pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0253308**
Facility Type	**Industrial**	APS ID	**1112736**
Major / Minor	**Minor**	Authorization ID	**1483315**

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

Applicant and Facility Information

Applicant Name	**Cleveland-Cliffs Steel Corporation**	Facility Name	**Cleveland Cliffs Steel Corporation Former Hillside Landfill Site**
Applicant Address	9227 Centre Pointe Drive	Facility Address	2301 Duss Avenue
	West Chester, OH 45069-4822		Ambridge, PA 15003-1865
Applicant Contact	James Kemp	Facility Contact	Same as Applicant
Applicant Phone	(513) 425-6177	Facility Phone	Same as Applicant
Applicant Email	James.kemp@clevelandcliffs.com		Same as Applicant
Client ID	160114	Site ID	668156
SIC Code	9999	Municipality	Harmony Township
SIC Description	Public Admin. - Nonclassifiable Establishment	County	Beaver
Date Application Received	April 1, 2024	EPA Waived?	Yes
Date Application Accepted	May 1, 2024	If No, Reason	
Purpose of Application	Renewal NPDES Permit Coverage		

Summary of Review

The Department received a renewal and transfer NPDES permit application from Cleveland-Cliffs Steel Corporation for its Former Hillside Landfill site on April 1, 2024. The transfer application is for a permittee name change from Cleveland-Cliffs Steel Holding Corporation to Cleveland-Cliffs Steel Corporation.

Cleveland-Cliffs Steel Corporation (Cleveland-Cliffs) owns the Former Hillside Landfill located at the former Armco Ambridge Works in Harmony Township, Beaver County, Pennsylvania. The hillside landfill was used by Armco Steel to dispose of solid waste from its Ambridge works from approximately 1952 to 1977. Fill materials placed into the landfill were produced from various activities at the Armco plant, which included oil and grease, mill scale, wastewater treatment plant sludge, cinders, fly ash, and demolition debris. Hydraulic oil containing polychlorinated biphenyls (PCBs) leaked form the hydraulic systems into the plant's hot mill sewer system, which in turn drained to the wastewater treatment plant. The treatment plant sludge was subsequently dumped into the Hillside Landfill. Armco also used cyanides and heavy metals in the plating and galvanizing processes at the plant. Electroplating waste and spent solvent were sent to the wastewater treatment plant, and the treatment plant sludge was subsequently dumped into the Hillside Landfill. As a result of the placement of these materials, seeps present near the toe of the landfill are impacted with light, non-aqueous phase liquid (LNAPL) which contains polychlorinated biphenyls (PCBs).

The site has one outfall, Outfall 001, that discharges to an unnamed tributary to the Ohio River. Outfall 001 discharges consist of collected, treated landfill seeps and stormwater run-off. The seeps/leachate is collected in a subgrade collection trench. The collection trench is directed to an oil/water separator. From the oil/water separator, the wastewater is pumped through "pre-filter" bag filters, granular activated carbon filters and "post filter" bag filters, and then discharged to the unnamed tributary. Sodium hypochlorite is added following the oil skimmer to oxidize dissolved iron to enable removal of iron

Approve	Deny	Signatures	Date
X		Adam Olesnanik, P.E. / Environmental Engineer	May 30, 2024
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	June 3, 2024

Summary of Review

by filtration. Sodium bisulfite is added following the post filters for dichlorination prior to discharge. Surface stormwater run-off from the site is collected into the oil/water separator for combination with the collected leachate.

The site was last inspected on August 1, 2023; no violations were noted. The permittee has no open violations.

Draft Permit issuance is recommended.

Public Participation

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.648
Latitude	40º 36' 58"	Longitude	-80º 13' 53"
Quad Name	Ambridge	Quad Code	1404
Wastewater Description:	Seeps from captive landfill and stormwater		

Receiving Waters	Unnamed Tributary to Ohio River	Stream Code	Not Applicable
NHD Com ID	Not Applicable	RMI	0.1
Drainage Area	0.52	Yield (cfs/mi^2)	0.006
Q_{7-10} Flow (cfs)	0.00304	Q_{7-10} Basis	USGS Streamstats
Elevation (ft)	695	Slope (ft/ft)	0.001
Watershed No.	20-G	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	

Nearest Downstream Public Water Supply Intake	Center Township Water Authority		
PWS Waters	Ohio River	Flow at Intake (cfs)	5,880
PWS RMI	953.78	Distance from Outfall (mi)	8.82

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.648
Latitude 40º 36' 58" **Longitude** -80º 13' 53"
Wastewater Description: IW Process Effluent without ELG

Technology-Based Effluent Limitations

Federal Effluent Limitation Guidelines (ELGs)

As described in 40 CFR 445.1 (e), the ELG for landfills point source category does not apply to this site because the captive landfill only received wastes generated by the industrial operation directly associated with the landfill.

Regulatory Effluent Standards and Monitoring Requirements

Flow Reporting requirements are in accordance with the 25 PA Code Chapter 92 regulations.

As oil-bearing wastewaters, discharges from Outfall 001 are subject to effluent standards for oil and grease from 25 Pa. Code § 95.2(2).

25 PA Code Chapter 92 requires pH requirements to be a minimum of 6.0 and a maximum of 9.0 S.U. for all industrial waste process and non-process discharges.

Table 1: Regulatory Effluent Standards and Monitoring Requirements

Parameter	Instant Minimum	Monthly Average	Daily Maximum	Instantaneous Maximum	Units
Flow	XXX	Report	Report	XXX	MGD
Oil and Grease	XXX	15.0	30.0	XXX	mg/L
pH	6.0	XXX	XXX	9.0	S.U.

Total Dissolved Solids Considerations

Outfall 001 is also subject to Chapter 95.10 Effluent Standards for total dissolved solids (TDS). The provisions of Chapter 95.10 were adopted on August 20, 2010 and became effective August 21, 2010. Chapter 95.10 of the Department's regulations establishes the effluent standards applicable to new and expanding discharges of TDS. Under the provisions of this regulation, dischargers that are subject to the requirements of 95.10 must be identified; discharges that are exempt from any treatment requirements under this chapter must be identified; the existing mass loadings of TDS that are exempt from the treatment requirements must be identified and quantified; and discharges of new and expanding mass loadings of TDS must be evaluated.

Integral to the implementation of Chapter 95.10 is the principle that existing, authorized mass loadings of TDS are exempt from any treatment requirements under these provisions. Existing mass loadings of TDS up to and including the maximum daily discharge loading for any existing discharge, provided that the loading was authorized prior to August 21, 2010 are exempt. Generally, no permit actions are required until an NPDES permit is issued, renewed, or amended. Discharge loadings of TDS authorized by the Department are typically exempt from the treatment requirements of Chapter 95.10 until the net TDS loading is increased, an existing discharge proposes a hydraulic expansion or there is a change in the waste stream. If there are existing mass or production-based TDS effluent limits, then these are used as the basis for the existing mass loading.

The concentration of TDS reported in the permit application is 486 mg/L. The concentration of TDS reported in the previous permit application was 468 mg/L. There is no reasonable potential for TDS loadings to be at levels of concern as the concentration is less than 1,000 mg/L. No limitations or monitoring requirements will be imposed for TDS based on 95.10.

Per- and Polyfluoroalkyl Substances (PFAS)

In February 2024, DEP implemented a new monitoring initiative for PFAS consistent with an EPA memorandum that provides guidance to states for addressing PFAS discharges. PFAS are a family of thousands of synthetic organic chemicals

that contain a chain of strong carbon-fluorine bonds. Many PFAS are highly stable, water- and oil-resistant, and exhibit other properties that make them useful in a variety of consumer products and industrial processes. PFAS are resistant to biodegradation, photooxidation, direct photolysis, and hydrolysis and do not readily degrade naturally; thus, many PFAS accumulate over time. According to the United States Department of Health and Human Services, Agency for Toxic Substances and Disease Registry (ATSDR), the environmental persistence and mobility of some PFAS, combined with decades of widespread use, have resulted in their presence in surface water, groundwater, drinking water, rainwater, soil, sediment, ice caps, outdoor and indoor air, plants, animal tissue, and human blood serum across the globe. ATSDR also reported that exposure to certain PFAS can lead to adverse human health impacts Due to their durability, toxicity, persistence, and pervasiveness, PFAS have emerged as potentially significant pollutants of concern.

In accordance with Section II.I of DEP's "Standard Operating Procedure (SOP) for Clean Water Program – Establishing Effluent Limitations for Individual Industrial Permits" [SOP No. BCW-PMT-032] and under the authority of 25 Pa. Code § 92a.61(b), DEP has determined that monitoring for a subset of common/well-studied PFAS including Perfluorooctanoic acid (PFOA), Perfluorooctanesulfonic acid (PFOS), Perfluorobutanesulfonic acid (PFBS), and Hexafluoropropylene oxide dimer acid (HFPO-DA) is necessary to help understand the extent of environmental contamination by PFAS in the Commonwealth and the extent to which point source dischargers are contributors. SOP BCW-PMT-032 directs permit writers to consider special monitoring requirements for PFOA, PFOS, PFBS, and HFPO-DA in the following instances:

a. If sampling that is completed as part of the permit renewal application reveals a detection of PFOA, PFOS, HFPO-DA or PFBS (any of these compounds), the application manager will establish a quarterly monitoring requirement for PFOA, PFOS, HFPO-DA and PFBS (all of these compounds) in the permit.

b. If sampling that is completed as part of the permit renewal application demonstrates non-detect values at or below the Target QLs for PFOA, PFOS, HFPO-DA and PFBS (all of these compounds in a minimum of 3 samples), the application manager will establish an annual monitoring requirement for PFOA, PFOS, HFPO-DA and PFBS in the permit.

c. In all cases the application manager will include a condition in the permit that the permittee may cease monitoring for PFOA, PFOS, HFPO-DA and PFBS when the permittee reports non-detect values at or below the Target QL for four consecutive monitoring periods for each PFAS parameter that is analyzed. Use the following language: The permittee may discontinue monitoring for PFOA, PFOS, HFPO-DA, and PFBS if the results in 4 consecutive monitoring periods indicate non-detects at or below Quantitation Limits of 4.0 ng/L for PFOA, 3.7 ng/L for PFOS, 3.5 ng/L for PFBS and 6.4 ng/L for HFPO-DA. When monitoring is discontinued, permittees should enter a No Discharge Indicator (NODI) Code of "GG" on DMRs.

Cleveland-Cliffs Steel Corporation's application sampling for PFOA, PFOS, PFBS, and HFPO-DA indicated non-detect at the Department's QLs. Therefore, annual reporting of PFOA, PFOS, PFBS, and HFPO-DA will be required consistent with Section II.I.b of SOP BCW-PMT-032.

As stated in Section II.I.c of the SOP, if non-detect values at or below DEP's Target QLs are reported for four consecutive monitoring periods (i.e., four consecutive annual results in Cleveland-Cliffs Steel Corporation's case), then the monitoring may be discontinued.

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 2. For IW discharges, the discharge flow used in modeling is the average flow during production or operation when the discharge is continuous, or the batch discharge flow rate for batch discharges 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 D of this Fact Sheet. Based on the results from Toxics Management Spread Sheet the recommended water quality-based effluent limitations or monitoring requirements for the discharges from Outfall 001 are displayed in Table 3.

Table 2: TMS Inputs for Outfall 001

Parameter	**Value**
River Mile Index	0.1
Discharge Flow (MGD)	0.072
Basin/Stream Characteristics	
Parameter	**Value**
Area in Square Miles	0.52
$Q_{7\text{-}10}$ (cfs)	0.00304
Low-flow yield (cfs/mi^2)	0.006
Elevation (ft)	695
Slope	0.0001

Table 3: Water Quality Based Effluent Limitations at Outfall 001

Parameters	Average Monthly	Daily Maximum	Discharge Concentration	Department's QLs
Total Boron(mg/L)	Report	Report	0.722	XXX
Hexavalent Chromium (µg/L)	Report	Report	< 5.0	1.0
Dissolved Iron (mg/L)	Report	Report	< 0.1	0.02
Total Iron (mg/L)	1.54	2.40	2.86	XXX
Total Manganese(mg/L)	1.02	1.60	0.641	XXX

Table 3: Water Quality Based Effluent Limitations at Outfall 001

Parameters	Average Monthly	Daily Maximum	Discharge Concentration	Department's QLs
Acrylamide (µg/L)	0.1	0.16	< 11.0	XXX
Carbon Tetrachloride (µg/L)	0.57	0.89	< 1.0	0.5

Total Maximum Daily Load

The Ohio River has a TMDL for PCBs and Chlordane. The TMDL outlines a plan to achieve water quality standards in the water body. The TMDL goal is for levels of PCB and chlordane in the water column to be equal to or less than the Commonwealth's water quality criteria. The production and use of PCB in the United States was banned in July of 1979. While it is now illegal to manufacture, distribute, or use PCB in the United states, these synthetic oils were used in the past. PCB was introduced into the environment while use was unrestricted, as is the case with this facility. The site has been shown to have PCBs in its discharge. The TMDL required that all discharges that are known to contain PCBs have effluent limitations and a requirement of "not detectable" for limits lower than detection. The Hillside Landfill was not given a WLA for PCBs. So, the TMDL assumes that the PCBs pollutant load from the site will be zero. To be consistent with this assumption with respect to 40 CFR 122.44(d)(1)(vii)(B) and the Department permitting procedures, the permit's WQBEL for Total PCBs will be equal to the water quality criterion. Compliance with the PCB WQBELs will be evaluated based on the achievement of the Department's quantitation limits (QLs). Table 4 summarizes the TMDL WQBELs for Outfall 001.

Table 4. PCB WQBELs

	Effluent Limits as Specified in Part A of the Permit (µg/L)		Effluent Limits as Specified on DMRs/eDMR for Compliance Evaluations (µg/L)	
Parameter	**Average Monthly**	**Daily Maximum**	**Average Monthly**	**Daily Maximum**
PCBs, Total	0.000064	0.000064	<0.50	<0.50

Anti-backsliding:

Previous effluent limits and monitoring requirements can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed below in Table 5. The Total Iron limitation was developed in the previous permit as a BPJ limitation derived from EPA's guidance document "Guidance for BAT-Equivalent Treatment of Selected Toxic Pollutants".

Table 5: Existing Effluent Limitation for 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)	Report	Report	XXX	XXX	XXX	XXX	2/Month	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	2/month	Grab
Oil and Grease	XXX	XXX	XXX	15.0	30.0	XXX	2/month	Grab
Boron, Total	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
Iron, Dissolved	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
Iron, Total	XXX	XXX	XXX	1.5	3.0	XXX	2/month	Grab
Manganese, Total	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
PCB-1016 (ug/L)	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
PCB-1242 (ug/L)	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
PCBs, Total (ug/L)	XXX	XXX	XXX	0.000064	0.000064	XXX	2/month	Grab

Proposed Effluent Limitations

The proposed effluent limitations and monitoring requirements for Outfall 001 are shown below in Table 6. The limits are the most stringent values from the above limitation analysis. Based on the limitation development above, Outfall 001 will receive new WQBELs for Total Iron, Total Manganese, Acrylamide and Carbon Tetrachloride, and monitoring requirements for Hexavalent Chromium. At this time Cleveland Cliffs may not be able to achieve these new WQBELs upon permit issuance; therefore, in accordance with 25 Pa. Code § 92a.51(a) of DEP's regulations, the Department is

granting a three-year compliance schedule for Cleveland Cliffs to come into compliance with the new limits. Monitor and report requirements will be imposed for Total Manganese, Acrylamide, and Carbon Tetrachloride, and the current limitations will be imposed for Total Iron during the interim period. The final WQBELs will be imposed three years after the permit effective date. Outfall 001 received new WBELs for Carbon Tetrachloride and monitoring requirements for Hexavalent Chromium because of the reporting limit that was used during the analytical testing. The reporting limits used were less stringent that the quantitation limitations that the Department requires, therefore, it is uncertain if the parameters are at concentrations above the Department QL. During the 30-day public comment period, Cleveland Cliffs may resample for Carbon Tetrachloride and Hexavalent Chromium at the Department's QLs to verify that the parameters are not present in the discharge. If it is determined that the parameters are not present in the discharge at the Department's QL, Carbon Tetrachloride and Hexavalent Chromium may be removed from the Final Permit. Additionally, Outfall 001 received WQBELs for Acrylamide even though it was non-detect; however, if it is believed that Acrylamide is not present in the discharge and the permittee doesn't use chemical additives containing Acrylamide, then the limitation and monitoring requirement for Acrylamide can be removed. If Cleveland Cliffs certifies that chemical additives used in the processes that discharge via Outfall 001 do not contain Acrylamide during the 30-day comment period, then the limitations for Acrylamide may be removed from the Final Permit.

Table 6: Proposed Effluent Limitation for 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)	Report	Report	XXX	XXX	XXX	XXX	2/Month	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	9.0	XXX	2/month	Grab
Oil and Grease	XXX	XXX	XXX	15.0	30.0	XXX	2/month	Grab
Boron, Total	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
Hexavalent Chromium	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
Iron, Dissolved	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
Iron, Total	XXX	XXX	XXX	1.5	2.40	XXX	2/month	Grab
Manganese, Total	XXX	XXX	XXX	1.02	1.60	XXX	2/month	Grab
Acrylamide(µg/L)	XXX	XXX	XXX	0.1	0.16	XXX	2/month	Grab
Carbon Tetrachloride (µg/L)	XXX	XXX	XXX	0.57	0.89	XXX	2/month	Grab
PCB-1016 (ug/L)	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
PCB-1242 (ug/L)	XXX	XXX	XXX	Report	Report	XXX	2/month	Grab
PCBs, Total (ug/L)	XXX	XXX	XXX	0.000064	0.000064	XXX	2/month	Grab
PFOA (ng/L)	XXX	XXX	XXX	XXX	Monitor	XXX	1/year	Grab
PFOS (ng/L)	XXX	XXX	XXX	XXX	Monitor	XXX	1/year	Grab
PFBS (ng/L)	XXX	XXX	XXX	XXX	Monitor	XXX	1/year	Grab
HFPO-DA (ng/L)	XXX	XXX	XXX	XXX	Monitor	XXX	1/year	Grab

The WQBEL for Total PCBs is more stringent that the Department's quantitation limits. For the purpose of compliance, a Part C Condition will be included in the permit stating that a statistical value report on the DMR that is less than the QLs (I.E. non-detect) will be considered to be incompliance. The results for the PCBs must be non-detect at the QL for all of the congeners, to be in compliance. If one of the congeners is detected at or above the QL, it is a violation of the total PCB effluent limitation. The QLs for the PCBs are displayed below in Table 7.

Table 7: Quantitation Limitation for Compliance

Parameter Name	Quantitation Limit
Total PCBs	0.50 µg/L
PCB-1016	0.25 µg/L
PCB-1242	0.25 µg/L

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☒	Toxics Management Spreadsheet (see Attachment **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: Site Plans

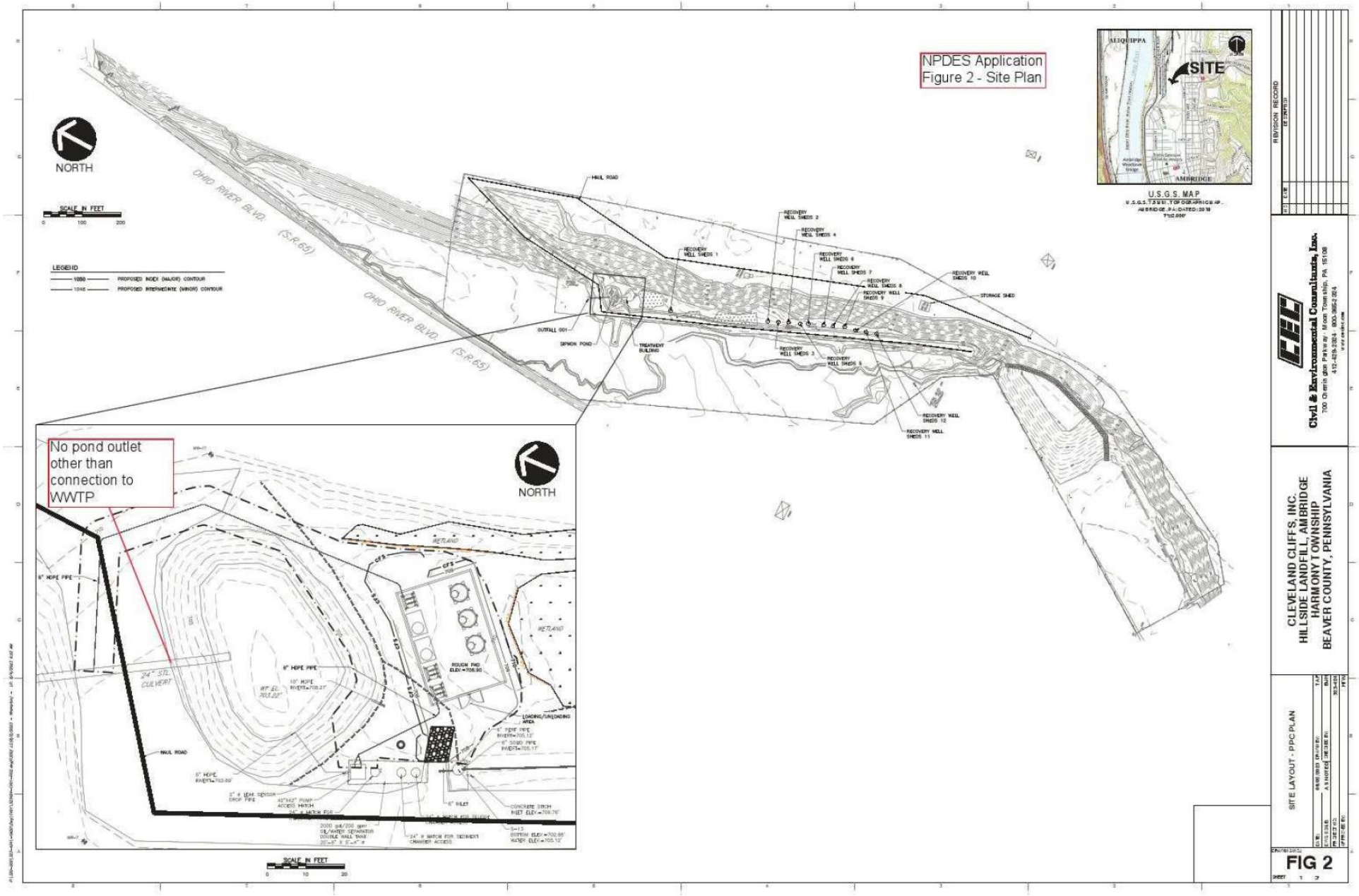
Attachment B: Site Flow Diagram

Attachment C: Outfall 001 Stream Stats Report

Attachment D: Outfall 001 Toxics Management Spreadsheet Evaluation

Attachment A:

Site Plans

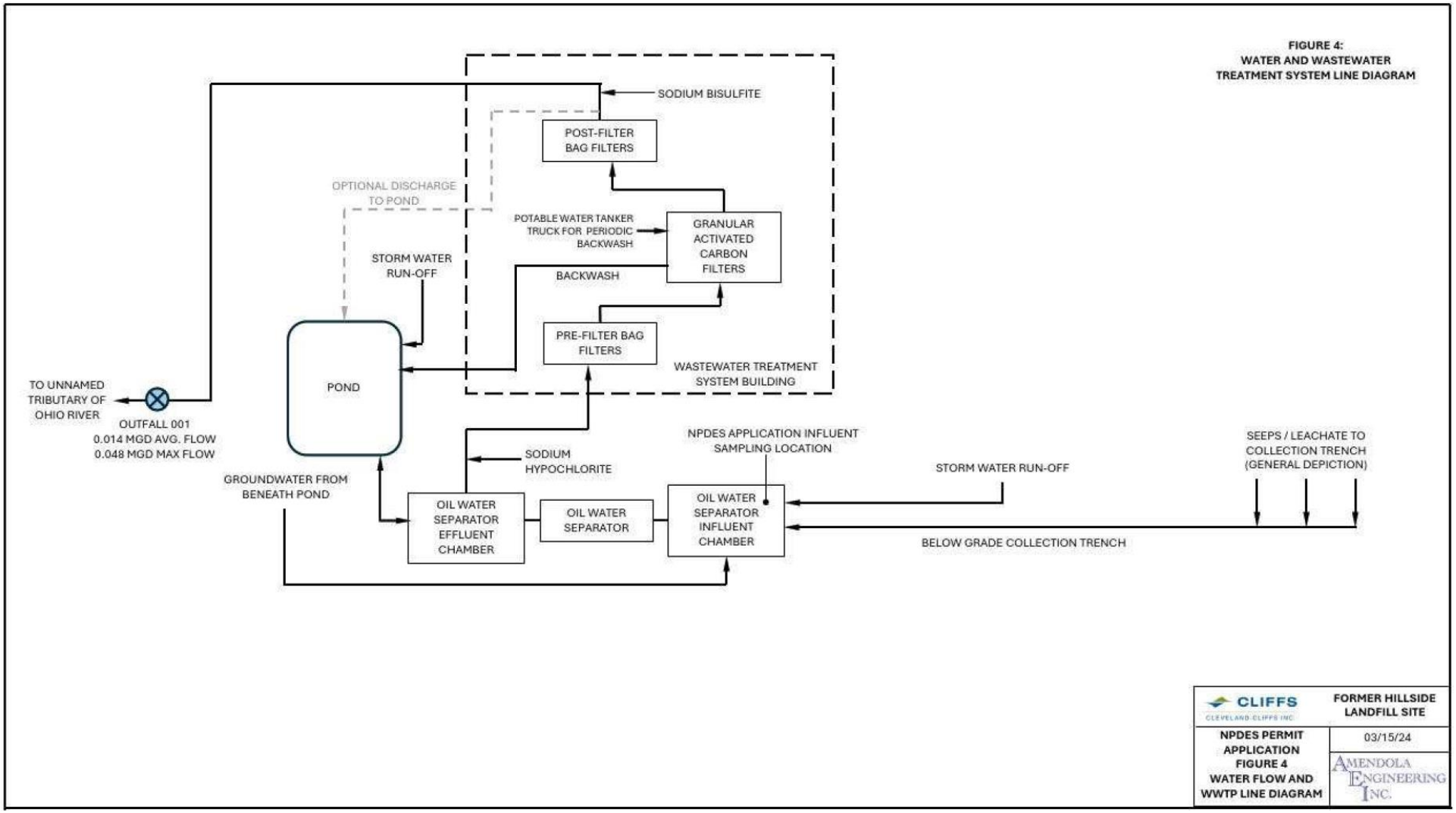

NPDES Application
Figure 2 - Site Plan
NORTH
SCALE IN FEET
OHIO RIVER BLVD. (S.R.65)
HAUL ROAD
OUTFALL 001
SIMON POND
TREATMENT BUILDING
STORAGE SHED
SITE
ALIQUIPPA
AMBRIDGE
U.S.G.S. MAP
No pond outlet other than connection to WWTP
WETLAND
24" STL CULVERT
ROUGH PAD ELEV.=705.90
LOADING/UNLOADING AREA
CONCRETE DITCH
Civil & Environmental Consultants, Inc.
CLEVELAND CLIFFS, INC.
HILLSIDE LANDFILL, AMBRIDGE
HARMONY TOWNSHIP
BEAVER COUNTY, PENNSYLVANIA
SITE LAYOUT - PPC PLAN
FIG 2


DRAINAGE FROM HARMONY TOWNSHIP
OUTFALL 001
TREATMENT SYSTEM BUILDING
OUTFALL 001 DISCHARGE OVERLAND FLOW
POND
(connected to treatment system; no other outlet)
UNNAMED TRIBUTARY TO OHIO RIVER
CULVERT BENEATH RT. 65 AND RAILROAD TO OHIO RIVER

Attachment B:

Site Flow Diagram

FIGURE 4:
WATER AND WASTEWATER TREATMENT SYSTEM LINE DIAGRAM

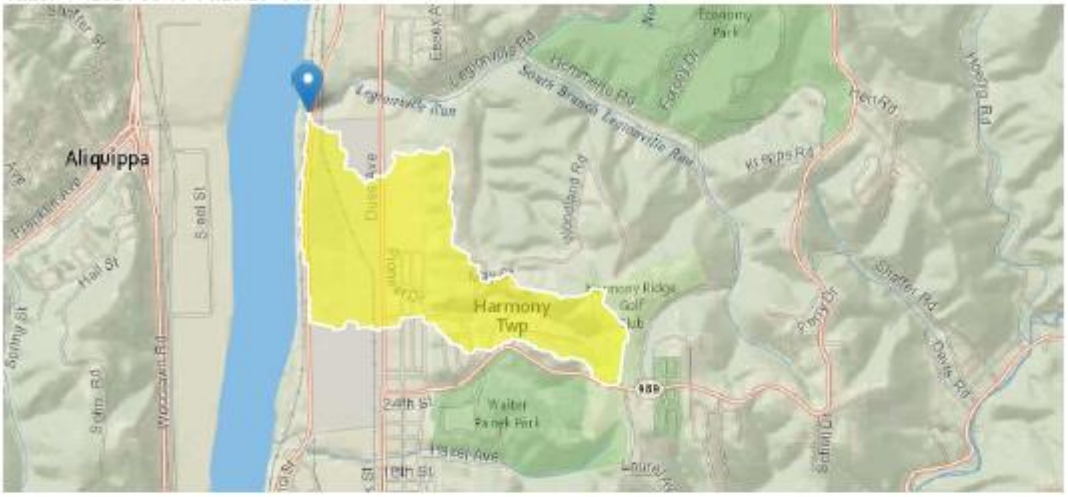


Attachment C:

Outfall 001 StreamStats Report

Outfall 001 StreamStats Report

Region ID: PA
Workspace ID: PA20240516182458334000
Clicked Point (Latitude, Longitude): 40.62035, -80.23180
Time: 2024-05-16 14:25:20 -0400



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.52	square miles
ELEV	Mean Basin Elevation	859	feet

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.52	square miles	2.26	1400
ELEV	Mean Basin Elevation	859	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	0.0101	ft^3/s
30 Day 2 Year Low Flow	0.0197	ft^3/s
7 Day 10 Year Low Flow	0.00304	ft^3/s
30 Day 10 Year Low Flow	0.00663	ft^3/s
90 Day 10 Year Low Flow	0.013	ft^3/s

Low-Flow Statistics Citations

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

Application Version: 4.20.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

Attachment D:

Outfall 001 Toxics Management Spreadsheet Evaluation

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: Cleveland Cliffs Former Hillside Landfill NPDES Permit No.: PA0253308 Outfall No.: 001

Evaluation Type: Major Sewage / Industrial Waste Wastewater Description: Treated Captive Landfill Leachate

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
0.072	349	6.88						

	Discharge Pollutant	Units	Max Discharge Conc		0 if left blank: Trib Conc	0 if left blank: Stream Conc	0.5 if left blank: Daily CV	0.5 if left blank: Hourly CV	0 if left blank: Strea m CV	0 if left blank: Fate Coeff	0 if left blank: FOS	1 if left blank: Criteri a Mod	1 if left blank: Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		486									
	Chloride (PWS)	mg/L		23.4									
	Bromide	mg/L		1.3									
	Sulfate (PWS)	mg/L		88.4									
	Fluoride (PWS)	mg/L		0.26									
Group 2	Total Aluminum	µg/L		10									
	Total Antimony	µg/L	<	1									
	Total Arsenic	µg/L	<	1.5									
	Total Barium	µg/L		160									
	Total Beryllium	µg/L	<	0.5									
	Total Boron	µg/L		722									
	Total Cadmium	µg/L	<	0.2									
	Total Chromium (III)	µg/L	<	1									
	Hexavalent Chromium	µg/L	<	5									
	Total Cobalt	µg/L		1.6									
	Total Copper	µg/L	<	2.5									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L		6.2									
	Dissolved Iron	µg/L	<	100									
	Total Iron	µg/L		2860									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		641									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L	<	2.5									
	Total Phenols (Phenolics) (PWS)	µg/L	<	5									
	Total Selenium	µg/L	<	2									
	Total Silver	µg/L	<	0.33									
	Total Thallium	µg/L	<	0.2									
	Total Zinc	µg/L		20									
	Total Molybdenum	µg/L		10									
	Acrolein	µg/L	<	1.3									
	Acrylamide	µg/L	<	11									
	Acrylonitrile	µg/L	<	5									
	Benzene	µg/L	<	0.5									
	Bromoform	µg/L	<	0.5									

Group 3	Carbon Tetrachloride	µg/L	<	1										
	Chlorobenzene	µg/L		0.5										
	Chlorodibromomethane	µg/L	<	0.5										
	Chloroethane	µg/L	<	1										
	2-Chloroethyl Vinyl Ether	µg/L	<	5										
	Chloroform	µg/L	<	0.5										
	Dichlorobromomethane	µg/L	<	0.5										
	1,1-Dichloroethane	µg/L	<	0.5										
	1,2-Dichloroethane	µg/L	<	0.5										
	1,1-Dichloroethylene	µg/L	<	0.5										
	1,2-Dichloropropane	µg/L	<	0.5										
	1,3-Dichloropropylene	µg/L	<	0.47										
	1,4-Dioxane	µg/L	<	0.19										
	Ethylbenzene	µg/L	<	0.5										
	Methyl Bromide	µg/L	<	1										
	Methyl Chloride	µg/L	<	1										
	Methylene Chloride	µg/L	<	1										
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5										
	Tetrachloroethylene	µg/L	<	0.5										
	Toluene	µg/L	<	0.5										
	1,2-trans-Dichloroethylene	µg/L	<	0.5										
	1,1,1-Trichloroethane	µg/L	<	0.5										
	1,1,2-Trichloroethane	µg/L	<	0.5										
	Trichloroethylene	µg/L	<	0.5										
	Vinyl Chloride	µg/L	<	0.5										
Group 4	2-Chlorophenol	µg/L	<	3										
	2,4-Dichlorophenol	µg/L	<	3										
	2,4-Dimethylphenol	µg/L	<	3										
	4,6-Dinitro-o-Cresol	µg/L	<	6										
	2,4-Dinitrophenol	µg/L	<	6										
	2-Nitrophenol	µg/L	<	3										
	4-Nitrophenol	µg/L	<	3										
	p-Chloro-m-Cresol	µg/L	<	3										
	Pentachlorophenol	µg/L	<	6										
	Phenol	µg/L	<	8.1										
	2,4,6-Trichlorophenol	µg/L	<	3										
Group 5	Acenaphthene	µg/L	<	1.5										
	Acenaphthylene	µg/L	<	1.5										
	Anthracene	µg/L	<	1.5										
	Benzidine	µg/L	<	4										
	Benzo(a)Anthracene	µg/L	<	1.5										
	Benzo(a)Pyrene	µg/L	<	1.5										
	3,4-Benzofluoranthene	µg/L	<	1.5										
	Benzo(ghi)Perylene	µg/L	<	1.5										
	Benzo(k)Fluoranthene	µg/L	<	1.5										
	Bis(2-Chloroethoxy)Methane	µg/L	<	3										
	Bis(2-Chloroethyl)Ether	µg/L	<	3										
	Bis(2-Chloroisopropyl)Ether	µg/L	<	3										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	3										
	4-Bromophenyl Phenyl Ether	µg/L	<	3										
	Butyl Benzyl Phthalate	µg/L	<	3										
	2-Chloronaphthalene	µg/L	<	3										
	4-Chlorophenyl Phenyl Ether	µg/L	<	3										
	Chrysene	µg/L	<	1.5										
	Dibenzo(a,h)Anthrancene	µg/L	<	1.5										
	1,2-Dichlorobenzene	µg/L	<	1										
	1,3-Dichlorobenzene	µg/L	<	0.43										
	1,4-Dichlorobenzene	µg/L	<	1										
	3,3-Dichlorobenzidine	µg/L	<	3										
	Diethyl Phthalate	µg/L	<	3										
	Dimethyl Phthalate	µg/L	<	3										
	Di-n-Butyl Phthalate	µg/L	<	3										
	2,4-Dinitrotoluene	µg/L	<	3										

	2,6-Dinitrotoluene	µg/L	<	3										
	Di-n-Octyl Phthalate	µg/L	<	3										
	1,2-Diphenylhydrazine	µg/L	<	3										
	Fluoranthene	µg/L	<	1.5										
	Fluorene	µg/L	<	1.5										
	Hexachlorobenzene	µg/L	<	3										
	Hexachlorobutadiene	µg/L	<	0.49										
	Hexachlorocyclopentadiene	µg/L	<	3										
	Hexachloroethane	µg/L	<	3										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	1.5										
	Isophorone	µg/L	<	3										
	Naphthalene	µg/L	<	1.5										
	Nitrobenzene	µg/L	<	3										
	n-Nitrosodimethylamine	µg/L	<	3										
	n-Nitrosodi-n-Propylamine	µg/L	<	3										
	n-Nitrosodiphenylamine	µg/L	<	3										
	Phenanthrene	µg/L	<	1.5										
	Pyrene	µg/L	<	1.5										
	1,2,4-Trichlorobenzene	µg/L	<	0.42										
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	<	0.25										
	PCB-1221	µg/L	<											
	PCB-1232	µg/L	<											
	PCB-1242	µg/L	<	0.25										
	PCB-1248	µg/L	<											
	PCB-1254	µg/L	<											
	PCB-1260	µg/L	<											
	PCBs, Total	µg/L	<											
	Toxaphene	µg/L	<											
	2,3,7,8-TCDD	ng/L	<											
Group 7	Gross Alpha	pCi/L												
	Total Beta	pCi/L	<											
	Radium 226/228	pCi/L	<											
	Total Strontium	µg/L	<											
	Total Uranium	µg/L	<											
	Osmotic Pressure	mOs/kg												

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Cleveland Cliffs Former Hillside Landfill, NPDES Permit No. PA0253308, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: Trib to Ohio River

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	099999	0.1	695	0.52			Yes
End of Reach 1		0.05	694	0.53			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	0.1	0.006										170	7		
End of Reach 1	0.05	0.006													

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	0.1														
End of Reach 1	0.05														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Cleveland Cliffs Former Hillside Landfill, NPDES Permit No. PA0253308, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.001 PMF: 1 Analysis Hardness (mg/l): 344.12 Analysis pH: 6.88

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	771	
Total Antimony	0	0		0	1,100	1,100	1,131	
Total Arsenic	0	0		0	340	340	350	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	21,588	
Total Boron	0	0		0	8,100	8,100	8,327	
Total Cadmium	0	0		0	6.686	7.49	7.7	Chem Translator of 0.892 applied
Total Chromium (III)	0	0		0	1567.699	4,961	5,100	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	16.7	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	97.7	
Total Copper	0	0		0	43.059	44.9	46.1	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	240.522	394	405	Chem Translator of 0.611 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	1.69	Chem Translator of 0.85 applied
Total Nickel	0	0		0	1332.061	1,335	1,372	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	26.950	31.7	32.6	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	66.8	
Total Zinc	0	0		0	333.897	341	351	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	3.08	

Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	650	650	668	
Benzene	0	0		0	640	640	658	
Bromoform	0	0		0	1,800	1,800	1,850	
Carbon Tetrachloride	0	0		0	2,800	2,800	2,878	
Chlorobenzene	0	0		0	1,200	1,200	1,234	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	18,504	
Chloroform	0	0		0	1,900	1,900	1,953	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	15,420	
1,1-Dichloroethylene	0	0		0	7,500	7,500	7,710	
1,2-Dichloropropane	0	0		0	11,000	11,000	11,308	
1,3-Dichloropropylene	0	0		0	310	310	319	
Ethylbenzene	0	0		0	2,900	2,900	2,981	
Methyl Bromide	0	0		0	550	550	565	
Methyl Chloride	0	0		0	28,000	28,000	28,784	
Methylene Chloride	0	0		0	12,000	12,000	12,336	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	1,028	
Tetrachloroethylene	0	0		0	700	700	720	
Toluene	0	0		0	1,700	1,700	1,748	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	6,990	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	3,084	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	3,495	
Trichloroethylene	0	0		0	2,300	2,300	2,364	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	576	
2,4-Dichlorophenol	0	0		0	1,700	1,700	1,748	
2,4-Dimethylphenol	0	0		0	660	660	678	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	82.2	
2,4-Dinitrophenol	0	0		0	660	660	678	
2-Nitrophenol	0	0		0	8,000	8,000	8,224	
4-Nitrophenol	0	0		0	2,300	2,300	2,364	
p-Chloro-m-Cresol	0	0		0	160	160	164	
Pentachlorophenol	0	0		0	7.755	7.75	7.97	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	473	
Acenaphthene	0	0		0	83	83.0	85.3	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	308	
Benzo(a)Anthracene	0	0		0	0.5	0.5	0.51	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	30,000	30,000	30,840	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	4,626	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	278	

Butyl Benzyl Phthalate	0	0		0	140	140	144	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	843	
1,3-Dichlorobenzene	0	0		0	350	350	360	
1,4-Dichlorobenzene	0	0		0	730	730	750	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	4,112	
Dimethyl Phthalate	0	0		0	2,500	2,500	2,570	
Di-n-Butyl Phthalate	0	0		0	110	110	113	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	1,645	
2,6-Dinitrotoluene	0	0		0	990	990	1,018	
1,2-Diphenylhydrazine	0	0		0	15	15.0	15.4	
Fluoranthene	0	0		0	200	200	206	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	10	10.0	10.3	
Hexachlorocyclopentadiene	0	0		0	5	5.0	5.14	
Hexachloroethane	0	0		0	60	60.0	61.7	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	10,280	
Naphthalene	0	0		0	140	140	144	
Nitrobenzene	0	0		0	4,000	4,000	4,112	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	17,476	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	308	
Phenanthrene	0	0		0	5	5.0	5.14	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	134	

☑ *CFC* CCT (min): 0.001 PMF: 1 Analysis Hardness (mg/l): 344.12 Analysis pH: 6.88

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	226	
Total Arsenic	0	0		0	150	150	154	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	4,215	
Total Boron	0	0		0	1,600	1,600	1,645	
Total Cadmium	0	0		0	0.580	0.68	0.7	Chem Translator of 0.857 applied
Total Chromium (III)	0	0		0	203.925	237	244	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	10.7	Chem Translator of 0.962 applied

Total Cobalt	0	0		0	19	19.0	19.5	
Total Copper	0	0		0	25.747	26.8	27.6	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	1,542	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	9.373	15.3	15.8	Chem Translator of 0.611 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	0.93	Chem Translator of 0.85 applied
Total Nickel	0	0		0	147.951	148	153	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	5.13	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	13.4	
Total Zinc	0	0		0	336.628	341	351	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	3.08	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	130	130	134	
Benzene	0	0		0	130	130	134	
Bromoform	0	0		0	370	370	380	
Carbon Tetrachloride	0	0		0	560	560	576	
Chlorobenzene	0	0		0	240	240	247	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	3,598	
Chloroform	0	0		0	390	390	401	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	3,187	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,542	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,262	
1,3-Dichloropropylene	0	0		0	61	61.0	62.7	
Ethylbenzene	0	0		0	580	580	596	
Methyl Bromide	0	0		0	110	110	113	
Methyl Chloride	0	0		0	5,500	5,500	5,654	
Methylene Chloride	0	0		0	2,400	2,400	2,467	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	216	
Tetrachloroethylene	0	0		0	140	140	144	
Toluene	0	0		0	330	330	339	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	1,439	
1,1,1-Trichloroethane	0	0		0	610	610	627	
1,1,2-Trichloroethane	0	0		0	680	680	699	
Trichloroethylene	0	0		0	450	450	463	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	113	
2,4-Dichlorophenol	0	0		0	340	340	350	
2,4-Dimethylphenol	0	0		0	130	130	134	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	16.4	
2,4-Dinitrophenol	0	0		0	130	130	134	

2-Nitrophenol	0	0		0	1,600	1,600	1,645	
4-Nitrophenol	0	0		0	470	470	483	
p-Chloro-m-Cresol	0	0		0	500	500	514	
Pentachlorophenol	0	0		0	5.949	5.95	6.12	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	93.5	
Acenaphthene	0	0		0	17	17.0	17.5	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	60.7	
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.1	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	6,000	6,000	6,168	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	935	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	55.5	
Butyl Benzyl Phthalate	0	0		0	35	35.0	36.0	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	160	160	164	
1,3-Dichlorobenzene	0	0		0	69	69.0	70.9	
1,4-Dichlorobenzene	0	0		0	150	150	154	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	822	
Dimethyl Phthalate	0	0		0	500	500	514	
Di-n-Butyl Phthalate	0	0		0	21	21.0	21.6	
2,4-Dinitrotoluene	0	0		0	320	320	329	
2,6-Dinitrotoluene	0	0		0	200	200	206	
1,2-Diphenylhydrazine	0	0		0	3	3.0	3.08	
Fluoranthene	0	0		0	40	40.0	41.1	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	2	2.0	2.06	
Hexachlorocyclopentadiene	0	0		0	1	1.0	1.03	
Hexachloroethane	0	0		0	12	12.0	12.3	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	2,159	
Naphthalene	0	0		0	43	43.0	44.2	
Nitrobenzene	0	0		0	810	810	833	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	3,495	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	60.7	
Phenanthrene	0	0		0	1	1.0	1.03	

Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	26.7	

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

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	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 Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	5.76	
Total Arsenic	0	0		0	10	10.0	10.3	
Total Barium	0	0		0	2,400	2,400	2,467	
Total Boron	0	0		0	3,100	3,100	3,187	
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	308	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	1,028	
Total Mercury	0	0		0	0.050	0.05	0.051	
Total Nickel	0	0		0	610	610	627	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	0.25	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	3.08	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	
Bromoform	0	0		0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0		0	N/A	N/A	N/A	
Chlorobenzene	0	0		0	100	100.0	103	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	5.86	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	N/A	N/A	N/A	
1,1-Dichloroethylene	0	0		0	33	33.0	33.9	

1,2-Dichloropropane	0	0		0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0		0	N/A	N/A	N/A	
Ethylbenzene	0	0		0	68	68.0	69.9	
Methyl Bromide	0	0		0	100	100.0	103	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	N/A	N/A	N/A	
1,1,2,2-Tetrachloroethane	0	0		0	N/A	N/A	N/A	
Tetrachloroethylene	0	0		0	N/A	N/A	N/A	
Toluene	0	0		0	57	57.0	58.6	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	103	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	10,280	
1,1,2-Trichloroethane	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0		0	N/A	N/A	N/A	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	30	30.0	30.8	
2,4-Dichlorophenol	0	0		0	10	10.0	10.3	
2,4-Dimethylphenol	0	0		0	100	100.0	103	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	2.06	
2,4-Dinitrophenol	0	0		0	10	10.0	10.3	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	N/A	N/A	N/A	
Phenol	0	0		0	4,000	4,000	4,112	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	72.0	
Anthracene	0	0		0	300	300	308	
Benzidine	0	0		0	N/A	N/A	N/A	
Benzo(a)Anthracene	0	0		0	N/A	N/A	N/A	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroisopropyl)Ether	0	0		0	200	200	206	
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	0.1	0.1	0.1	
2-Chloronaphthalene	0	0		0	800	800	822	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	1,028	
1,3-Dichlorobenzene	0	0		0	7	7.0	7.2	
1,4-Dichlorobenzene	0	0		0	300	300	308	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	617	

Dimethyl Phthalate	0	0		0	2,000	2,000	2,056	
Di-n-Butyl Phthalate	0	0		0	20	20.0	20.6	
2,4-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
1,2-Diphenylhydrazine	0	0		0	N/A	N/A	N/A	
Fluoranthene	0	0		0	20	20.0	20.6	
Fluorene	0	0		0	50	50.0	51.4	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0		0	4	4.0	4.11	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	34	34.0	35.0	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	10.3	
n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	20	20.0	20.6	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.072	

☑ *CRL* CCT (min): 0.140 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	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylamide	0	0		0	0.07	0.07	0.1	
Acrylonitrile	0	0		0	0.06	0.06	0.086	
Benzene	0	0		0	0.58	0.58	0.83	
Bromoform	0	0		0	7	7.0	10.0	
Carbon Tetrachloride	0	0		0	0.4	0.4	0.57	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	1.14	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	N/A	N/A	N/A	
Dichlorobromomethane	0	0		0	0.95	0.95	1.36	
1,2-Dichloroethane	0	0		0	9.9	9.9	14.2	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	1.29	
1,3-Dichloropropylene	0	0		0	0.27	0.27	0.39	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Methyl Bromide	0	0		0	N/A	N/A	N/A	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	20	20.0	28.6	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	0.29	
Tetrachloroethylene	0	0		0	10	10.0	14.3	
Toluene	0	0		0	N/A	N/A	N/A	
1,2-trans-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,1,1-Trichloroethane	0	0		0	N/A	N/A	N/A	
1,1,2-Trichloroethane	0	0		0	0.55	0.55	0.79	
Trichloroethylene	0	0		0	0.6	0.6	0.86	
Vinyl Chloride	0	0		0	0.02	0.02	0.029	
2-Chlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0		0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0		0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0		0	N/A	N/A	N/A	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	0.030	0.03	0.043	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	2.15	
Acenaphthene	0	0		0	N/A	N/A	N/A	

Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.0001	0.0001	0.0001	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.001	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.0001	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.001	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.014	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.043	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	0.46	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.12	0.12	0.17	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.0001	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.05	0.05	0.072	
Diethyl Phthalate	0	0		0	N/A	N/A	N/A	
Dimethyl Phthalate	0	0		0	N/A	N/A	N/A	
Di-n-Butyl Phthalate	0	0		0	N/A	N/A	N/A	
2,4-Dinitrotoluene	0	0		0	0.05	0.05	0.072	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.072	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.043	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00008	0.00008	0.0001	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.014	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	0.14	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.001	
Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.0007	0.0007	0.001	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.007	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	4.72	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	

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

No. Samples/Month: 4

Pollutants	*Mass Limits* AML (lbs/day)	*Mass Limits* MDL (lbs/day)	*Concentration Limits* AML	*Concentration Limits* MDL	*Concentration Limits* IMAX	*Concentration Limits* Units	Governing WQBEL	WQBEL Basis	Comments
Total Boron	Report	Report	Report	Report	Report	µg/L	1,645	CFC	Discharge Conc > 10% WQBEL (no RP)
Hexavalent Chromium	Report	Report	Report	Report	Report	µg/L	10.7	CFC	Discharge Conc > 10% WQBEL (no RP)
Dissolved Iron	Report	Report	Report	Report	Report	µg/L	308	THH	Discharge Conc > 10% WQBEL (no RP)
Total Iron	0.93	1.44	1,542	2,406	3,855	µg/L	1,542	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Manganese	0.62	0.96	1,028	1,604	2,570	µg/L	1,028	THH	Discharge Conc ≥ 50% WQBEL (RP)
Acrylamide	0.00006	0.00009	0.1	0.16	0.25	µg/L	0.1	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Carbon Tetrachloride	0.0003	0.0005	0.57	0.89	1.43	µg/L	0.57	CRL	Discharge Conc ≥ 50% WQBEL (RP)

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Fluoride (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	750	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	2,467	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Cadmium	0.7	µg/L	Discharge Conc < TQL
Total Chromium (III)	244	µg/L	Discharge Conc < TQL
Total Cobalt	19.5	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	27.6	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Total Lead	15.8	µg/L	Discharge Conc < TQL
Total Mercury	0.051	µg/L	Discharge Conc < TQL
Total Nickel	153	µg/L	Discharge Conc < TQL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	5.13	µg/L	Discharge Conc < TQL
Total Silver	31.7	µg/L	Discharge Conc < TQL
Total Thallium	0.25	µg/L	Discharge Conc < TQL
Total Zinc	341	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	3.0	µg/L	Discharge Conc < TQL
Acrylonitrile	0.086	µg/L	Discharge Conc < TQL
Benzene	0.83	µg/L	Discharge Conc < TQL
Bromoform	10.0	µg/L	Discharge Conc < TQL

Chlorobenzene	103	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	1.14	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	3,598	µg/L	Discharge Conc < TQL
Chloroform	5.86	µg/L	Discharge Conc < TQL
Dichlorobromomethane	1.36	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	14.2	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	33.9	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	1.29	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	0.39	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	69.9	µg/L	Discharge Conc < TQL
Methyl Bromide	103	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	5,654	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	28.6	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	0.29	µg/L	Discharge Conc < TQL
Tetrachloroethylene	14.3	µg/L	Discharge Conc < TQL
Toluene	58.6	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	103	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	627	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	0.79	µg/L	Discharge Conc < TQL
Trichloroethylene	0.86	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.029	µg/L	Discharge Conc < TQL
2-Chlorophenol	30.8	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	10.3	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	103	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2.06	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	10.3	µg/L	Discharge Conc < TQL
2-Nitrophenol	1,645	µg/L	Discharge Conc < TQL
4-Nitrophenol	483	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.043	µg/L	Discharge Conc < TQL
Phenol	4,112	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	2.15	µg/L	Discharge Conc < TQL
Acenaphthene	17.5	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	308	µg/L	Discharge Conc < TQL
Benzidine	0.0001	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.001	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.0001	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.001	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.014	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS

Bis(2-Chloroethyl)Ether	0.043	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	206	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	0.46	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	55.5	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.1	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	822	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.17	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.0001	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	164	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	7.2	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	154	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	0.072	µg/L	Discharge Conc < TQL
Diethyl Phthalate	617	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	514	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	20.6	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	0.072	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.072	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.043	µg/L	Discharge Conc < TQL
Fluoranthene	20.6	µg/L	Discharge Conc < TQL
Fluorene	51.4	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.0001	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.014	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.03	µg/L	Discharge Conc < TQL
Hexachloroethane	0.14	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.001	µg/L	Discharge Conc < TQL
Isophorone	35.0	µg/L	Discharge Conc < TQL
Naphthalene	44.2	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	10.3	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.001	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.007	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	4.72	µg/L	Discharge Conc < TQL
Phenanthrene	1.03	µg/L	Discharge Conc < TQL
Pyrene	20.6	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.072	µg/L	Discharge Conc < TQL
PCB-1016	N/A	N/A	No WQS
PCB-1242	N/A	N/A	No WQS