pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0254983**
Facility Type	**Storm Water**	APS ID	**1095172**
Major / Minor	**Minor**	Authorization ID	**1451456**

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

Applicant and Facility Information

Applicant Name	**Donora Dock LLC**	Facility Name	**Donora Terminal**
Applicant Address	1501 Ligonier Street Latrobe, PA 15650-2912	Facility Address	West of Donora, PA on north side of SR 0837 Donora, PA 15033
Applicant Contact	John Ross	Facility Contact	Same as Applicant
Applicant Phone	(724) 396-0734	Facility Phone	Same as Applicant
Applicant email	John.ross@resfuel.com	Facility email:	Same as Applicant
Client ID	315533	Site ID	787693
SIC Code	1241,4491	Municipality	Carroll Township
SIC Description	Coal Mining Services - Marine Cargo Handling	County	Washington
Date Application Received	August 17, 2023	EPA Waived?	Yes
Date Application Accepted		If No, Reason	
Purpose of Application	Renewal NPDES Permit Coverage		

Summary of Review

The Department received an NPDES permit application from Apex Companies, LLC on behalf of Donora Dock, LLC, for renewal coverage of the coal storage facility on August 17, 2023. The Facility's industrial activity codes are:

- SIC Codes: 1241 (Coal mining services) and 4491 (Marine cargo handling)
- NAICS Codes: 213113 (Support activities for coal mining) 488320 (Marine cargo handling).

Donora Terminal is a coal storage, loading, and unloading facility. Coal deliveries to the facility arrive via barge on the Monongahela River or via trucks which access the site from State Route 837. Coal from barges is unloaded to trucks and transported to stockpile areas on the southern portion of the site. Coal from trucks in unloaded directly at the stockpile area. Coal being shipped from the site is also transported by truck or barge. The facility processes more than 2 million tons of coal per year.

The NPDES permit authorized discharges of stormwater associated with industrial activities through Outfalls 001 and 002. Outfall 001 is the primary spillway and Outfall 002 is the emergency spillway. Construction and operation of a settling pond system was proposed.

Approve	Deny	Signatures	Date
X		Angela Rohrer / Environmental Engineering Specialist	June 7, 2024
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	June 11, 2024

Summary of Review

A Water Quality Management (WQM) Part II permit (6316200) was issued on August 31, 2018. This permit approved the construction of two sedimentation ponds and one sedimentation trap with hydraulic design capacity of 1.8 MGD. The ponds are designed to hold 10-year 24-hour storm.

The WQM Part II permit was amended on May 15, 2020 due to modifications in the stormwater management and treatment features. This amendment approved the construction/modification of two settling basins with hydraulic design capacity of 4.9 MGD total and two collection sumps with collection channels. The settling basins are designed to retain 10-year, 24-hour storm.

The NPDES permit was amended on August 5, 2020. The modifications in activities to the original Donora Terminal Permit design included the relocation and resizing of sediment basin 1 (SB-1), revised outfalls (locations), revised channels and sumps, the addition of sediment basin 2 (SB-2), the addition of eastern stockpile area and associated channels, and the addition of the eastern loading loop. The addition of a sediment basin added an additional two outfalls to the NPDES Permit. The final outfalls are listed in Table 1.

Table 1: Final Outfall Details

Outfall Designation	Location	Locational Coordinates
Outfall 001	SB-1 Principal Spillway	40° 11' 46.54", - 79° 52' 03.91"
Outfall 002	SB-1 Emergency Spillway	40° 11' 46.73", - 79° 52' 05.87"
Outfall 003	SB-2 Principal Spillway	40° 11' 42.40", - 79° 51' 50.53"
Outfall 004	SB-2 Emergency Spillway	40° 11' 43.05", - 79° 51' 52.44"

The NPDES permit was amended on October 6, 2022. Due to unforeseen quantities of unsuitable material on site and required slopes to provide drainage to the left side of settling basin 2, it was necessary to relocate the proposed sump to the right side of the basin and center of the large stockpile area accordingly as shown on the attached plan. Consequently, the proposed outfall 003 was relocated approximately 300 linear feet to the left side of the basin. The proposed location is 40° 11′ 43.87” -79° 51’ 54.54”.

The Department received a WQM post construction certification from Apex Companies, LLC on behalf of Donora Dock, LLC on August 14, 2023. It was certified that construction of the two proposed sedimentation basins and drainage features on the Donora Terminal Site had been completed in accordance with the permitted plans.

Stormwater runoff comes into contact with coal on all areas of the site. Runoff is directed to sumps on site to allow solids to settle before being directed to sedimentation basins. Water is detained in the basins and allowed to evaporate or is used for dust suppression on site.

Currently, runoff from the barge loading/unloading area is collected in the original sump, pumped to trucks, and transported to the sediment basins. Proposed collection ditches to Sedimentation Basin 1 have not been installed. Stormwater runoff is entering the basin via sheet flow.

The facility has reported no discharge during the last five years.

The facility was last inspected by James Stewart, on February 24, 2022, with one violation noted, this violation was resolved on July 19, 2022.

It is recommended that operations conduct a site inspection to verify the Outfall inventory.

The facility has no open violations.

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*,

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.85 (Precipitation induced)
Latitude	40º 11' 46.54"	Longitude	-79º 52' 03.91"
Quad Name	Donora	Quad Code	1707
Wastewater Description:	Stormwater		

Receiving Waters	Monongahela River (WWF)	Stream Code	37185
NHD Com ID	99409228	RMI	34.40
Drainage Area	5230	Yield (cfs/mi^2)	0.105
Q_{7-10} Flow (cfs)	550	Q_{7-10} Basis	U.S. Army Corps of Engineers
Elevation (ft)	729	Slope (ft/ft)	0.0001
Watershed No.	19-C	Chapter 93 Class.	Warm Water Fishery
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBS)		
Source(s) of Impairment	Source Unknown		
TMDL Status	Final	Name	Monongahela River TMDL

Nearest Downstream Public Water Supply Intake	PA American Co. - Pittsburgh (84.06 MGD)		
PWS Waters	Monongahela River	Flow at Intake (cfs)	550
PWS RMI	25.54	Distance from Outfall (mi)	9.76

Discharge, Receiving Waters and Water Supply Information

Outfall No.	002	Design Flow (MGD)	45.0 (Precipitation induced)
Latitude	40º 11' 46.73"	Longitude	-79º 52' 05.87"
Quad Name	Donora	Quad Code	1707
Wastewater Description:	Stormwater Emergency Pond Overflow		

Receiving Waters	Monongahela River (WWF)	Stream Code	37185
NHD Com ID	99409198	RMI	35.31
Drainage Area	5230	Yield (cfs/mi^2)	0.105
Q_{7-10} Flow (cfs)	550	Q_{7-10} Basis	U.S. Army Corps of Engineers
Elevation (ft)	728	Slope (ft/ft)	0.0001
Watershed No.	19-C	Chapter 93 Class.	Warm Water Fishery
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBS)		
Source(s) of Impairment	Source Unknown		
TMDL Status	Final	Name	Monongahela River TMDL

Nearest Downstream Public Water Supply Intake	PA American Co. - Pittsburgh (58.28MGD)		
PWS Waters	Monongahela River	Flow at Intake (cfs)	550
PWS RMI	25.54	Distance from Outfall (mi)	9.68

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	0.76
Latitude	40º 11' 42.40"	Longitude	-79º 51' 50.53"
Quad Name	Donora	Quad Code	1707
Wastewater Description:	Stormwater		

Receiving Waters	Monongahela River (WWF)	Stream Code	37185
NHD Com ID	99409198	RMI	35.62
Drainage Area	5230	Yield (cfs/mi^2)	0.105
Q_{7-10} Flow (cfs)	550	Q_{7-10} Basis	U.S. Army Corps of Engineers
Elevation (ft)	760	Slope (ft/ft)	0.0001
Watershed No.	19-C	Chapter 93 Class.	Warm Water Fishery
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBS)		
Source(s) of Impairment	Impaired		
TMDL Status	Final	Name	Monongahela River TMDL

Nearest Downstream Public Water Supply Intake	PA American Co. - Pittsburgh (58.28MGD)		
PWS Waters	Monongahela River	Flow at Intake (cfs)	550
PWS RMI	25.54	Distance from Outfall (mi)	9.97

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	27.14
Latitude	40º 11' 43.05"	Longitude	-79º 51' 52.44"
Quad Name	Donora	Quad Code	1707
Wastewater Description:	Stormwater		
Receiving Waters	Monongahela River (WWF)	Stream Code	37185
NHD Com ID	99409198	RMI	35.57
Drainage Area	5230	Yield (cfs/mi^2)	0.105
Q_{7-10} Flow (cfs)	550	Q_{7-10} Basis	U.S. Army Corps of Engineers
Elevation (ft)	760	Slope (ft/ft)	0.0001
Watershed No.	19-C	Chapter 93 Class.	Warm Water Fishery
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Polychlorinated Biphenyls (PCBS)		
Source(s) of Impairment	Impaired		
TMDL Status	Final	Name	Monongahela River TMDL
Nearest Downstream Public Water Supply Intake	PA American Co. - Pittsburgh (58.28MGD)		
PWS Waters	Monongahela River	Flow at Intake (cfs)	550
PWS RMI	25.54	Distance from Outfall (mi)	9.93

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 3.3
Latitude 40º 11' 46.54" **Longitude** -79º 52' 03.91"
Wastewater Description: Stormwater

Technology-Based Limitations

A reporting requirement for flow will be imposed in accordance with 25 Pa. Code § 92a.61(h).

Outfall 001 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall discharges stormwater associated with industrial activity. The SIC codes for the site are 1241 (Coal mining services) and 4491 (Marine cargo handling) and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix J (Additional Facilities).

The reporting requirements applicable to stormwater discharges are shown in Table 2 below. Along with the monitoring requirements, sector specific BMPs included in Appendix J of the PAG-03 will also be included in Part C of the Draft Permit.

Table 2: PAG-03 Appendix J Monitoring Requirements

Parameter	Max Daily Concentration	Benchmark Value mg/L
Total Nitrogen (mg/L)	Monitor and Report	-
Total Phosphorus (mg/L)	Monitor and Report	-
Total Suspended Solids (TSS) (mg/L)	Monitor and Report	100
Oil and Grease (mg/L)	Monitor and Report	30
pH (S.U)	Monitor and Report	9.0
Chemical Oxygen Demand (COD) (mg/L)	Monitor and Report	120

Outfall 001 effluent is comprised primarily of stormwater runoff from active coal storage areas. There are no specific Federal Effluent Limitation Guidelines (ELGs) or state regulations requiring effluent limitations for this type of discharge (coal and salt storage). In the absence of a specific EPA-promulgated ELG, Best Professional Judgement (BPJ) will be used to develop technology-based effluent limitations.

40 CFR 434 Subpart B regulates coal preparation plants and coal preparation plant associated areas. 40 CFR § 434.11(f) states that the term “coal preparation plant associated areas” means the coal preparation plant yards, immediate access roads, coal refuse piles and coal storage piles and facilities. 40 CFR § 434.22(b) established the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal preparation plant associated areas subject to the provisions of this subpart after application of the best practicable control technology currently available if discharges from such point sources normally exhibit a pH equal to or greater than 6.0 prior to treatment:

Table 3: BPT Effluent Limitations

Pollutant	Maximum for any 1 day (mg/L)	Average of daily values for 30 consecutive days (mg/L)
Iron, Total	7.0	3.5
TSS	70	35
pH	Within the range of 6.0 to 9.0 at all times	

Additionally, it has been determined that Donora Terminal is subject to 40 CFR §423.12(b)(9) requirements associated with coal storage pile runoff. A maximum daily TSS limit of 50 mg/L is proposed due to the significant similarities between coal piles at the Donora facility and coal piles at steam electric generating facilities. 40 CFR §423.12(b)(9) includes the application of BPT effluent limitation of TSS as 50 mg/L of maximum concentration at any time, subject to provisions of 40 CFR §423.12(b)(10).

Water Quality-Based Effluent Limitations

Total Maximum Daily Load TMDL

Stormwater discharges from Donora Terminal are located within the Monongahela River Watershed, for which the Department has developed a TMDL. The Monongahela River Watershed TMDL was finalized on March 1, 1999 to address impairments resulting from PCBs and Chlordane. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's ("EPA'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 its water quality standard 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 to restore and maintain the quality of the state's water resources (USEPA 1991).

This Total Maximum Daily Load (TMDL) applies to two segments of the Monongahela River (Stream Code 37185): from the Maxwell Lock and Dam (L&D) at Monessen (River Mile 61.2) to L&D 4 (River Mile 41.5); and from L&D 2 at Braddock (River Mile 11.2) to the mouth at Pittsburgh (River Mile 0.0). The Monongahela River Watershed TMDL does not include a waste load allocation for Donora Terminal. Water quality criteria for the TMDL watershed does not apply to the stormwater discharges from Donora Terminal.

Toxics Management Spread Sheet

The Department of Environmental Protection (DEP) has developed the DEP Toxics Management Spreadsheet ("TMS") to facilitate calculations necessary for completing a reasonable potential (RP) analysis and determining water quality-based effluent limitations for discharges of toxic pollutants. The Toxics Management Spreadsheet is a macro-enabled Excel binary file that combines the functions of the PENTOXSD model and the Toxics Screening Analysis spreadsheet to evaluate the reasonable potential for discharges to cause excursions above water quality standards and to determine WQBELs. The Toxics Management Spread Sheet is a single discharge, mass-balance water quality calculation spread sheet that includes consideration for mixing, first-order decay and other factors to determine recommended WQBELs for toxic substances and several non-toxic substances. Required input data including stream code, river mile index, elevation, drainage area, discharge name, NPDES permit number, discharge flow rate and the discharge concentrations for parameters in the permit application or in DMRs, which are entered into the spread sheet to establish site-specific discharge conditions. Other data such as low flow yield, reach dimensions and partial mix factors may also be entered to further characterize the conditions of the discharge and receiving water. Discharge concentrations for the parameters are chosen to represent the "worst case" quality of the discharge (i.e., maximum reported discharge concentrations). The spread sheet then evaluates each parameter by computing a Waste Load Allocation for each applicable criterion, determining a recommended maximum WQBEL and comparing that recommended WQBEL with the input discharge concentration to determine which is more stringent. Based on this evaluation, the Toxics Management Spread sheet recommends average monthly and maximum daily WQBELs.

Reasonable Potential Analysis and WQBEL Development for Outfall 001

Discharges from Outfall 001 are evaluated based on concentrations reported on the application and on DMRs; data from those sources are entered into the Toxics Management Spread Sheet. The maximum reported value of the parameters from the application form or from previous DMRs is used as the input concentration in the Toxics Management Spread Sheet. All toxic pollutants whose maximum concentrations, as reported in the permit application or on DMRs, are greater than the most stringent applicable water quality criterion are considered to be pollutants of concern. [This includes pollutants reported as "Not Detectable" or as "<MDL" where the method detection limit for the analytical method used by the applicant is greater than the most stringent water quality criterion]. The Toxics Management Spread Sheet is run with the discharge and receiving stream characteristics shown in Table 4. The design flow used in modeling is the average flow during production or operation taken from the permit application. Pollutants for which water quality standards have not been promulgated (e.g., TSS, oil and grease) are excluded from the analysis. All the parameters are evaluated using the model to determine the water quality-based effluent limits applicable to the discharge and the receiving stream. The spreadsheet then compares the reported discharge concentrations to the calculated water quality-based effluent limitations to determine if a reasonable potential exists to exceed the calculated WQBELs. 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 C of this Fact Sheet. The Toxics Management Spread Sheet did not recommend any WQBELs for Outfall 001.

Table 4: TMS Inputs for Outfall 001

Parameter	Value
River Mile Index	34.40
Discharge Flow (MGD)	0.85
Basin/Stream Characteristics	
Parameter	**Value**
Area in Square Miles	5,230
Q_{7-10} (cfs)	550
Low-flow yield (cfs/mi^2)	0.105
Elevation (ft)	729
Slope	0.0001

Anti-Backsliding

The limitations in the site's current permit can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed in Table 5 below. The Total Suspended Solids and Total Iron limitations were previously imposed as Best Professional Judgment Limitations derived using 40 CFR 434 Subpart B §§ 434.22(b) and 434.23(b) and 40 CFR §§ 423.12(b)(1) and (b)(9). The Oil and Grease limits that were imposed are effluent standards for oil and grease from 25 Pa. Code § 95.2(2). Monitoring for Hexavalent Chromium, Total Cadmium, Total Lead, Total Silver, Total Thallium, Total Aluminum, Total Manganese, Total Dissolved Solids and Total Sulfate were previously imposed because the parameters were pollutants of concern.

Table 5. Current Effluent Limitation at Outfall 001

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	2/ Month	Estimate
pH (S.U)	XXX	XXX	6.0	XXX	XXX	9.0	2/ Month	Grab
Total Suspended Solids	XXX	XXX	XXX	35.0	50.0	XXX	2/ Month	Grab
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report	XXX	2/ Month	Grab
Oil and Grease	XXX	XXX	XXX	15.0	30.0	XXX	2/ Month	Grab
Total Aluminum	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Cadmium	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Hexavalent Chromium	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Iron	XXX	XXX	XXX	3.5	7.0	XXX	2/ Month	Grab
Total Lead	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Manganese	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Silver	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Sulfate	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Thallium	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab

However, as specified in the previous permit and previous fact sheet, a follow-up sample was mandatory after the sedimentation basins achieved steady-state operation to evaluate the applicability of the established effluent limitations. This sample was required to be tested for the parameters listed in Groups 1 and 2 of the application for individual permit to discharge industrial wastewater.

Construction of the two proposed sedimentation basins and drainage features on the Donora Terminal Site have been completed. Based on the new information and the Toxics Management Spread Sheet results, Hexavalent Chromium, Total Cadmium, Total Lead, Total Silver, Total Thallium, Total Aluminum, Total Manganese, Total Dissolved Solids and Total Sulfate are no longer pollutants of concern.

The proposed removal of monitoring requirements for Hexavalent Chromium, Total Cadmium, Total Lead, Total Silver, Total Thallium, Total Aluminum, Total Manganese, Total Dissolved Solids and Total Sulfate is based on 40 CFR § 122.44(l)(1) and (2):

(l) *Reissued permits.* (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62.)

(2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

(i) Exceptions—A permit with respect to which paragraph (l)(2) of this section applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant, if:

(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.

Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for Outfall 001 are displayed in Table 6 below. A Part C condition is included in the Draft Permit requiring submission of a Corrective Action Plan whenever there are two or more consecutive exceedances of the stormwater benchmark values, which are also included in the Part C condition. These values are not effluent limitations, an exceedance of the benchmark value is not a violation. As describe above, if there are two or more exceedances of the benchmark values, a Corrective Action Plan must be developed and submitted to the Department to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater. The stormwater benchmark values for Total Suspended Solids and Oil and Grease do not apply to Outfall 001, because Outfall 001 has limitations for these parameters.

The monitoring frequency of 2/month was imposed in the previous permit. To align closer to the Department's typical stormwater monitoring, the monitoring frequency of 1/quarter will be imposed.

The average monthly limits are not applicable to a 1/quarter reporting frequency. Therefore, the average monthly limits for Total Iron and Oil and Grease will be removed from the permit and the Maximum Daily Limit (MDL) will be imposed for these parameters.

Note that the Total Suspended Solids value was labeled as Daily Maximum in the previous permit. Based on 40 CFR §423.12(b)(9) it should have been labeled as 50 mg/L IMAX. This error was corrected and now an Instantaneous Maximum (IMAX) will be set equal to 50.0 mg/L. In addition, as explained above, the monitoring frequency of 1/quarter will be imposed.

Table 6: Proposed Effluent Limitation at Outfall 001

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/Quarter	Estimate
pH (S.U)	XXX	XXX	6.0	XXX	XXX	9.0	1/Quarter	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	XXX	50.0	1/Quarter	Grab
Oil and Grease	XXX	XXX	XXX	XXX	30.0	XXX	1/Quarter	Grab
Total Iron	XXX	XXX	XXX	XXX	7.0	XXX	1/Quarter	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/Quarter	Calculated
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/Quarter	Grab
Chemical Oxygen Demand (COD)	XXX	XXX	XXX	XXX	Report	XXX	1/Quarter	Grab

Development of Effluent Limitations

Outfall No. 002 **Design Flow (MGD)** 0
Latitude 40º 11' 46.73" **Longitude** -79º 52' 5.87"
Wastewater Description: Stormwater Pond 1 emergency overflow

Outfall 002 is the discharge point for the emergency overflow of Sedimentation Basin 1, which receives storm water runoff from the same areas as Outfall 001.

Outfall No. 004 **Design Flow (MGD)** 0
Latitude 40º 11' 43.05" **Longitude** -79º 51' 52.44"
Wastewater Description: Stormwater Pond 2 emergency overflow

Outfall 004 is the discharge point for the emergency overflow of Sedimentation Basin 2, which receives storm water runoff from the same areas as Outfall 003.

Technology-Based Limitations

A reporting requirement for flow will be imposed in accordance with 25 Pa. Code § 92a.61(h).

Outfalls 002 and 004 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall discharges stormwater associated with industrial activity. The SIC codes for the site are 1241 (Coal mining services) and 4491 (Marine cargo handling) and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix J (Additional Facilities).

The reporting requirements applicable to stormwater discharges are shown in Table 7 below. Along with the monitoring requirements, sector specific BMPs included in Appendix J of the PAG-03 will also be included in Part C of the Draft Permit.

Table 7: PAG-03 Appendix J Monitoring Requirements

Parameter	Max Daily Concentration	Benchmark Value mg/L
Total Nitrogen (mg/L)	Monitor and Report	-
Total Phosphorus (mg/L)	Monitor and Report	-
Total Suspended Solids (TSS) (mg/L)	Monitor and Report	100
Oil and Grease (mg/L)	Monitor and Report	30
pH (S.U)	Monitor and Report	9.0
Chemical Oxygen Demand (COD) (mg/L)	Monitor and Report	120

Outfalls 002 and 004 effluent is comprised primarily of stormwater runoff from active coal storage areas. There are no specific Federal Effluent Limitation Guidelines (ELGs) or state regulations requiring effluent limitations for this type of discharge (coal and salt storage). In the absence of a specific EPA-promulgated ELG, Best Professional Judgement (BPJ) will be used to develop technology-based effluent limitations.

40 CFR 434 Subpart B regulates coal preparation plants and coal preparation plant associated areas. 40 CFR § 434.11(f) states that the term “coal preparation plant associated areas” means the coal preparation plant yards, immediate access roads, coal refuse piles and coal storage piles and facilities. 40 CFR § 434.22(b) established the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal preparation plant associated areas subject to the provisions of this subpart after application of the best practicable control technology currently available if discharges from such point sources normally exhibit a pH equal to or greater than 6.0 prior to treatment:

Table 8: BPT Effluent Limitations

Pollutant	Maximum for any 1 day (mg/L)	Average of daily values for 30 consecutive days (mg/L)
Iron, Total	7.0	3.5
TSS	70	35
pH	Within the range of 6.0 to 9.0 at all times	

Additionally, it has been determined that 40 CFR §423.12(b)(9) is another technology based effluent limitation appropriate for Donora Terminal when compared to steam electric generating facilities. 40 CFR §423.12(b)(9) includes the application of BPT effluent limitation of TSS as 50 mg/L of maximum concentration at any time, subject to provisions of 40 CFR §423.12(b)(10).

The ponds series are designed to retain and treat stormwater up to a 10-year, 24 hour rainfall event. A flowrate greater than this storm event may discharge through the emergency overflow Outfalls 002 and 004. As this is an unrestricted pathway, the water will not be retained for sufficient time to ensure proper solids settling. 40 CFR § 423.12(b)(10) states, "Any untreated overflow from facilities designed, constructed and operated to treat the volume of coal pile runoff which is associated with a 10 year, 24 hour rainfall event shall not be subject to the limitation in paragraph (b)(9) of this section." Paragraph (b)(9) is the TSS limitation of 50 mg/L. A Part C condition will be added to the permit and reads as follows:

Any untreated overflow from Outfall 001 or 002 associated with a 10-year, 24-hour rainfall event shall not be subject to the 50 mg/L TSS limit. The burden of proof is on the permittee to show that untreated overflows occurred as a result of runoff volumes in excess of the 10-year, 24-hour rainfall event.

Only in the event a storm exceeds the 10-year, 24-hour runoff volume will be the emergency overflow be permitted to discharge. All of the TBEL pollutants limitations, other than TSS, will be required to be met during discharge from Outfalls 002 and 004.

Water Quality-Based Limitations

Water quality-based limitations for Outfalls 002 and 004 were not evaluated as the flow of the receiving water will not be at the Q7-10 low flow conditions when discharging the rare high-flow stormwater.

Anti-Backsliding

The limitations in the site's current permit can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed in Table 9 below.

Table 9. Effluent limits and monitoring requirements for Outfalls 002 and 004

Parameter	Mass (pounds)		Concentration (mg/L)			
	Average Monthly	Daily Maximum	Instant Minimum	Average Monthly	Daily Maximum	Instant Maximum
Flow (MGD)	Report	Report	—	—	—	—
TSS	—	—	—	Report	Report	—
pH (S.U.)	—	—	6.0	—	—	9.0
Total Iron	—	—	—	3.5	7.0	—
Oil and Grease	—	—	—	15.0	30.0	—

Proposed Effluent Limitations and Monitoring Requirements

Effluent limits imposed at the outfalls are the more stringent of TBELs, WQBELs, regulatory effluent standards and monitoring requirements as described in the sections above. The applicable effluent limitations for Outfalls 002 and 004 are summarized in Table 10.

Table 10: Effluent limits and monitoring requirements for Outfalls 002 and 004

Parameter	Mass (pounds)		Concentration (mg/L)			
	Average Monthly	Daily Maximum	Instant Minimum	Average Monthly	Daily Maximum	Instant Maximum
Flow (MGD)	Report	Report	—	—	—	—
TSS	—	—	—	Report	Report	—
pH (S.U.)	—	—	6.0	—	—	9.0
Total Iron	—	—	—	3.5	7.0	—
Oil and Grease	—	—	—	15.0	30.0	—

Parameter	Mass (pounds)		Concentration (mg/L)			
	Average Monthly	Daily Maximum	Instant Minimum	Average Monthly	Daily Maximum	Instant Maximum
Total Nitrogen	—	—	—	Report	Report	—
Total Phosphorus	—	—	—	Report	Report	—
Chemical Oxygen Demand	—	—	—	Report	Report	—

Since the discharge from Outfalls 002 and 004 will be precipitation induced, grab sampling will be required for all parameters, except flow, which should be estimated. The sampling frequency will be twice per discharge as the storm event in which water may flow through the emergency spillway is expected to occur once every ten years.

Development of Effluent Limitations

Outfall No. 003 **Design Flow (MGD)** 1.6
Latitude 40º 11' 42.40" **Longitude** -79º 51' 50.53"
Wastewater Description: Stormwater

Technology-Based Limitations

A reporting requirement for flow will be imposed in accordance with 25 Pa. Code § 92a.61(h).

Outfall 003 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall discharges stormwater associated with industrial activity. The SIC codes for the site are 1241 (Coal mining services) and 4491 (Marine cargo handling) and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix J (Additional Facilities).

The reporting requirements applicable to stormwater discharges are shown in Table 11 below. Along with the monitoring requirements, sector specific BMPs included in Appendix J of the PAG-03 will also be included in Part C of the Draft Permit.

Table 11: PAG-03 Appendix J Monitoring Requirements

Parameter	Max Daily Concentration	Benchmark Value Mg/L
Total Nitrogen (mg/L)	Monitor and Report	-
Total Phosphorus (mg/L)	Monitor and Report	-
Total Suspended Solids (TSS) (mg/L)	Monitor and Report	100
Oil and Grease (mg/L)	Monitor and Report	30
pH (S.U)	Monitor and Report	9.0
Chemical Oxygen Demand (COD) (mg/L)	Monitor and Report	120

Outfall 003 effluent is comprised primarily of stormwater runoff from active coal storage areas. There are no specific Federal Effluent Limitation Guidelines (ELGs) or state regulations requiring effluent limitations for this type of discharge (coal and salt storage). In the absence of a specific EPA-promulgated ELG, Best Professional Judgement (BPJ) will be used to develop technology-based effluent limitations.

40 CFR 434 Subpart B regulates coal preparation plants and coal preparation plant associated areas. 40 CFR § 434.11(f) states that the term “coal preparation plant associated areas” means the coal preparation plant yards, immediate access roads, coal refuse piles and coal storage piles and facilities. 40 CFR § 434.22(b) established the concentration or quality of pollutants which may be discharged by any existing coal preparation plant and coal preparation plant associated areas subject to the provisions of this subpart after application of the best practicable control technology currently available if discharges from such point sources normally exhibit a pH equal to or greater than 6.0 prior to treatment:

Table 12: BPT Effluent Limitations

Pollutant	Maximum for any 1 day (mg/L)	Average of daily values for 30 consecutive days (mg/L)
Iron, Total	7.0	3.5
TSS	70	35
pH	Within the range of 6.0 to 9.0 at all times	

Additionally, it has been determined that 40 CFR §423.12(b)(9) is another technology based effluent limitation appropriate for Donora Terminal when compared to steam electric generating facilities. 40 CFR §423.12(b)(9) includes the application of BPT effluent limitation of TSS as 50 mg/L of maximum concentration at any time, subject to provisions of 40 CFR §423.12(b)(10).

Water Quality-Based Effluent Limitations

Total Maximum Daily Load TMDL

Stormwater discharges from Donora Terminal are located within the Monongahela River Watershed, for which the Department has developed a TMDL. The Monongahela River Watershed TMDL was finalized on March 1, 1999 to address impairments resulting from PCBs and Chlordane. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's ("EPA'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 its water quality standard 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 to restore and maintain the quality of the state's water resources (USEPA 1991).

This Total Maximum Daily Load (TMDL) applies to two segments of the Monongahela River (Stream Code 37185): from the Maxwell Lock and Dam (L&D) at Monessen (River Mile 61.2) to L&D 4 (River Mile 41.5); and from L&D 2 at Braddock (River Mile 11.2) to the mouth at Pittsburgh (River Mile 0.0). The Monongahela River Watershed TMDL does not include a waste load allocation for Donora Terminal. Water quality criteria for the TMDL watershed does not apply to the stormwater discharges from Donora Terminal.

Toxics Management Spread Sheet

Reasonable Potential Analysis and WQBEL Development for Outfall 003

Discharges from Outfall 003 are evaluated based on concentrations reported on the application and on DMRs; data from those sources are entered into the Toxics Management Spread Sheet. The maximum reported value of the parameters from the application form or from previous DMRs is used as the input concentration in the Toxics Management Spread Sheet. The Toxics Management Spread Sheet is run with the discharge and receiving stream characteristics shown in Table 13. The design flow used in modeling is the average flow during production or operation taken from the permit application. Pollutants for which water quality standards have not been promulgated (e.g., TSS, oil and grease) are excluded from the analysis. All the parameters are evaluated using the model to determine the water quality-based effluent limits applicable to the discharge and the receiving stream. The information 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 D of this Fact Sheet. The Toxics Management Spread Sheet did not recommend any WQBELs for Outfall 003.

Table 13: TMS Inputs for Outfall 003

Parameter	**Value**
River Mile Index	35.62
Discharge Flow (MGD)	0.76
Basin/Stream Characteristics	
Parameter	**Value**
Area in Square Miles	5,230
Q_{7-10} (cfs)	550
Low-flow yield (cfs/mi^2)	0.105
Elevation (ft)	760
Slope	0.0001

Anti-Backsliding

The limitations in the site's current permit can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed in Table 14 below. The Total Suspended Solids and Total Iron limitations were previously imposed as Best Professional Judgment Limitations derived using 40 CFR 434 Subpart B §§ 434.22(b) and 434.23(b) and 40 CFR §§ 423.12(b)(1) and (b)(9). The Oil and Grease limits that were imposed are effluent standards for oil and grease from 25 Pa. Code § 95.2(2). Monitoring for Hexavalent Chromium, Total Cadmium, Total Lead, Total Silver, Total Thallium, Total Aluminum, Total Manganese, Total Dissolved Solids and Total Sulfate were previously imposed because the parameters were pollutants of concern.

Table 14. Current Effluent Limitation at Outfall 003

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	2/ Month	Estimate
pH (S.U)	XXX	XXX	6.0	XXX	XXX	9.0	2/ Month	Grab
Total Suspended Solids	XXX	XXX	XXX	35.0	50.0	XXX	2/ Month	Grab
Total Dissolved Solids	XXX	XXX	XXX	XXX	Report	XXX	2/ Month	Grab
Oil and Grease	XXX	XXX	XXX	15.0	30.0	XXX	2/ Month	Grab
Total Aluminum	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Cadmium	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Hexavalent Chromium	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Iron	XXX	XXX	XXX	3.5	7.0	XXX	2/ Month	Grab
Total Lead	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Manganese	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Silver	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Sulfate	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab
Total Thallium	XXX	XXX	XXX	Report	Report	XXX	2/ Month	Grab

However, as specified in the previous permit and previous fact sheet, a follow-up sample was mandatory after the sedimentation basins achieved steady-state operation to evaluate the applicability of the established effluent limitations. This sample was required to be tested for the parameters listed in Groups 1 and 2 of the application for individual permit to discharge industrial wastewater.

Construction of the two proposed sedimentation basins and drainage features on the Donora Terminal Site have been completed. Based on the new information and the Toxics Management Spread Sheet results, Hexavalent Chromium, Total Cadmium, Total Lead, Total Silver, Total Thallium, Total Aluminum, Total Manganese, Total Dissolved Solids and Total Sulfate are no longer pollutants of concern.

The proposed removal of monitoring requirements for Hexavalent Chromium, Total Cadmium, Total Lead, Total Silver, Total Thallium, Total Aluminum, Total Manganese, Total Dissolved Solids and Total Sulfate is based on 40 CFR § 122.44(l)(1) and (2):

(l) *Reissued permits.* (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62.)

(2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

(i) Exceptions—A permit with respect to which paragraph (l)(2) of this section applies may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant, if:

(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.

Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for Outfall 003 are displayed in Table 15 below. A Part C condition is included in the Draft Permit requiring submission of a Corrective Action Plan whenever there are two or more consecutive exceedances of the stormwater benchmark values, which are also included in the Part C condition. These values are not effluent limitations, an exceedance of the benchmark value is not a violation. As describe above, if there are two or more exceedances of the benchmark values, a Corrective Action Plan must be developed and submitted to the Department to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater. The stormwater benchmark values for Total Suspended Solids and Oil and Grease do not apply to Outfall 003, because Outfall 003 has limitations for these parameters.

The monitoring frequency of 2/month was imposed in the previous permit. To align closer to the Department's typical stormwater monitoring, the monitoring frequency of 1/quarter will be imposed.

The average monthly limits are not applicable to a 1/quarter reporting frequency. Therefore, the average monthly limits for Total Iron and Oil and Grease will be removed from the permit and the Maximum Daily Limit (MDL) will be imposed for these parameters.

Note that the Total Suspended Solids value was labeled as Daily Maximum in the previous permit. Based on 40 CFR §423.12(b)(9) it should have been labeled as 50 mg/L IMAX. This error was corrected and now an Instantaneous Maximum (IMAX) will be set equal to 50.0 mg/L. In addition, as explained above, the monitoring frequency of 1/quarter will be imposed.

Table 15. Proposed Effluent Limitation at Outfall 003

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/Quarter	Estimate
pH (S.U)	XXX	XXX	6.0	XXX	XXX	9.0	1/Quarter	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	XXX	50.0	1/Quarter	Grab
Oil and Grease	XXX	XXX	XXX	XXX	30.0	XXX	1/Quarter	Grab
Total Iron	XXX	XXX	XXX	XXX	7.0	XXX	1/Quarter	Grab
Total Nitrogen	XXX	XXX	XXX	XXX	Report	XXX	1/Quarter	Calculated
Total Phosphorus	XXX	XXX	XXX	XXX	Report	XXX	1/Quarter	Grab
Chemical Oxygen Demand (COD)	XXX	XXX	XXX	XXX	Report	XXX	1/Quarter	Grab

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☒	Toxics Management Spreadsheet (see Attachment C, D)
☐	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, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 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, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 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, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

Attachments

Attachment A: Water Flow Diagram

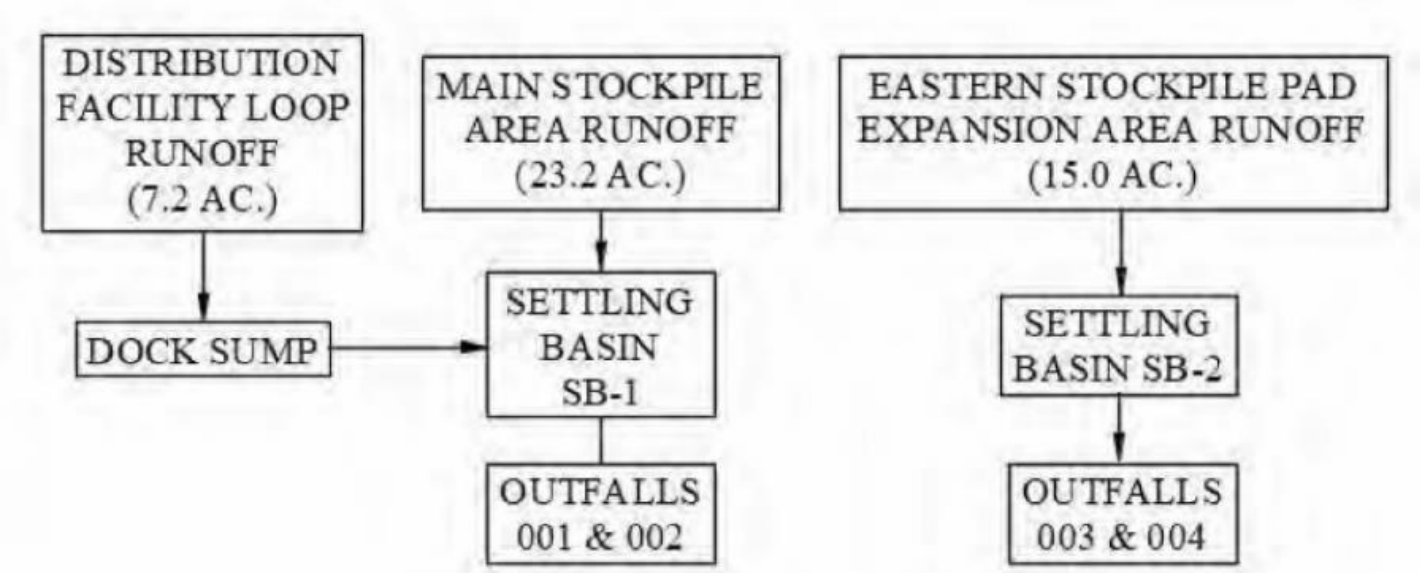
Attachment B: StreamStats Report

Attachment C: Toxic Management Spreadsheet for Outfall 001

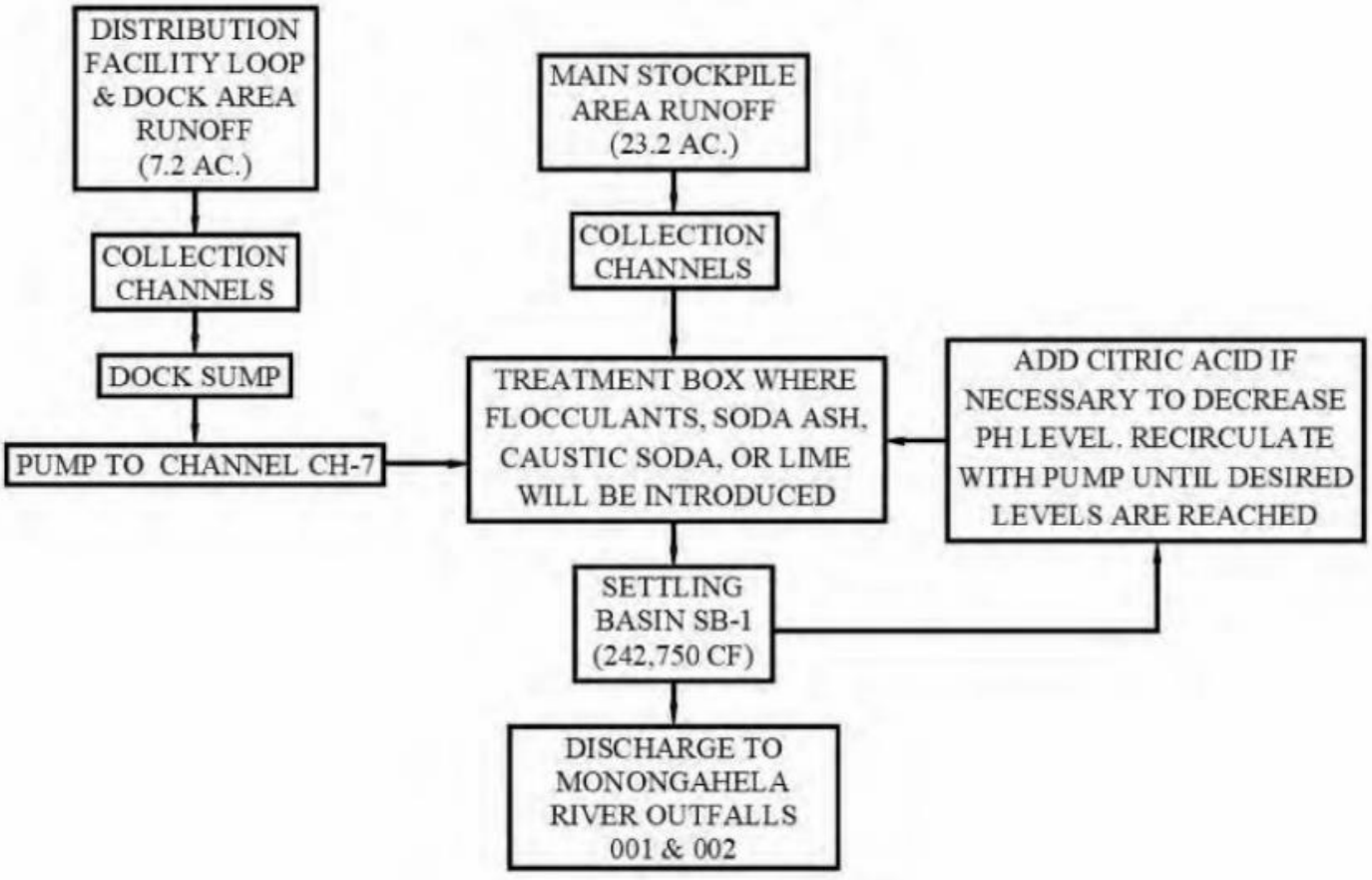
Attachment D: Toxic Management Spreadsheet for Outfall 003

ATTACHMENT A.
Water Flow Diagram

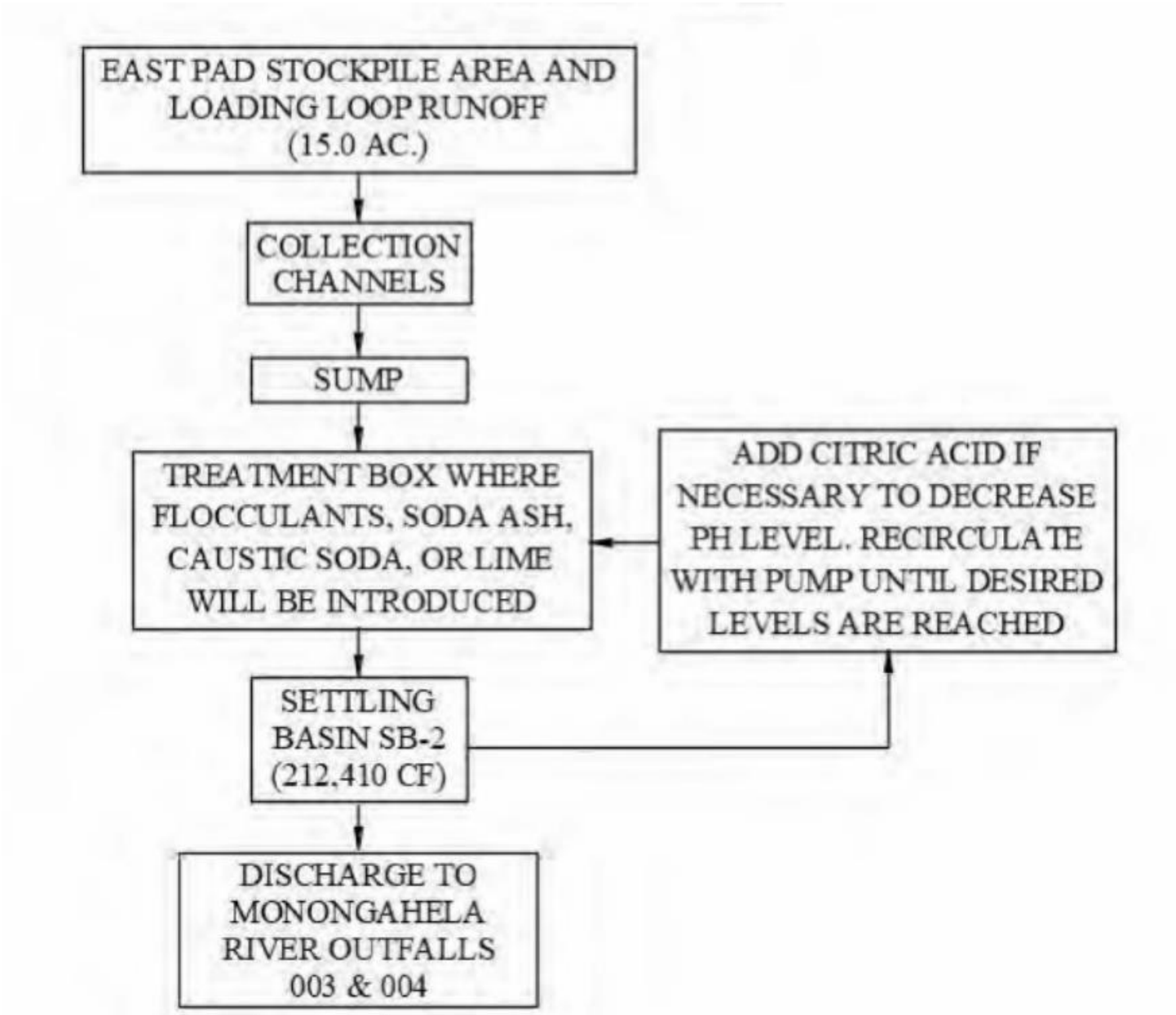
- General flow diagram



- Settling Basin 1



- Settling Basin 2



Attachment B: StreamStats Report

PA0254983 - Donora Terminal - StreamStats Report

Region ID: PA
Workspace ID: PA20240417131756671000
Clicked Point (Latitude, Longitude): 40.19704, -79.86743
Time: 2024-04-17 09:18:23 -0400

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	5230	square miles
ELEV	Mean Basin Elevation	1840	feet
FOREST	Percentage of area covered by forest	76.7028	percent
PRECIP	Mean Annual Precipitation	47	inches
URBAN	Percentage of basin with urban development	2.5113	percent

Attachment C: Toxic Management Spreadsheet for Outfall 001

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Donora Terminal** NPDES Permit No.: **PA0254983** Outfall No.: **001**

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

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
0.85	18.8	8.51						

					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		27									
	Chloride (PWS)	mg/L		1.1									
	Bromide	mg/L	<	0.2									
	Sulfate (PWS)	mg/L		10.4									
	Fluoride (PWS)	mg/L	<	0.1									
Group 2	Total Aluminum	µg/L		62.6									
	Total Antimony	µg/L	<	1									
	Total Arsenic	µg/L	<	1									
	Total Barium	µg/L		19.9									
	Total Beryllium	µg/L	<	1									
	Total Boron	µg/L	<	50									
	Total Cadmium	µg/L	<	0.2									
	Total Chromium (III)	µg/L	<	1									
	Hexavalent Chromium	µg/L		0.025									
	Total Cobalt	µg/L	<	0.5									
	Total Copper	µg/L		1.3									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	0.02									
	Dissolved Iron	µg/L		129									
	Total Iron	µg/L		107									
	Total Lead	µg/L		1.7									
	Total Manganese	µg/L	<	10									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		0.9									
	Total Phenols (Phenolics) (PWS)	µg/L	<	10									
	Total Selenium	µg/L	<	1									
	Total Silver	µg/L		0.1									
	Total Thallium	µg/L	<	0.2									
	Total Zinc	µg/L		26.1									
	Total Molybdenum	µg/L		0.8									
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										
	Carbon Tetrachloride	µg/L	<										
	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										

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

	Indeno(1,2,3-cd)Pyrene	µg/L	<											
	Isophorone	µg/L	<											
	Naphthalene	µg/L	<											
	Nitrobenzene	µg/L	<											
	n-Nitrosodimethylamine	µg/L	<											
	n-Nitrosodi-n-Propylamine	µg/L	<											
	n-Nitrosodiphenylamine	µg/L	<											
	Phenanthrene	µg/L	<											
	Pyrene	µg/L	<											
	1,2,4-Trichlorobenzene	µg/L	<											
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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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Donora Terminal, NPDES Permit No. PA0254983, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Monongahela River**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	037185	34.4	729	5230	0.0001		Yes
End of Reach 1	037185	25.54	727	5330	0.0001	84.06	Yes

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

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	34.4	0.1	550			684	18					100	7		
End of Reach 1	25.54	0.1	550			922.5	18								

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	34.4														
End of Reach 1	25.54														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Donora Terminal, NPDES Permit No. PA0254983, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.134 Analysis Hardness (mg/l): 98.576 Analysis pH: 7.01

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 Aluminum	0	0		0	750	750	42,777	
Total Antimony	0	0		0	1,100	1,100	62,740	
Total Arsenic	0	0		0	340	340	19,392	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	1,197,766	
Total Boron	0	0		0	8,100	8,100	461,995	
Total Cadmium	0	0		0	1.986	2.1	120	Chem Translator of 0.945 applied
Total Chromium (III)	0	0		0	563.112	1,782	101,639	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	929	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	5,418	
Total Copper	0	0		0	13.259	13.8	788	Chem Translator of 0.96 applied
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	63.581	80.2	4,573	Chem Translator of 0.793 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	93.9	Chem Translator of 0.85 applied
Total Nickel	0	0		0	462.590	464	26,437	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	3.138	3.69	211	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	3,707	
Total Zinc	0	0		0	115.765	118	6,751	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 720 PMF: 0.928 Analysis Hardness (mg/l): 99.791 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	
Fluoride (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	85,631	
Total Arsenic	0	0		0	150	150	58,385	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	1,595,851	
Total Boron	0	0		0	1,600	1,600	622,771	
Total Cadmium	0	0		0	0.246	0.27	105	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	73.988	86.0	33,487	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	4,046	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	7,395	
Total Copper	0	0		0	8.940	9.31	3,625	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	628,900	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.511	3.17	1,235	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	353	Chem Translator of 0.85 applied
Total Nickel	0	0		0	51.915	52.1	20,268	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	1,942	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	5,060	
Total Zinc	0	0		0	117.930	120	46,554	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 720 THH PMF: 0.928 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 1

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	##########	WQC applied at RMI 25.54 with a design stream flow of 550 cfs
Chloride (PWS)	0	0		0	250,000	250,000	##########	WQC applied at RMI 25.54 with a design stream flow of 550 cfs
Sulfate (PWS)	0	0		0	250,000	250,000	##########	WQC applied at RMI 25.54 with a design stream flow of 550 cfs
Fluoride (PWS)	0	0		0	2,000	2,000	838,534	WQC applied at RMI 25.54 with a design stream flow of 550 cfs
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	2,180	
Total Arsenic	0	0		0	10	10.0	3,892	
Total Barium	0	0		0	2,400	2,400	934,157	
Total Boron	0	0		0	3,100	3,100	1,206,619	
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	
Dissolved Iron	0	0		0	300	300	116,770	
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	389,232	
Total Mercury	0	0		0	0.050	0.05	19.5	
Total Nickel	0	0		0	610	610	237,431	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	2,096	WQC applied at RMI 25.54 with a design stream flow of 550 cfs
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	93.4	
Total Zinc	0	0		0	N/A	N/A	N/A	

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

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

☑ ***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)	209,633	mg/L	Discharge Conc ≤ 10% WQBEL
Chloride (PWS)	104,817	mg/L	Discharge Conc ≤ 10% WQBEL
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	104,817	mg/L	Discharge Conc ≤ 10% WQBEL
Fluoride (PWS)	N/A	N/A	Discharge Conc < TQL
Total Aluminum	27,419	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	767,719	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	296,120	µg/L	Discharge Conc < TQL
Total Cadmium	76.9	µg/L	Discharge Conc < TQL
Total Chromium (III)	33,487	µg/L	Discharge Conc < TQL
Hexavalent Chromium	596	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	3,473	µg/L	Discharge Conc < TQL
Total Copper	505	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	116,770	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	628,900	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	1,235	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	389,232	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	19.5	µg/L	Discharge Conc < TQL
Total Nickel	16,945	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)	2,096	µg/L	Discharge Conc ≤ 10% WQBEL
Total Selenium	1,942	µg/L	Discharge Conc < TQL
Total Silver	135	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	93.4	µg/L	Discharge Conc < TQL
Total Zinc	4,327	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS

Attachment D: Toxic Management Spreadsheet for Outfall 003

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Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Donora Terminal** NPDES Permit No.: **PA0254983** Outfall No.: **003**

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

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
0.76	42.8	7.1						

					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		86									
	Chloride (PWS)	mg/L		2.75									
	Bromide	mg/L	<	0.2									
	Sulfate (PWS)	mg/L		23.8									
	Fluoride (PWS)	mg/L		0.06									
Group 2	Total Aluminum	µg/L		424									
	Total Antimony	µg/L	<	1									
	Total Arsenic	µg/L		1.1									
	Total Barium	µg/L		24.3									
	Total Beryllium	µg/L	<	1									
	Total Boron	µg/L	<	50									
	Total Cadmium	µg/L		0.2									
	Total Chromium (III)	µg/L	<	1									
	Hexavalent Chromium	µg/L		0.057									
	Total Cobalt	µg/L	<	0.5									
	Total Copper	µg/L		5.3									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	0.02									
	Dissolved Iron	µg/L		49									
	Total Iron	µg/L		373									
	Total Lead	µg/L		15.7									
	Total Manganese	µg/L		72									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		0.6									
	Total Phenols (Phenolics) (PWS)	µg/L	<	10									
	Total Selenium	µg/L	<	1									
	Total Silver	µg/L		0.2									
	Total Thallium	µg/L	<	0.2									
	Total Zinc	µg/L		132									
	Total Molybdenum	µg/L		1.6									
	Acrolein	µg/L	<										
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<										
	Benzene	µg/L	<										
	Bromoform	µg/L	<										
	Carbon Tetrachloride	µg/L	<										
	Chlorobenzene	µg/L											
	Chlorodibromomethane	µg/L	<										
	Chloroethane	µg/L	<										
	2-Chloroethyl Vinyl Ether	µg/L	<										

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

	Indeno(1,2,3-cd)Pyrene	µg/L	<										
	Isophorone	µg/L	<										
	Naphthalene	µg/L	<										
	Nitrobenzene	µg/L	<										
	n-Nitrosodimethylamine	µg/L	<										
	n-Nitrosodi-n-Propylamine	µg/L	<										
	n-Nitrosodiphenylamine	µg/L	<										
	Phenanthrene	µg/L	<										
	Pyrene	µg/L	<										
	1,2,4-Trichlorobenzene	µg/L	<										
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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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Donora Terminal, NPDES Permit No. PA0254983, Outfall 003

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Monongahela River**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	037185	35.62	760	5230	0.0001		Yes
End of Reach 1	037185	25.54	759	5330	0.0001	84.06	Yes

Q $_{7\text{-}10}$

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	35.62	0.1	550			684	18					100	7		
End of Reach 1	25.54	0.1	550			922.5	18								

Q $_{h}$

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	35.62														
End of Reach 1	25.54														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Donora Terminal, NPDES Permit No. PA0254983, Outfall 003

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.134 Analysis Hardness (mg/l): 99.101 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	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	47,742	
Total Antimony	0	0		0	1,100	1,100	70,022	
Total Arsenic	0	0		0	340	340	21,643	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	1,336,787	
Total Boron	0	0		0	8,100	8,100	515,618	
Total Cadmium	0	0		0	1.996	2.11	135	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	565.567	1,790	113,930	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	1,037	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	6,047	
Total Copper	0	0		0	13.325	13.9	884	Chem Translator of 0.96 applied
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	63.950	80.7	5,138	Chem Translator of 0.792 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	105	Chem Translator of 0.85 applied
Total Nickel	0	0		0	464.674	466	29,639	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	3.167	3.73	237	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	4,138	
Total Zinc	0	0		0	116.288	119	7,569	Chem Translator of 0.978 applied

☑ ***CFC*** CCT (min): 720 PMF: 0.928 Analysis Hardness (mg/l): 99.869 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	
Fluoride (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	95,721	
Total Arsenic	0	0		0	150	150	65,265	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	1,783,898	
Total Boron	0	0		0	1,600	1,600	696,155	
Total Cadmium	0	0		0	0.246	0.27	118	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.035	86.1	37,456	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	4,523	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	8,267	
Total Copper	0	0		0	8.946	9.32	4,054	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	703,198	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.513	3.18	1,382	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	394	Chem Translator of 0.85 applied
Total Nickel	0	0		0	51.949	52.1	22,671	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	2,171	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	5,656	
Total Zinc	0	0		0	118.007	120	52,074	Chem Translator of 0.986 applied

☑ ***THH*** CCT (min): 720 THH PMF: 0.928 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 1

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	##########	WQC applied at RMI 25.54 with a design stream flow of 550 cfs
Chloride (PWS)	0	0		0	250,000	250,000	##########	WQC applied at RMI 25.54 with a design stream flow of 550 cfs
Sulfate (PWS)	0	0		0	250,000	250,000	##########	WQC applied at RMI 25.54 with a design stream flow of 550 cfs
Fluoride (PWS)	0	0		0	2,000	2,000	937,597	WQC applied at RMI 25.54 with a design stream flow of 550 cfs
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	2,437	
Total Arsenic	0	0		0	10	10.0	4,351	
Total Barium	0	0		0	2,400	2,400	1,044,233	
Total Boron	0	0		0	3,100	3,100	1,348,801	
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	
Dissolved Iron	0	0		0	300	300	130,529	

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	435,097	
Total Mercury	0	0		0	0.050	0.05	21.8	
Total Nickel	0	0		0	610	610	265,409	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	2,344	WQC applied at RMI 25.54 with a design stream flow of 550 cfs
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	104	
Total Zinc	0	0		0	N/A	N/A	N/A	

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

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

☑ ***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)	234,399	mg/L	Discharge Conc ≤ 10% WQBEL
Chloride (PWS)	117,200	mg/L	Discharge Conc ≤ 10% WQBEL
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	117,200	mg/L	Discharge Conc ≤ 10% WQBEL
Fluoride (PWS)	938	mg/L	Discharge Conc ≤ 10% WQBEL
Total Aluminum	30,601	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	4,351	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	856,826	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	330,490	µg/L	Discharge Conc < TQL
Total Cadmium	86.2	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	37,456	µg/L	Discharge Conc < TQL
Hexavalent Chromium	665	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	3,876	µg/L	Discharge Conc < TQL
Total Copper	566	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	130,529	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	703,198	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	1,382	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	435,097	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	21.8	µg/L	Discharge Conc < TQL
Total Nickel	18,997	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)	2,344	µg/L	Discharge Conc ≤ 10% WQBEL
Total Selenium	2,171	µg/L	Discharge Conc < TQL
Total Silver	152	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	104	µg/L	Discharge Conc < TQL
Total Zinc	4,851	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS