganese criteria. The unnamed tributary to the Monongahela River has had the potable water supply use deleted under PA Code 25 § 93.9v. Because the only use for which there is a criterion has been deleted from the waterbody, TMDLs

are not necessary to ensure that the use, via conformation with the water quality criterion, is being met.

Table 2. Applicable Water Quality Criteria

Parameter	*Criterion Value (mg/l)*	*Total Recoverable/Dissolved*
Aluminum (Al)	0.75	Total Recoverable
Iron (Fe)	1.50	30 day average; Total Recoverable
pH *	6.0-9.0	N/A

*The pH values shown will be used when applicable. In the case of freestone streams with little or no buffering capacity, the TMDL endpoint for pH will be the natural background water quality.

Attachment 7
Group 1 TQLs

3800-PM-BCW0009a Rev. 3/2024
Permit Application Instructions

ATTACHMENT B
TARGET QUANTITATION LIMITS (QLs) FOR EFFLUENT ANALYSIS OF POLLUTANT GROUPS

Group 1 Pollutants	Target QL Value	Units
Flow (MGD)	-	
BOD5 or CBOD5 (mg/L)	3.0	mg/L
Fecal Coliform (No./100 mL)	-	
Total Suspended Solids (TSS) (mg/L)	2.0	mg/L
Total Residual Chlorine (TRC) (mg/L)	0.02	mg/L
pH (S.U.)	-	
Temperature (°F)	-	
Dissolved Oxygen (mg/L)	-	
Total Phosphorus (mg/L)	0.01	mg/L
Ammonia-Nitrogen (mg/L)	0.02	mg/L
Total Kjeldahl Nitrogen (TKN) (mg/L)	1.0	mg/L
Nitrite as N (mg/L)	0.01	mg/L
Nitrate as N (mg/L)	0.04	mg/L
Total Dissolved Solids (TDS) (mg/L)	2.0	mg/L
Chloride (mg/l)	0.5	mg/L
Bromide (mg/l)	0.2	mg/L
Sulfate (mg/l)	1.0	mg/L
Oil and Grease (mg/L)	5.0	mg/L
Total Hardness (CaCO3) (mg/L)	0.11	mg/L
Perfluorooctanoic acid (PFOA) (ng/L)	4.0	ng/L
Perfluorooctanesulfonic acid (PFOS) (ng/L)	3.7	ng/L
Perfluorobutanesulfonic acid (PFBS) (ng/L)	3.5	ng/L
Hexafluoropropylene oxide dimer acid (HFPO-DA) (ng/L)	6.4	ng/L

Group 2 Pollutants	Target QL Value	Units
Aluminum, Total (µg/L)	10	µg/L
Antimony, Total (µg/L)	2.0	µg/L
Arsenic, Total (µg/L)	3.0	µg/L
Barium, Total (µg/L)	2.0	µg/L
Beryllium, Total (µg/L)	1.0	µg/L
Boron, Total (µg/L)	200	µg/L
Cadmium, Total (µg/L)	0.2	µg/L
Chromium, Total (µg/L)	4.0	µg/L
Chromium, Hexavalent (µg/L)	1.0	µg/L
Cobalt, Total (µg/L)	1.0	µg/L
Copper, Total (µg/L)	4.0	µg/L
Cyanide, Free (µg/L)	1.0	µg/L
Cyanide, Total (µg/L)	10	µg/L
Iron, Total (µg/L)	20	µg/L
Iron, Dissolved (µg/L)	20	µg/L
Lead, Total (µg/L)	1.0	µg/L

ATTACHMENT C
ADDITIONAL SAMPLING AND ANALYTICAL TESTING GUIDANCE FOR NPDES PERMIT APPLICATIONS

DEP recommends that clean techniques be employed as appropriate in collecting, handling, storing, preparing, and analyzing samples. Clean techniques refer to methods that reduce contamination and enable the accurate and precise measurement of substances, and to related issues concerning detection limits, quality control, and quality assurance. Clean techniques are those requirements or practices for sample collection and handling necessary to produce reliable analytical data in the microgram per liter (µg/L) or part per billion range, or less.

SAMPLING:

1. Sample collection should be conducted or supervised by a person trained and experienced in performing wastewater sampling.

2. EPA's regulations 40 CFR 136, "Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act", specify the appropriate sample type and quantity requirements. Specific requirements for sample containers, sample preservation, holding times, sizes, etc. relevant to the applicable test methods must also be followed.

3. Each sampling event shall occur at the time representative of normal operation. Normal operation means having all processes which contribute wastewater in normal operation, and with a properly operating treatment facility (where treatment is being provided), which is not experiencing "upset" conditions.

4. Samples should be collected from the center of the flow channel where turbulence is at a maximum, where specified in the present permit, or at any discharge pipe or location adequate for the collection of a representative sample.

5. Sample Type:

   a. **Grab Samples** – Grab samples must be taken for pH, Temperature, Dissolved Oxygen, Cyanide (Total and Free), Total Phenols, Total Residual Chlorine, Oil and Grease, Fecal Coliform, PFOA, PFOS, PFBS, HFPO-DA, and Volatile Organics (Pollutant Group 3). A **sampling event** for these pollutants consists of one (1) grab sample and 1 analysis.

   b. **Composite Samples** – An automatic **24-hour composite sample** must be taken for each **sampling event. Exceptions** – a minimum of one (1) grab sample may be taken for effluents from holding ponds or other impoundments with a retention period of greater than 24 hours. DEP may also waive composite sampling for any outfall for which it is demonstrated that use of an automatic sampler is infeasible and that a composite sample derived from a minimum of eight (8) grab samples per sample event will be representative of the discharge.

6. Definitions:

   A **grab sample** is an individual sample of at least 100 mL collected at a randomly-selected representative time over a period not exceeding 15 minutes.

   A **composite sample** is a combination of individual samples (at least eight for a 24-hour period or four for an 8-hour period) of at least 100 milliliters (mL) each obtained at spaced time intervals during the compositing period. The composite must be flow-proportional; either the volume of each individual sample is proportional to discharge flow rates, or the sampling interval is proportional to the flow rates over the time period used to produce the composite. If the discharge rate is constant, a constant sample volume can be taken at constant time intervals between samples.

ANALYSIS:

Analytical methods promulgated in 40 CFR Part 136 must be used where applicable. If no method has been promulgated by EPA for a particular pollutant, use any suitable method for measuring the level of the pollutant provided that a description of the method or a reference to a published method is attached to the results. The description shall include the sample holding time, preservation technique, and quality control measures.