pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0002879**
Facility Type	**Industrial**	APS ID	**1075975**
Major / Minor	**Minor**	Authorization ID	**1418082**

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

Applicant and Facility Information

Applicant Name	**Union Electric Steel Corporation**	Facility Name	**Harmon Creek Plant**
Applicant Address	PO Box 465	Facility Address	31 Union Electric Road
	Carnegie, PA 15106-0465		Burgettstown, PA 15021-2121
Applicant Contact	Katlyn Pace	Facility Contact	Katlyn Pace
Applicant Phone	(412) 429-2471	Facility Phone	(412) 429-2471
Client ID	82967	Site ID	242338
SIC Code	3312	Municipality	Smith Township
SIC Description	Manufacturing - Blast Furnaces and Steel Mills	County	Washington
Date Application Received	November 17, 2022	EPA Waived?	Yes
Date Application Accepted		If No, Reason	

Purpose of Application: NPDES permit renewal

Summary of Review

The Department received an NPDES permit renewal application from Union Electric Steel Corporation on November 17, 2022 for coverage of its steel production facility in Smith Township in Washington County.

Union Electric Steel Corporation produces forged and cast rolls for the worldwide steel and aluminum industries as well as ingots and die-forged products for the oil and gas, aluminum and plastic extrusion industries.

The facility is a steel production where scrap steel is melted and pureed into ingots. The ingots are rough forged for subsequent finishing into rolls at other facilities. The Facility has an SIC Code of 3312 and North American Industry Classification System Code of 331221.

The facility discharges via three Outfalls to an Unnamed Tributary to Burgetts Fork, designated in the 25 PA Code Chapter 93 as a Warm Water Fishery (WWF). The Unnamed tributary to Burgetts Fork is impaired by metals (aluminum, iron and manganese) associated with abandoned mine drainage.

According to the information provided with the application, since the issue date of the current permit, the drainage areas of the facility have been modified. The Outfall 004 drainage area has been expanded and rerouted through a new series of catch basins. Areas previously included in the Outfall 002 drainage area now discharge to Outfall 004.

During the current permit cycle, Union Electric Steel Corporation violated its NPDES permit effluent limitations on 59 occasions.

Approve	Deny	Signatures	Date
X		Angela Rohrer / Environmental Engineering Specialist	September 21, 2023
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	September 22, 2023

Summary of Review

The facility was last inspected by Tim Smolar, on January 30, 2023 with three violations noted.

- Violations of effluent limits in Part A of the NPDES Permit [25 Pa. Code 92a.44]
- Failure to use approved analytical methods [25 Pa. Code 92a.41(a)(10)]
- Violation of Part C permit conditions [25 Pa. Code 92a.46]

The Inspection Report included the following requirements

- Within 30 days of receipt of this report, please prepare and submit a report to the Department containing the details of steps taken to address the violations noted, and conditions that contribute and/or may develop into additional violations. Please include in the report a description of any intended actions that have not yet been completed, along with an anticipated time frame for their completion.

- Follow up with reviewing engineer on any overdue items related to sampling for the renewal application or Permit Compliance Schedule.

In order to address the effluent limit violations, the Facility took the following actions:

- Ordered storm drain inlet filters which are rated for Aluminum removal.
- Seeded former slag management area just north of Outfall 004.

Photo 1. Former slag management area before seeding, facing Outfall 004.

Photo 2. Former slag management area 8 weeks after seeding, facing Outfall 004.

- Storage of the ladle bottoms and slag dust was moved from the area just north of Outfall 004 to the storage yard along the eastern part of the plant.
- Removed any sediment from storm drains leading to Outfall 002 and 003.
- The facility expects to install new storm drain filters in storm drains that direct stormwater to Outfalls 002 and 003. The filters will be installed by August 31, 2023.

It should be noted that the facility has not exceeded the effluent limitations during the second quarter of 2023.

The violations were resolved on April 28, 2023.

Summary of Review

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	002	Design Flow (MGD)	0.0
Latitude	40º 24' 21.30"	Longitude	-80º 24' 21.60"
Quad Name	Burgettstown	Quad Code	1502
Wastewater Description:	Stormwater runoff		
Receiving Waters	UNT of Burgetts Fork	Stream Code	33847
NHD Com ID	99689388	RMI	1.71
Drainage Area	0.75	Yield (cfs/mi^2)	0.00756
Q_{7-10} Flow (cfs)	0.00567	Q_{7-10} Basis	USGS Streamstats
Elevation (ft)	1,045	Slope (ft/ft)	0.001
Watershed No.	20-D	Chapter 93 Class.	WWF
Assessment Status	Impaired		
Cause(s) of Impairment	Metals		
Source(s) of Impairment	Acid mine drainage		
TMDL Status	Final	Name	Raccoon Creek Watershed
Nearest Downstream Public Water Supply Intake	Midland Borough Municipal Water Authority (8.65 MGD)		
PWS Waters	Ohio River	Flow at Intake (cfs)	5,700
PWS RMI	36.0	Distance from Outfall (mi)	46.6

Other Comments:

This Outfall receives stormwater runoff from stormwater inlets and roof drains located around the eastern side of the manufacturing building.

During the current permit cycle, Union Electric Steel Corporation has violated its NPDES permit effluent limitations at Outfall 002 on 31 occasions. See Table 1.

Table 1. DMR data for Outfall 002

MONITORING END DATE	PARAMETER	SAMPLE VALUE	PERMIT VALUE	STATISTICAL BASE CODE
1/31/2023	Aluminum, Total	0.89	0.75	Average Monthly
1/31/2023	Aluminum, Total	1.25	0.75	Daily Maximum
10/31/2022	Aluminum, Total	0.79	0.75	Average Monthly
10/31/2022	Aluminum, Total	1.37	0.75	Daily Maximum
9/30/2022	Aluminum, Total	1.03	0.75	Daily Maximum
6/30/2022	Aluminum, Total	1.2	0.75	Average Monthly
6/30/2022	Aluminum, Total	2.12	0.75	Daily Maximum
4/30/2022	Aluminum, Total	0.85	0.75	Daily Maximum
3/31/2022	Aluminum, Total	2.13	0.75	Average Monthly
3/31/2022	Aluminum, Total	2.87	0.75	Daily Maximum
2/28/2022	Aluminum, Total	1.21	0.75	Average Monthly
2/28/2022	Aluminum, Total	2.21	0.75	Daily Maximum
12/31/2021	Aluminum, Total	0.76	0.75	Average Monthly
12/31/2021	Aluminum, Total	1.31	0.75	Daily Maximum
10/31/2021	Aluminum, Total	0.88	0.75	Average Monthly

MONITORING END DATE	PARAMETER	SAMPLE VALUE	PERMIT VALUE	STATISTICAL BASE CODE
10/31/2021	Aluminum, Total	1.55	0.75	Daily Maximum
9/30/2021	Aluminum, Total	1.45	0.75	Average Monthly
9/30/2021	Aluminum, Total	2.41	0.75	Daily Maximum
8/31/2021	Aluminum, Total	1.54	0.75	Average Monthly
8/31/2021	Aluminum, Total	2.87	0.75	Daily Maximum
7/31/2021	Aluminum, Total	0.78	0.75	Average Monthly
7/31/2021	Aluminum, Total	1.21	0.75	Daily Maximum
5/31/2021	Aluminum, Total	0.91	0.75	Daily Maximum
3/31/2021	Aluminum, Total	3.42	0.75	Average Monthly
3/31/2021	Aluminum, Total	3.42	0.75	Daily Maximum
2/28/2021	Aluminum, Total	3.98	0.75	Average Monthly
2/28/2021	Aluminum, Total	3.98	0.75	Daily Maximum
4/30/2020	Aluminum, Total	1.1	0.75	Average Monthly
4/30/2020	Aluminum, Total	1.14	0.75	Daily Maximum
9/30/2019	Total Suspended Solids	141	100	Daily Maximum
3/31/2019	Total Suspended Solids	172	100	Daily Maximum

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	0.0
Latitude	40º 24' 30.4"	Longitude	-80º 24' 26.9"
Quad Name	Burgettstown	Quad Code	1502
Wastewater Description:	Groundwater and Stormwater runoff		
Receiving Waters	UNT to Burgetts Fork	Stream Code	33847
NHD Com ID	99689388	RMI	1.90
Drainage Area	0.75	Yield (cfs/mi^2)	0.00756
Q_{7-10} Flow (cfs)	0.00567	Q_{7-10} Basis	USGS Streamstats
Elevation (ft)	1,045	Slope (ft/ft)	0.0001
Watershed No.	20-D	Chapter 93 Class.	WWF
Assessment Status	Impaired		
Cause(s) of Impairment	Metals		
Source(s) of Impairment	Acid mine drainage		
TMDL Status	Final	Name	Raccoon Creek Watershed
Nearest Downstream Public Water Supply Intake	Midland Borough Municipal Water Authority (8.65 MGD)		
PWS Waters	Ohio River	Flow at Intake (cfs)	5,700
PWS RMI	36.0	Distance from Outfall (mi)	46.80

Other Comments:

Groundwater from area surrounding the Electric Arc Furnace and stormwater runoff from the western side of the manufacturing building.

During the current permit cycle, Union Electric Steel Corporation has violated its NPDES permit effluent limitations at Outfall 003 on 12 occasions.

Table 2. DMR data for Outfall 003

MONITORING END DATE	PARAMETER	SAMPLE VALUE (mg/L)	PERMIT VALUE (mg/L)	STATISTICAL BASE CODE
2/28/2023	Aluminum, Total	0.77	0.75	Daily Maximum
1/31/2023	Aluminum, Total	1.18	0.75	Daily Maximum
7/31/2022	Aluminum, Total	0.98	0.75	Daily Maximum
3/31/2022	Aluminum, Total	1.22	0.75	Daily Maximum
12/31/2021	Aluminum, Total	0.79	0.75	Daily Maximum
10/31/2021	Aluminum, Total	1.05	0.75	Daily Maximum
7/31/2021	Aluminum, Total	0.86	0.75	Daily Maximum
5/31/2021	Aluminum, Total	0.76	0.75	Daily Maximum
3/31/2021	Aluminum, Total	1.1	0.75	Daily Maximum
2/28/2021	Aluminum, Total	2.54	0.75	Daily Maximum
4/30/2020	Aluminum, Total	0.97	0.75	Daily Maximum
4/30/2020	Manganese, Total	3.37	2	Daily Maximum

Discharge, Receiving Waters and Water Supply Information			
Internal Monitoring Point	103 - ELIMINATED	Design Flow (MGD)	0.0072
Latitude	40º 24' 30.4"	Longitude	-80º 24' 26.9"
Quad Name		Quad Code	
Wastewater Description:	Groundwater from the area surrounding the Electric Arc Furnace		

IMP 103 (discharge volume varies) discharges groundwater from an interceptor trench located beneath the electric arc furnace. Groundwater levels within the vicinity of the plant are shallow (2-3 feet below the ground surface). The EAF pit extends below the shallow groundwater. The groundwater is pumped out to reduce infiltration into the pit for safety reasons. The previous permit imposed monitoring requirements for flow, total residual chlorine, fluoride, bromide, sulfates, barium, total molybdenum, and pH due to pollutant concentrations which are not typical of uncontaminated groundwater.

The Toxics Management Spread Sheet was used to evaluate the reasonable potential for discharges to cause excursions above water quality standards and to determine WQBELs.

Discharges from IMP 103 are evaluated based on concentrations reported on the application; data from those sources are entered into the Toxics Management Spread Sheet. The maximum reported value of the parameters from the application form is used as the input concentration in the Toxics Management Spread Sheet. All toxic pollutants whose maximum concentrations, as reported in the permit application, that are greater than the most stringent applicable water quality criterion are considered to be pollutants of concern.

The Toxics Management Spread Sheet is run with the discharge and receiving stream characteristics shown in Table 4. Effluent limitations are established in the draft permit where a pollutant's maximum reported discharge concentration equals or exceeds 50% of the WQBEL. For non-conservative pollutants, monitoring requirements are established where the maximum reported concentration is between 25% - 50% of the WQBEL. For conservative pollutants, monitoring requirements are established where the maximum reported concentration is between 10% - 50% of the WQBEL. The information described above including the maximum reported discharge concentrations, the most stringent water quality criteria, the pollutant-of-concern (reasonable potential) determinations, the calculated WQBELs, and the WQBEL/monitoring recommendations are displayed in the Toxics Management Spread Sheet in Attachment B of this Fact Sheet. The Toxics Management Spread Sheet did not recommend any WQBELs for IMP103. It is believed that at this time the pollutants in discussion are not pollutants of concern and will not contribute to the impairments listed for UNT to Burgetts Fork. Therefore, based on the Management Spread Sheet results, the monitoring requirements imposed in the previous permit will be removed.

Table 4: TMS Inputs for IMP 103

Parameter	**Value**
River Mile Index	1.9
Discharge Flow (MGD)	0.0072
Basin/Stream Characteristics	
Parameter	**Value**
Area in Square Miles	0.75
Q_{7-10} (cfs)	0.0271
Low-flow yield (cfs/mi^2)	0.0075
Elevation (ft)	1045
Slope	0.0001

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	0
Latitude	40º 24' 15.3"	Longitude	-80º 24' 15.6"
Quad Name	Burgettstown	Quad Code	1502
Wastewater Description:	Stormwater		
Receiving Waters	Unnamed Tributary to Burgetts Fork (WWF)	Stream Code	33847
NHD Com ID	99689388	RMI	1.56
Drainage Area	0.75	Yield (cfs/mi^2)	0.00756
Q_{7-10} Flow (cfs)	0.00567	Q_{7-10} Basis	USGS Streamstats
Elevation (ft)	1,045	Slope (ft/ft)	0.001
Watershed No.	20-D	Chapter 93 Class.	WWF
Assessment Status	Impaired		
Cause(s) of Impairment	Metals		
Source(s) of Impairment	Acid mine drainage		
TMDL Status	Final	Name	Raccoon Creek Watershed
Nearest Downstream Public Water Supply Intake	Midland Borough Municipal Water Authority (8.65 MGD)		
PWS Waters	Ohio River	Flow at Intake (cfs)	5,700
PWS RMI	36.0	Distance from Outfall (mi)	46.50

Other Comments:

The outfall receives stormwater runoff from the slag handling area, the former Outfall 005 drainage area, and from three stormwater inlets located near the northeastern corner of the manufacturing building.

During the current permit cycle, Union Electric Steel Corporation has violated its NPDES permit effluent limitations at Outfall 004 on 16 occasions.

Table 3. DMR data for Outfall 004

MONITORING END DATE	PARAMETER	SAMPLE VALUE (mg/L)	PERMIT VALUE (mg/L)	STATISTICAL BASE CODE
1/31/2023	Aluminum, Total	2.33	0.75	Daily Maximum
10/31/2022	Aluminum, Total	3.85	0.75	Daily Maximum
9/30/2022	Aluminum, Total	1.28	0.75	Daily Maximum
8/31/2022	Aluminum, Total	0.9	0.75	Daily Maximum
7/31/2022	Aluminum, Total	2.85	0.75	Daily Maximum
2/28/2022	Aluminum, Total	4.14	0.75	Daily Maximum
1/31/2022	Aluminum, Total	1.25	0.75	Daily Maximum
12/31/2021	Aluminum, Total	4.29	0.75	Daily Maximum
9/30/2021	Aluminum, Total	4.45	0.75	Daily Maximum
7/31/2021	Aluminum, Total	5.32	0.75	Daily Maximum
6/30/2021	Aluminum, Total	4.83	0.75	Daily Maximum
5/31/2021	Aluminum, Total	4.04	0.75	Daily Maximum
4/30/2021	Aluminum, Total	6.12	0.75	Daily Maximum

MONITORING END DATE	PARAMETER	SAMPLE VALUE (mg/L)	PERMIT VALUE (mg/L)	STATISTICAL BASE CODE
3/31/2021	Aluminum, Total	9.53	0.75	Daily Maximum
2/28/2021	Aluminum, Total	11.1	0.75	Daily Maximum
4/30/2020	Manganese, Total	2.4	2	Daily Maximum

Development of Effluent Limitations

Outfall No.	002	**Design Flow (MGD)**	0.0
Latitude	40º 24' 21.3"	**Longitude**	-80º 24' 21.6"
Wastewater Description:	Stormwater runoff		

Technology-Based Limitations

Outfall 002 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3312 (Steel Works, Blast Furnaces) and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B (Primary Metals). The reporting requirements applicable to stormwater discharges are shown in Table 6 below. Along with the monitoring requirements, sector specific BMPs included in Appendix B of the PAG-03 will also be included in Part C of the Draft Permit.

Table 6. PAG-03 Appendix (B) Monitoring Requirements

Parameters	Max Daily Concentration
Total Nitrogen (mg/L)	Monitor and report
Total Phosphorus (mg/L)	Monitor and report
Total Suspended Solids (TSS) (mg/L)	Monitor and report
Oil & Grease (mg/L)	Monitor and report
Total Aluminum (mg/L)	Monitor and report
Total Zinc (mg/L)	Monitor and report
Total Copper (mg/L)	Monitor and report
Total Iron (mg/L)	Monitor and report
Total Lead	Monitor and report

Water Quality-Based Effluent limitations:

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Harmon Creek Plant are composed of stormwater only, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Total Maximum Daily Load ("TMDL")

Raccoon Creek Watershed - Stream Segment SL6

Wastewater discharges from the Harmon Creek Plant are located within the Raccoon Creek Watershed for which the Department has developed a TMDL. The TMDL was finalized on April 7, 2005 and establishes waste load allocations for the discharge of aluminum, iron and manganese within the Raccoon Creek watershed. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA 1991a). Stream reaches within the Raccoon Creek watershed are included in the state's 2008 Section 303(d) list because of various impairments, including metals, pH and sediment. The TMDL includes consideration for each river and tributary within the target watershed and its impairment sources. Stream data is then used to calculate minimum pollutant reductions that are necessary to attain water quality criteria levels. Target concentrations published in the TMDL were based on established water quality criteria of 0.750 $^{mg}/_{L}$ total recoverable aluminum, 1.5 $^{mg}/_{L}$ total recoverable iron based on a 30-day average and 1.0 $^{mg}/_{L}$ total recoverable manganese. The reduction needed to meet the minimum water quality standards is then divided between each known point and non-point pollutant source in the form of a watershed allocation. TMDLs prescribe allocations that minimally achieve water quality criteria (i.e., 100 percent use of a stream's assimilative capacity).

Aluminum: The specific water quality criterion for aluminum is expressed as an acute or maximum daily in 25 Pa. Code Chapter 93. Discharges of aluminum may only be authorized to the extent that they will not cause or contribute to any violation of the water quality standards. Therefore, the water quality criterion for aluminum (0.75 mg/L) is imposed as a

maximum daily effluent limit (MDL). Whenever the most stringent criterion is selected for the MDL, the Department should also impose an average monthly limit (AML) and instantaneous maximum limit (IMAX) if applicable. The imposition of an AML that is more stringent than the MDL is typically not appropriate because the water quality concerns have already been fully addressed by setting the MDL equal to the most stringent applicable criterion. Therefore, where the MDL is set at the value of the most stringent applicable criterion, the AML should be set equal to the MDL. TMDL aluminum limits are proposed for Outfall 002. The proposed aluminum limits are shown in Table 5.

Iron: Discharges from the Harmon Creek Plant are located within Stream Segment SL6. According to Page 42 of the TMDL, a TMDL for iron at Segment SL6 is not necessary because the water quality standard is met. Accordingly, iron will be regulated based upon the technology and water quality based requirements discussed in previous sections of this Fact Sheet. TMDL iron limits are not proposed for this facility.

Manganese: The specific water quality criterion for manganese is expressed as an acute or maximum daily of 1.0 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of human health and is associated with chronic exposure associated with a potable water supply (PWS). Since no duration is given in Chapter 93 for the manganese criterion, a duration of 30 days is used based on the water quality criteria duration for Threshold Human Health (THH) criteria given in Section III.C.3.a., Table 1 on Page 10 of DEP's Water Quality Toxics Management Strategy. The 30-day duration for THH criteria coincides with the 30-day duration of an AML, which is why the manganese criterion is set equal to the AML for a "permitting at criteria" scenario.

Because the manganese criterion is interpreted as having chronic exposure, the manganese MDL and IMAX may be made less stringent according to procedures established in Section III.C.2.h. of the Water Quality Toxics Management Strategy (AML multipliers of 2.0 and 2.5 for the MDL and IMAX respectively). This results in a maximum daily manganese limit of 2.0 mg/L. TMDL manganese limits are proposed for Outfall 002.

Table 5 – TMDL Effluent Limitations

Parameter	Average Monthly	Maximum Daily	Units
Aluminum, total*	**0.75**	**0.75**	mg/L
Iron, total	**Report**	**Report**	mg/L
Manganese, total*	**1.0**	**2.0**	mg/L

Anti-Backsliding

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed below in Table 7. These limitations are currently imposed on Outfall 002. The Total Suspended Solids limitations were previously imposed as Best Professional Judgment Limitations. The total Aluminum and Total Manganese limitations were previously imposed due to the discharging to a stream within the Racoon Creek Watershed for which the Department has developed a Total Maximum Daily Loads (TMDL).

Table 7: Current Effluent Limitation at Outfall 002

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/Month	Measured
Total Suspended Solids	XXX	XXX	XXX	XXX	100	XXX	1/Month	Grab
Total Aluminum	XXX	XXX	XXX	0.75	0.75	XXX	2/Month	Grab
Total Iron	XXX	XXX	XXX	Report	Report	XXX	2/Month	Grab
Total Manganese	XXX	XXX	XXX	1.0	2.0	XXX	2/Month	Grab

Proposed Final Effluent Limitations

The proposed effluent requirements for Outfall 002 are displayed in Table 8 below. The stormwater benchmark value for Total Suspended Solids does not apply, because Outfall 002 has limitations for this parameter.

Table 8: Proposed Effluent Limitation at Outfall 002

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/Month	Measured
Total Nitrogen (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Calculated
Total Phosphorus (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	100	XXX	1/Month	Grab
Oil & Grease (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Grab
Total Aluminum	XXX	XXX	XXX	0.75	0.75	XXX	2/Month	Grab
Total Iron	XXX	XXX	XXX	Report	Report	XXX	2/Month	Grab
Total Manganese	XXX	XXX	XXX	1.0	2.0	XXX	2/Month	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Grab

Development of Effluent Limitations

Outfall No.	003	**Design Flow (MGD)**	0.0
Latitude	40º 24' 30.4"	**Longitude**	-80º 24' 26.9"
Wastewater Description:	Groundwater and Stormwater runoff		

Outfall No.	004	**Design Flow (MGD)**	0.0
Latitude	40º 24' 15.3"	**Longitude**	-80º 24' 15.6"
Wastewater Description:	Stormwater runoff		

Technology-Based Limitations

Outfalls 003 and 004 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3312 (Steel Works, Blast Furnaces) and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B (Primary Metals). The reporting requirements applicable to stormwater discharges are shown in Table 9 below. Along with the monitoring requirements, sector specific BMPs included in Appendix B of the PAG-03 will also be included in Part C of the Draft Permit.

Table 9. PAG-03 Appendix (B) Monitoring Requirements

Parameters	Max Daily Concentration
Total Nitrogen (mg/L)	Monitor and report
Total Phosphorus (mg/L)	Monitor and report
Total Suspended Solids (TSS) (mg/L)	Monitor and report
Oil & Grease (mg/L)	Monitor and report
Total Aluminum (mg/L)	Monitor and report
Total Zinc (mg/L)	Monitor and report
Total Copper (mg/L)	Monitor and report
Total Iron (mg/L)	Monitor and report
Total Lead	Monitor and report

Water Quality-Based Effluent limitations:

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Harmon Creek Plant are composed of stormwater only, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Total Maximum Daily Load ("TMDL")

Raccoon Creek Watershed - Stream Segment SL6

Wastewater discharges from Outfalls 003 and 004 are located within the Raccoon Creek Watershed for which the Department has developed a TMDL. The TMDL was finalized on April 7, 2005 and establishes waste load allocations for the discharge of aluminum, iron and manganese within the Raccoon Creek watershed. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA 1991a). Stream reaches within the Raccoon Creek watershed are included in the state's 2008 Section 303(d) list because of various impairments, including metals, pH and sediment. The TMDL includes consideration for each river and tributary within the target watershed and its impairment sources. Stream data is then used to calculate minimum pollutant reductions that are necessary to attain water quality criteria levels. Target concentrations published in the TMDL were based on established water quality criteria of 0.750 $^{mg}/_{L}$ total recoverable aluminum, 1.5 $^{mg}/_{L}$ total recoverable iron based on a 30-day average and 1.0 $^{mg}/_{L}$ total recoverable manganese. The reduction needed to meet the minimum water quality standards is then divided between each known point and non-point pollutant source in the form of a watershed allocation. TMDLs prescribe allocations that minimally achieve water quality criteria (i.e., 100 percent use of a stream's assimilative capacity).

Aluminum: The specific water quality criterion for aluminum is expressed as an acute or maximum daily in 25 Pa. Code Chapter 93. Discharges of aluminum may only be authorized to the extent that they will not cause or contribute to any violation of the water quality standards. Therefore, the water quality criterion for aluminum (0.75 mg/L) is imposed as a maximum daily effluent limit (MDL). Whenever the most stringent criterion is selected for the MDL, the Department should also impose an average monthly limit (AML) and instantaneous maximum limit (IMAX) if applicable. The imposition of an AML that is more stringent than the MDL is typically not appropriate because the water quality concerns have already been fully addressed by setting the MDL equal to the most stringent applicable criterion. Therefore, where the MDL is set at the value of the most stringent applicable criterion, the AML should be set equal to the MDL. TMDL aluminum limits are proposed for Outfalls 003 and 004. The proposed aluminum limits are shown in Table 10.

Iron: Discharges from the Harmon Creek Plant are located within Stream Segment SL6. According to Page 42 of the TMDL, a TMDL for iron at Segment SL6 is not necessary because the water quality standard is met. Accordingly, iron will be regulated based upon the technology and water quality based requirements discussed in previous sections of this Fact Sheet. TMDL iron limits are not proposed for this facility.

Manganese: The specific water quality criterion for manganese is expressed as an acute or maximum daily of 1.0 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of human health and is associated with chronic exposure associated with a potable water supply (PWS). Since no duration is given in Chapter 93 for the manganese criterion, a duration of 30 days is used based on the water quality criteria duration for Threshold Human Health (THH) criteria given in Section III.C.3.a., Table 1 on Page 10 of DEP's Water Quality Toxics Management Strategy. The 30-day duration for THH criteria coincides with the 30-day duration of an AML, which is why the manganese criterion is set equal to the AML for a "permitting at criteria" scenario.

Anti-Backsliding

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed below in Table 10. These limitations are currently imposed on Outfalls 003 and 004. The Total Suspended Solids limitations were previously imposed as Best Professional Judgment Limitations. The total Aluminum and Total Manganese limitations were previously imposed due to the discharging to a stream within the Racoon Creek Watershed for which the Department has developed a Total Maximum Daily Loads (TMDL).

Table 10: Current Effluent Limitation at Outfalls 003 and 004

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	XXX	Report	XXX	XXX	XXX	XXX	1/Month	Measured
Total Suspended Solids	XXX	XXX	XXX	XXX	100	XXX	1/Month	Grab
Total Aluminum	XXX	XXX	XXX	XXX	0.75	XXX	1/Month	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/Month	Grab
Total Manganese	XXX	XXX	XXX	XXX	2.0	XXX	1/Month	Grab

Proposed Final Effluent Limitations

The proposed effluent requirements for Outfalls 003 and 004 are displayed in Table 11 below. The stormwater benchmark value for Total Suspended Solids does not apply, because Outfalls 003 and 004 have limitations for this parameter.

Table 11: Proposed Effluent Limitation at Outfalls 003 and 004

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Flow (MGD)	XXX	Report	XXX	XXX	XXX	XXX	1/Month	Measured
Total Nitrogen (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Calculated
Total Phosphorus (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	100	XXX	1/Month	Grab
Oil & Grease (mg/L)	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Grab

Parameters	Mass (lb/day)		Concentration (mg/L)				Monitoring Requirements	
	Average Monthly	Daily Maximum	Instant. Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Frequency	Sample Type
Total Aluminum	XXX	XXX	XXX	XXX	0.75	XXX	1/Month	Grab
Total Iron	XXX	XXX	XXX	XXX	Report	XXX	1/Month	Grab
Total Manganese	XXX	XXX	XXX	XXX	2.0	XXX	1/Month	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Grab
Total Copper	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Grab
Total Lead	XXX	XXX	XXX	XXX	Report	XXX	1/6 Months	Grab

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☒	Toxics Management Spreadsheet (see Attachment)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☐	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☐	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

Attachments

Attachment A. StreamStats Report

Attachment B. Toxic Management Spreadsheet for IMP 103

Attachment A

StreamStats Report

PA0002879 - Harmon Creek Plant - StreamStats Report

Region ID: PA
Workspace ID: PA20221213180144601000
Clicked Point (Latitude, Longitude): 40.40590, -80.40597
Time: 2022-12-13 13:02:05 -0500

Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	0	percent
DRNAREA	Area that drains to a point on a stream	0.75	square miles
ELEV	Mean Basin Elevation	1165	feet
FOREST	Percentage of area covered by forest	83.0034	percent
PRECIP	Mean Annual Precipitation	39	inches
URBAN	Percentage of basin with urban development	3.918	percent

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.75	square miles	2.26	1400
ELEV	Mean Basin Elevation	1165	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	0.0197	ft^3/s
30 Day 2 Year Low Flow	0.0385	ft^3/s

Statistic	Value	Unit
7 Day 10 Year Low Flow	0.00567	ft^3/s
30 Day 10 Year Low Flow	0.0124	ft^3/s
90 Day 10 Year Low Flow	0.0255	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/)

Base Flow Statistics

Base Flow Statistics Parameters [Statewide Mean and Base Flow]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.75	square miles	2.26	1720
PRECIP	Mean Annual Precipitation	39	inches	33.1	50.4
CARBON	Percent Carbonate	0	percent	0	99
FOREST	Percent Forest	83.0034	percent	5.1	100
URBAN	Percent Urban	3.918	percent	0	89

Base Flow Statistics Disclaimers [Statewide Mean and Base Flow]

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

Base Flow Statistics Flow Report [Statewide Mean and Base Flow]

Statistic	Value	Unit
Base Flow 10 Year Recurrence Interval	0.398	ft^3/s
Base Flow 25 Year Recurrence Interval	0.352	ft^3/s
Base Flow 50 Year Recurrence Interval	0.326	ft^3/s

Base 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: 4.11.1
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment B

Toxic Management Spreadsheet for IMP 103

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Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Harmon Creek Plant** NPDES Permit No.: **PA0002879** Outfall No.: **103**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Groundwater from the area surroding the E**

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
0.0072	884	7.6						

					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		1530									
	Chloride (PWS)	mg/L		262									
	Bromide	mg/L		2.5									
	Sulfate (PWS)	mg/L		1040									
	Fluoride (PWS)	mg/L		4.08									
Group 2	Total Aluminum	µg/L	<										
	Total Antimony	µg/L	<										
	Total Arsenic	µg/L											
	Total Barium	µg/L		128									
	Total Beryllium	µg/L	<										
	Total Boron	µg/L											
	Total Cadmium	µg/L	<										
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L											
	Total Cobalt	µg/L											
	Total Copper	µg/L											
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<										
	Dissolved Iron	µg/L	<										
	Total Iron	µg/L											
	Total Lead	µg/L											
	Total Manganese	µg/L											
	Total Mercury	µg/L	<										
	Total Nickel	µg/L	<										
	Total Phenols (Phenolics) (PWS)	µg/L	<										
	Total Selenium	µg/L	<										
	Total Silver	µg/L	<										
	Total Thallium	µg/L	<										
	Total Zinc	µg/L											
	Total Molybdenum	µg/L		353									
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										

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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Harmon Creek Plant, NPDES Permit No. PA0002879, Outfall 103

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **UNT to Burgetts Fork**

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	033847	1.9	1045	0.75	0.001		Yes
End of Reach 1	033847	1	1040	0.76	0.001		Yes

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

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	1.9	0.1	0.00567									100	7		
End of Reach 1	1	0.1	0.00567												

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	1.9														
End of Reach 1	1														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Harmon Creek Plant, NPDES Permit No. PA0002879, Outfall 103

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | ◉ All ○ Inputs ○ Results ○ Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.305 PMF: 1 Analysis Hardness (mg/l): 619.53 Analysis pH: 7.30

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	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	21,000	21,000	31,690	

☑ ***CFC*** CCT (min): 0.305 PMF: 1 Analysis Hardness (mg/l): 619.53 Analysis pH: 7.30

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	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	4,100	4,100	6,187	

☑ ***THH*** CCT (min): 0.305 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	
Fluoride (PWS)	0	0		0	2,000	2,000	N/A	
Total Barium	0	0		0	2,400	2,400	3,622	

☑ ***CRL*** CCT (min): 0.675 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	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	

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

No. Samples/Month: 4

	Mass Limits		Concentration Limits						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Fluoride (PWS)	N/A	N/A	PWS Not Applicable
Total Barium	3,622	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS