pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

**Southwest Regional Office**
**CLEAN WATER PROGRAM**

| | | | |
|---|---|---|---|
| Application Type | **New** | Application No. | **PA0255815** |
| Facility Type | **Industrial** | APS ID | **1025060** |
| Major / Minor | **Minor** | Authorization ID | **1330415** |

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

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **Cyprus Amax Minerals Company** | Facility Name | **Former American Zinc & Chemicals Smith Township Site** |
| Applicant Address | 333 North Central Avenue | Facility Address | Bologna Industrial Road |
| | Phoenix, AZ 85004-2189 | | Smith Twp, PA 15078 |
| Applicant Contact | Allen Long | Facility Contact | David Gosen |
| Applicant Phone | (724) 934-9562 | Facility Phone | (602) 366-7312 |
| Client ID | 61799 | Site ID | 651304 |
| SIC Code | **562910** | Municipality | Smith Township |
| SIC Description | Remediation Services, Cleanup of Former Smelter Site | County | Washington |
| Date Application Received | October 14, 2020 | EPA Waived? | Yes |
| Date Application Accepted | October 16, 2020 | If No, Reason | |

Purpose of Application: New NPDES Permit for Treated Contaminated Stormwater.

## Summary of Review

The Department received an NPDES Permit application from Cyprus Amax Minerals Company on October 14, 2020. The Cyprus Amax Minerals Company (Cyprus) facility is the former American Zinc & Chemicals (AZC) Smith Township Site located in Smith Township, Washington County. The site is undergoing cleanup activities. The facility is classified by NAIC Code 562910 – Remediation Services, Cleanup of Former Smelter Site.

Beginning in 1913, AZC owned the site and operated there a coal-fired zinc smelter facility. To supply its smelter operation, AZC deep-mined coal under portions of the site. AZC ended its zinc smelter operations at the site in 1947 and ended the acid plant and residue mill operations in early 1948. During operations, AZC disposed of various waste at the site, including but not limited to slag; discarded retorts and condensers; brick; coal ash; and construction debris.

The Site consists of approximately 157 contiguous acres. The facility has been cleared of the buildings (Ore Bins, Roasting Furnaces, Distilling Furnaces and Pottery Buildings) with only the foundations remaining, refer to Attachment A Site Plan. The Eastern Area of the site, comprising approximately 120 acres, consists of an irregular ground surface with large stockpiles of smelter material located in different areas. Smelter material is also present on the ground surface in a layer of varying thicknesses on many areas of the Site. Remnants of some of the former processing structures and buildings remain at the Site and are in a state of disrepair. Foundations, dilapidated buildings, and concrete chambers/vessels are visible around the Site. Two former ore tunnel entrances are also present in the area where former manufacturing activities were located. The former underground coal mine entrance is apparent at the base of the hillside on the eastern boundary of the Site. Current property

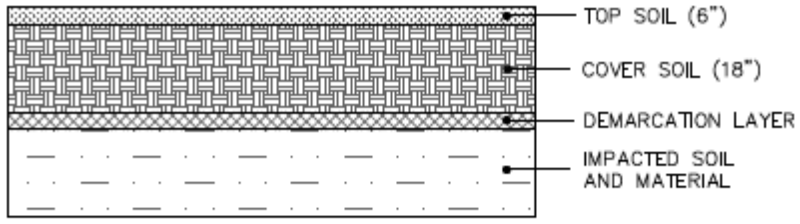
| Approve | Deny | Signatures | Date |
|---|---|---|---|
| X | | Curtis Holes, P.E. / Environmental Engineering Specialist | February 17, 2021 |
| X | | Michael E. Fifth, P.E. / Environmental Engineer Manager | February 18, 2021 |

**Summary of Review**

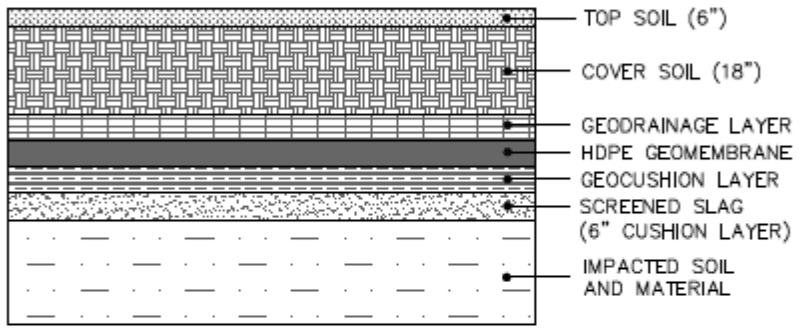
owners of the Eastern Area include the Bologna Coal Company (BCC) (approximately 84 acres), Peterson Industries (approximately 28 acres), Smith Township (approximately 5 acres), and the LMC (approximately 3 acres).
The Western Area of the site, comprising approximately 37 acres, is primarily used by the Langeloth Metallurgical Company (LMC) as part of their molybdenum processing operations. The Western Area is owned by LMC and they reportedly covered and vegetated the balance of the Western Area with cover soil imported from nearby clean borrow areas in 1994.

The facility is in the process of going through remediation consisting of installing a soil cap, with a two-year estimated schedule to complete these activities. In 2009, the Department elected to enter into a settlement with Cyprus to share with Cyprus the funding of a portion of the site's remedial investigation, cleanup and post-remediation care. Smelter material will be relocated to one area and capped. Building foundations will be removed and backfilled as deemed necessary. Final grading plans will consist of three different cover system profiles (soil cap will be installed in the southern portion of the facility; geosynthetic cap installed in the northern portion; non-cap areas will be installed in all other areas). Refer to Figure 1 for the Cover System Profiles.

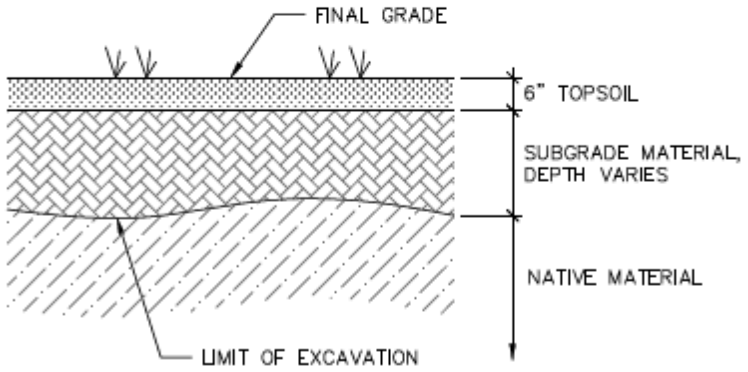
**Figure 1: Cover System Profiles**




**SOIL CAP**
NOT TO SCALE




**GEOSYNTHETIC CAP**
NOT TO SCALE




**NON-CAP AREA TYPICAL SECTION**
NOT TO SCALE

**Summary of Review**

Historical Site investigations have reported the presence of a “piped seep” located within the valley in the southern portion of the Site. Results of those investigations indicated the presence of cadmium, copper, lead and zinc at concentrations above their respective Surface Water Screening Criteria. The “piped seep” has been backfilled years ago and a gravel sump has been installed in the area of the “piped seep”. Currently the gravel sump is then piped to sedimentation pond 1. Final design will convey the “piped seep” discharge to the treatment system prior to discharge to Burgetts Fork.

The flow rates from the piped seep are directly related to the amount of rainfall that is occurring in the area. The proposed soil cap that will be installed during remediation activities will be designed to mitigate stormwater runoff and will have a lower permeability than the existing exposed smelter material. The reduced permeability and proper management of stormwater will reduce the amount of rain infiltration into the area and thus reduce the total metals discharging to surface water. The remaining seep water, if any, will be collected via a subsurface collection drain and treated using a passive treatment system consisting of a sulfate reducing bioreactor, free water surface aerobic wetland, and limestone bed. On January 15, 2021, the Department received a Water Quality Management Part II permit application for the treatment system. The sulfate reducing bioreactor is used to remove metals from the piped seep. The free water surface aerobic wetland is used to remove manganese from the piped seep. The limestone bed is used to provide aeration allowing additional manganese removal.

Construction activities will generally consist of excavation and consolidation of impacted smelter materials, installation of soil and geosynthetic caps over the consolidated materials, development of access roads, and vegetative restoration; and will disturb approximately 134 acres within Washington County, Pennsylvania.

The total maximum pre-construction drainage area, including off-site upstream areas that run-on to the Site, is approximately 204 acres. This drainage area conveys contaminated stormwater runoff towards a number of on-site delineated wetlands and streams, which generally flow in the easterly direction and ultimately enter into Burgetts Fork.

The client has no open violations.

Residual waste disposal must meet solid waste regulations.

Part C language in the draft permit provides controls on floating solids, chemical additives, residual solids, stormwater discharges.

It is recommended that a draft permit be published for public comment in response to this application.

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.

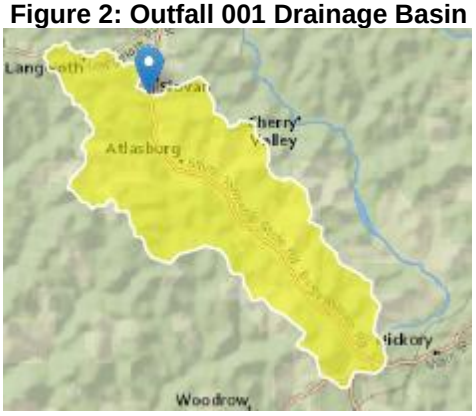
**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 001 | Design Flow (MGD) | 0.00288 |
| Latitude | 40º 21' 22.63" | Longitude | -80º 23' 33.81" |
| Quad Name | Avella | Quad Code | 1602 |
| Wastewater Description: | "Piped Seep" discharge along with contaminated stormwater runoff. | | |
| Receiving Waters | Burgetts Fork | Stream Code | 33846 |
| NHD Com ID | 99690694 | RMI | 3.2 |
| Drainage Area | 10.5 miles$^2$ | Yield (cfs/mi$^2$) | 0.0142 |
| $Q_{7-10}$ Flow (cfs) | 0.149 | $Q_{7-10}$ Basis | USGS StreamStats |
| Elevation (ft) | 1006 | Slope (ft/ft) | |
| Watershed No. | 20-D | Chapter 93 Class. | WWF |
| Assessed Use | **Aquatic Life** | Existing Use Qualifier | |
| Exceptions to Use | None | Exceptions to Criteria | |
| Assessment Status | **Impaired** | | |
| Cause(s) of Impairment | Metals, TSS, pH | | |
| Source(s) of Impairment | Acid Mine Drainage | | |
| TMDL Status | Final April 7, 2005 | Name | Raccoon Creek |
| Nearest Downstream Public Water Supply Intake | | | |
| PWS Waters | | Flow at Intake (cfs) | |
| PWS RMI | | Distance from Outfall (mi) | <50 on Ohio River |

Changes Since Last Permit Issuance: **None**

Other Comments: **None**

**Figure 2: Outfall 001 Drainage Basin**



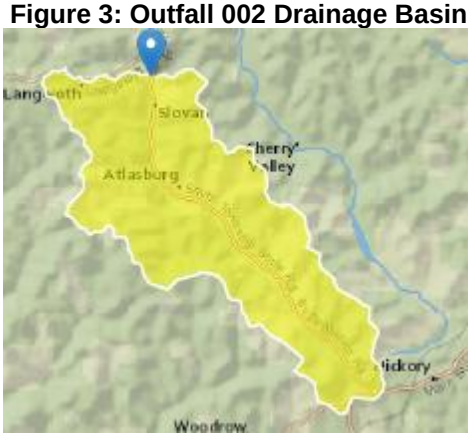
**Discharge, Receiving Waters and Water Supply Information**

| | | | |
|---|---|---|---|
| Outfall No. | 002 | Design Flow (MGD) | 0.0 |
| Latitude | 40º 21' 57.2" | Longitude | -80º 23' 30.23" |
| Quad Name | Avella | Quad Code | 1602 |
| Wastewater Description: | Stormwater runoff. | | |
| Receiving Waters | Burgetts Fork | Stream Code | 33846 |
| NHD Com ID | 99690494 | RMI | 2.7 |
| Drainage Area | 11.1 miles$^2$ | Yield (cfs/mi$^2$) | 0.0144 |
| $Q_{7-10}$ Flow (cfs) | 0.16 | $Q_{7-10}$ Basis | USGS StreamStats |
| Elevation (ft) | 993 | Slope (ft/ft) | |
| Watershed No. | 20-D | Chapter 93 Class. | WWF |
| Assessed Use | **Aquatic Life** | Existing Use Qualifier | |
| Exceptions to Use | None | Exceptions to Criteria | |
| Assessment Status | **Impaired** | | |
| Cause(s) of Impairment | Metals, TSS, pH | | |
| Source(s) of Impairment | Acid Mine Drainage | | |
| TMDL Status | Final April 7, 2005 | Name | Raccoon Creek |
| Nearest Downstream Public Water Supply Intake | | | |
| PWS Waters | | Flow at Intake (cfs) | |
| PWS RMI | | Distance from Outfall (mi) | <50 on Ohio River |

Changes Since Last Permit Issuance: **None**

Other Comments: **None**

**Figure 3: Outfall 002 Drainage Basin**



| Compliance History | |
|---|---|
| | |
| **Summary of DMRs:** | The application is a new permit. |
| **Summary of Inspections:** | The last inspection conducted by the Department was on October 27, 2020 by Curt Holes and Mike Tomei. |

Other Comments: **None**

**Development of Effluent Limitations**

| | | | |
|---|---|---|---|
| **Outfall No.** | 001 | **Design Flow (MGD)** | 0.00288 |
| **Latitude** | 40º 21' 22.63" | **Longitude** | -80º 23' 33.81" |

**Wastewater Description:** "Piped Seep" discharge along with contaminated stormwater runoff.

## Technology-Based Limitations

Outfall 001 discharge consists of waters from the "piped seep" and contaminated stormwater runoff. The average discharge is based on the flowrate of the "piped seep" of approximately 0.00288 MGD (2 gpm). Outfall 001's discharge is not subject to Federal Effluent Limitation Guidelines (ELGs) as the SIC code is not listed under 40 CFR parts 405 through 471.

Regulatory Effluent Standards and Monitoring Requirements

Flow monitoring is required pursuant to 25 Pa. Code § 92a.61(d)(1).

Pursuant to 25 Pa. Code § 95.2(4) effluent standards for industrial wastes may not contain more than 7 mg/L of dissolved iron.

Effluent standards for pH (see Table 6) are also imposed on industrial wastes by 25 Pa. Code § 95.2(1).

Total Dissolved Solids (TDS)

Integral to the implementation of 25 Pa. Code § 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. 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 a change in the waste stream. New and expanding discharge loadings of TDS equal to or less than 5,000 lbs./day, measured as an average daily discharge over the course of a calendar year, otherwise known as the annual average daily load.

The discharge flowrate of Outfall 001 is 0.00288 MGD (2 gpm) with a TDS concentration of 1,140 mg/L results in a TDS mass loading of under 30 lbs/day. The facility is well below the 5,000 lbs./day mass loading threshold; therefore, the facility is exempt from 25 Pa. Code § 95.10 treatment requirements.

## Water Quality-Based Limitations

Total Maximum Daily Load (TMDL)

Wastewater discharges from the Former American Zinc & Chemicals Smith Township Site are located within the Raccoon Creek Watershed for which the Department has developed a TMDL. The TMDL was finalized on February 3, 2005 and establishes waste load allocations for the discharge of aluminum, iron, manganese and pH within the Raccoon Creek Watershed. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA 1991a).

The Former American Zinc & Chemicals Smith Township Site was inactive before the TMDL was finalized and is not identified in the TMDL. The TMDL was finalized on February 3, 2005 to address metals from acid mine drainage (Aluminum, Iron and Manganese) and pH in the Raccoon Creek Watershed. The industrial waste discharge for the facility consist of a "piped seep" and stormwater discharge. Since the facility's low flow discharge (0.00288 MGD) do not contain parameters at concentrations (all three parameters are reported to have the concentration of less than 1.0 mg/L of each parameter, which are below the standard treatment pond effluent limits contained in the TMDL) that have the potential to cause or contribute to the impairment of the Raccoon Creek, the Raccoon Creek TMDL are not imposed at the facility was inactive before the TMDL was finalized. The TMDL parameters of concern will still be analyzed through the Water Quality-Based Limitation evaluation to determine if these parameters are a concern for the facility discharges.

Toxics Management Analysis

The Department's Toxics Management Spreadsheet (TMS) was utilized to facilitate calculations necessary for completing a reasonable potential analysis and determine Water Quality-Based Effluent Limitations (WQBELs) for discharges containing toxic pollutant concentrations. TMS combines the functionality of two (2) of the Department's analysis tools, Toxics Screening Analysis Spreadsheet and PENTOXSD water quality model.

DEP's procedures for evaluating reasonable potential are as follows:

1. For IW discharges, the design flow to use in modeling is the average flow during production or operation and may be taken form the permit application.

2. Perform a Toxics Screening Analysis to identify toxic pollutants of concern. All toxic pollutants, as reported in the permit application or on DMRs, are modeled by the TMS to determine the parameters 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].

    - Establish limits in the draft permit where the maximum reported concentration equals or exceeds 50% of the WQBEL. Use the average monthly and maximum daily limits for the permit as recommended by TMS. Establish an IMAX limit at 2.5 times the average monthly limit.

    - For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.

    - For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10% - 50% of the WQBEL.

Discharges from Outfall 001 are evaluated based on concentrations reported on the application are used as inputs into the TMS. A summary of TMS Inputs is contained in Table 1 below.

**Table 1: TMS Inputs**

| Parameter | Value |
|---|---|
| **Discharge Inputs** | |
| Facility | Former American Zinc & Chemical Co. - Cleanup |
| Evaluation Type | Industrial |
| NPDES Permit No. | PA0255815 |
| Wastewater Description | Contaminated Seep and Stormwater |
| Outfall ID | 001 |
| Design Flow (MGD) | 0.00288 |
| Hardness ($^{mg}/_{L}$) | 794 |
| pH (S.U.) | 6.33 |
| Partial Mix Factors | Unknown – Calculated by TMS |
| Complete Mix Times | |
| $Q_{7-10}$ (min) | |
| $Q_h$ (min) | |
| **Stream Inputs** | |
| Receiving Surface Water | Burgetts Fork |
| Number of Reaches to Model | 1 |
| Stream Code | 033846 |
| RMI | 3.2 / 2.7* |
| Elevation (ft) | 1006 / 993* |
| Drainage Area ($mi^2$) | 10.5 / 11.1* |
| Slope (ft/ft) | |
| PWS Withdrawal (MGD) | N/A |
| Apply Fish Criteria | Yes |
| Low Flow Yield ($cfs/mi^2$) | |
| Flows | |
| Stream (cfs) | 0.149 / 0.16***** |
| Tributary (cfs) | N/A |
| Width (ft) | 26 / 42***** |
| Stream Hardness ($^{mg}/_{L}$) | 100 |
| Stream pH (S.U.) | 7 |

***** Denotes discharge location/downstream location values.

Based on the recommendations of the TMS, weekly monitor and report for two (2) parameters: Total Copper; Total Lead; along with WQBEL for two (2) parameters: Total Cadmium; Total Zinc at Outfall 001, as summarized below in Table 2. Analysis Report from the TMS run is included in Attachment A.

**Table 2: TMS Recommended WQBELs & Monitoring Requirements**

| | Concentration Limits (µg/L) | | | |
|---|---|---|---|---|
| **Pollutant** | **Discharge** | **AML** | **MDL** | **IMAX** |
| **Total Cadmium** | 30.00 | 10.70 | 16.70 | 26.70 |
| **Total Copper** | 56.00 | Report | Report | Report |
| **Total Lead** | 34.00 | Report | Report | Report |
| **Total Zinc** | 2,500.00 | 3,090 | 4,821 | 7,726 |
| **pH (S.U.)** | 7.60 | Report | 9.00 | 9.00 |

WQM 7.0 Model

In general, WQM 7.0 Model is run if the maximum $BOD_5$/$CBOD_5$ concentrations exceeds 30/25 mg/L in the permit application or the DMRs. The permit application reports $BOD_5$ concentrations of 2.3 mg/L, therefore, WQM 7.0 Model is not required to be run.

**Emerging Pollutants of Concern**

Where the concentration of TDS in the discharge exceeds 1,000 $^{mg}/_{L}$, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, establish a monitoring requirement for TDS, sulfate, chloride, and bromide. For discharges of 0.1 MGD or less establish a monitoring requirement for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L. Outfall 001 has a discharge flowrate of 0.00288 MGD and reported maximum TDS concentration of 1,140 $^{mg}/_{L}$. Therefore, the emerging pollutants of concern monitoring requirements are not imposed.

**Effluent Limitations and Monitoring Requirements for Outfall 001**

Effluent limits applicable at Outfall 002 are the more stringent of TBELs, regulatory effluent standards, previously permitted effluent limits and the monitoring requirements are summarized in Table 3.

**Table 3: Final Effluent limits and monitoring requirements for Outfall 001**

| Parameter | Mass | | Concentration (µg/L) | | | | Basis |
|---|---|---|---|---|---|---|---|
| | Average Monthly | Daily Maximum | Instant. Minimum | Average Monthly | Daily Maximum | Instant Maximum | |
| Flow (MGD) | Report | Report | — | — | — | — | 25 Pa. Code § 92a.61(d)(1) |
| Total Cadmium | — | — | — | 10.70 | 16.70 | — | 25 Pa. Code § 93.8 |
| Total Copper | — | — | — | Report | Report | — | 25 Pa. Code § 93.8 |
| Total Lead | — | — | — | Report | Report | — | 25 Pa. Code § 93.8 |
| Total Zinc | — | — | — | 3,090 | 4,821 | — | 25 Pa. Code § 93.8 |
| pH (S.U.) | — | — | Report | — | — | 9.0 | 25 Pa. Code § 95.2 |

Monitoring requirements for the interim and final effluent limits are based on the previous permits monitoring requirements for the facility are displayed in Table 4 below.

**Table 4: Monitoring Requirements for Outfall 001**

| Parameter | Sample Type | Minimum Sample Frequency |
|---|---|---|
| Flow (MGD) | Measured | 2/month |
| Total Cadmium | Grab | 2/month |
| Total Copper | Grab | 2/month |
| Total Lead | Grab | 2/month |
| Total Zinc | Grab | 2/month |
| pH (S.U.) | Grab | 2/month |

**STORMWATER Outfall 002**

The Department's policy for stormwater discharges is to either (1) require that the stormwater is uncontaminated, (2) impose "Monitor and Report", to establish effluent goals and require the permittee to submit a Stormwater Pollution Prevention Plan (SWPPP), or (3) impose effluent limits. In all cases, a stormwater special condition is placed in the permit in Part C.

Stormwater effluent data reported in the application are compared to stream criteria, EPS's Multi-Sector General Permit "benchmark values", ELGs and other references while considering site specific conditions such as stream flow and location to determine if actual discharge concentrations of various pollutants in stormwater warrant further controls. If there is insufficient data available, or if pollutant levels are excessive, monitoring for specific pollutants and/or a SWPPP are required in the permit. Otherwise, the stormwater outfalls are simply listed as discharge points. In either case, a special condition is added to the permit to include some of the key components of the Department's General Permit (PAG-03) for Discharges of Stormwater Associated with Industrial Activities.

**Outfall 002** (40º 21' 57.2", -80º 23' 30.23"): The drainage area consists of Red Dog coal waste. The Red Dog material might be used in constructing the cap system, if the material qualifies and meets design specifications. There might be an active borrow area in the drainage area during cap system construction, but at a minimum regrading and repair of erosion reels will be conducted. The final conditions of the Outfall 002 drainage area will direct the stormwater runoff to a constructed wetland that will ultimately discharge to Burgetts Fork. Current BMPs to control pollutants in the stormwater are housekeeping procedures, employee education and awareness.

The drainage area of Outfall 002 has two existing wetlands, one at the west and one at the north. The western wetland will be expanded to mitigate wetlands removed for the remediation process. The discharge of the northern wetland is the Outfall 002 location.

The burnt coal byproduct (Red Dog) of historic industrial activity has been disposed of throughout the drainage area of Outfall 002. These historic industrial activity for the facility by General Permit Appendix B – Primary Metals, with the monitoring requirements summarized below in Table 5.

**Table 5: Stormwater Outfall 002 Monitoring Requirements.**

| | Monitoring Requirements | | |
|---|---|---|---|
| **Parameter** | **Minimum Sample Frequency** | **Sample Type** | **Benchmark Values** |
| TSS ($^{mg}/_{L}$) | 1 / 6 months | Grab | 100 |
| Total Aluminum ($^{mg}/_{L}$) | 1 / 6 months | Grab | XXX |
| Total Zinc ($^{mg}/_{L}$) | 1 / 6 months | Grab | XXX |
| Total Copper ($^{mg}/_{L}$) | 1 / 6 months | Grab | XXX |
| Total Iron ($^{mg}/_{L}$) | 1 / 6 months | Grab | XXX |
| Total Lead ($^{mg}/_{L}$) | 1 / 6 months | Grab | XXX |

The benchmark values listed above are not effluent limitations, and exceedances do not constitute permit violations. However, if the permittee's sampling demonstrates exceedances of benchmark values for two (2) consecutive monitoring periods, the permittee shall submit a corrective action plan within 90-days of the end of the monitoring period triggering the plan.

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

## Attachment A – Site Location Maps

## Attachment B – StreamStats Data

## Attachment C – TMS Model Output File

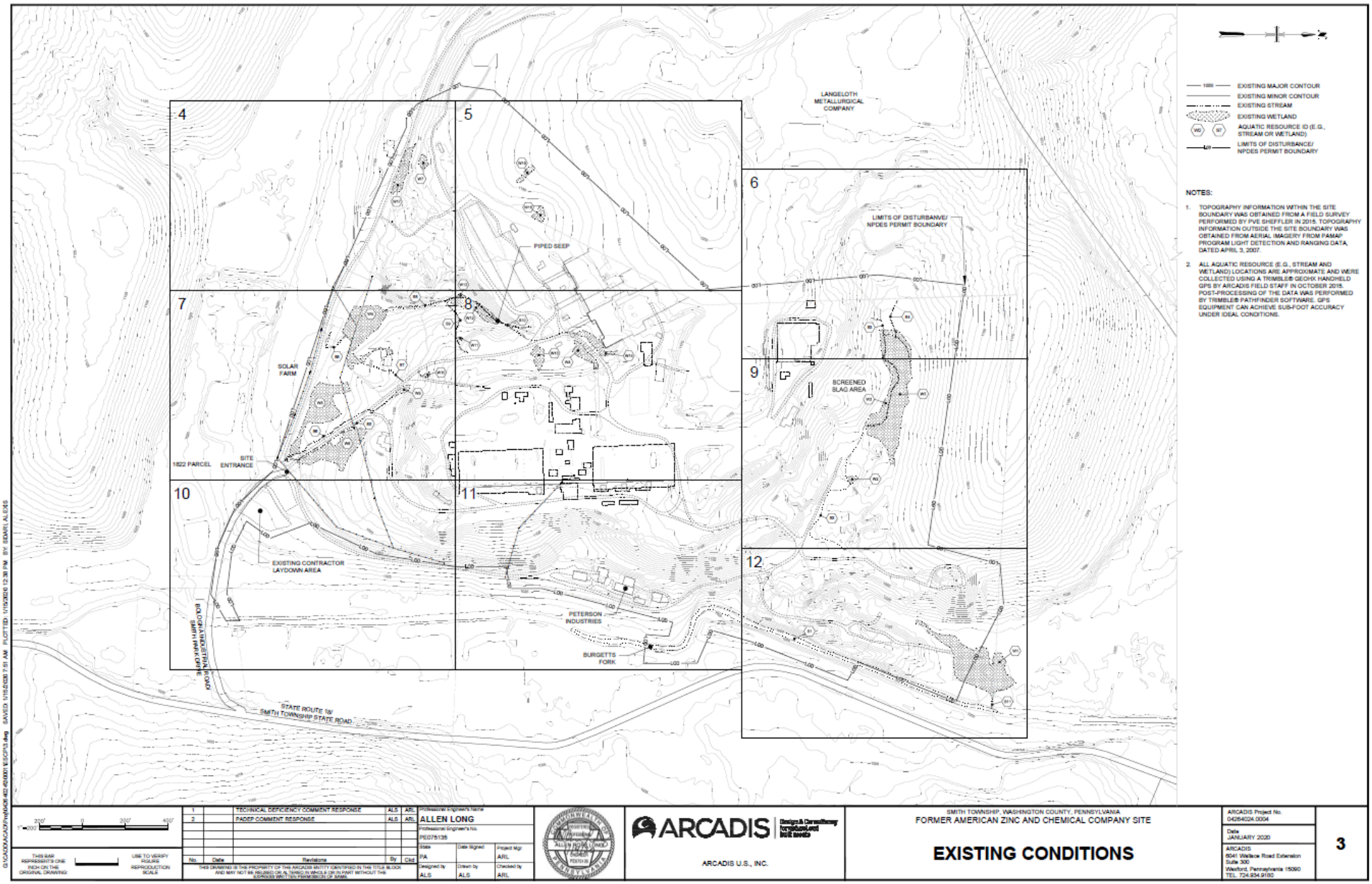
# Attachment A – Site Location Maps

# Existing Site Map

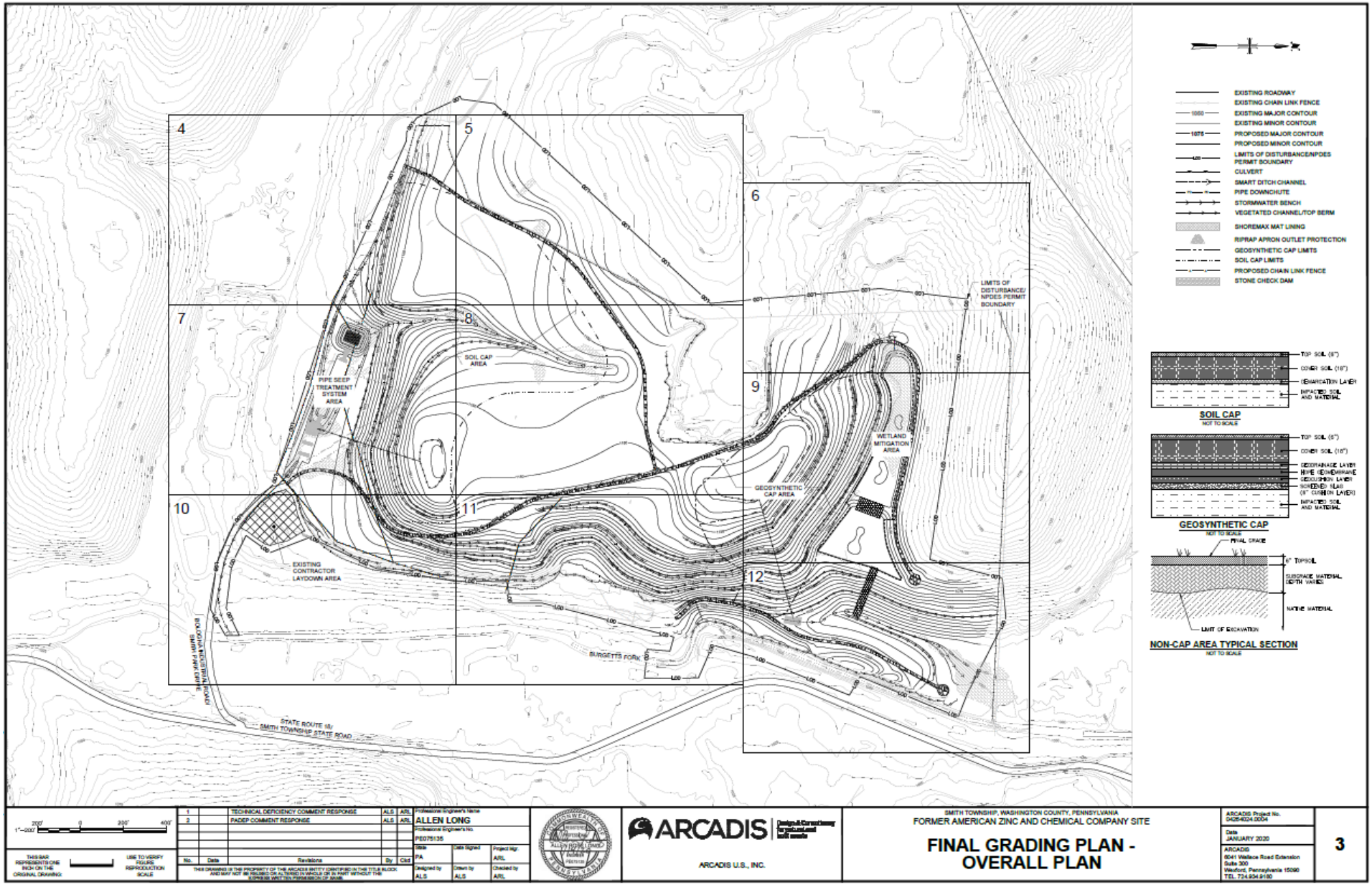
# Existing Conditions with Overlay of Historic Operations

# Existing Condition Topography with Historic Operations Overlay and Wetlands Identified

## Existing Conditions Plan



# Final Grading Plan



# Attachment B – StreamStats Data

# StreamStats Report - Outfall 001

| | |
|---|---|
| **Region ID:** | PA |
| **Workspace ID:** | PA20201021145445867000 |
| **Clicked Point (Latitude, Longitude):** | 40.35601, -80.39222 |
| **Time:** | 2020-10-21 10:56:05 -0400 |


Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| DRNAREA | Area that drains to a point on a stream | 10.5 | square miles |
| STORAGE | Percentage of area of storage (lakes ponds reservoirs wetlands) | 0.22 | percent |
| ELEV | Mean Basin Elevation | 1201 | feet |
| PRECIP | Mean Annual Precipitation | 39 | inches |
| FOREST | Percentage of area covered by forest | 41.6856 | percent |
| URBAN | Percentage of basin with urban development | 5.9293 | percent |
| CARBON | Percentage of area of carbonate rock | 0 | percent |

Peak-Flow Statistics Parameters

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 10.5 | square miles | 0.92 | 1160 |
| STORAGE | Percent Storage | 0.22 | percent | 0 | 8.9 |

Peak-Flow Statistics Flow Report

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

| Statistic | Value | Unit | SEp |
|---|---|---|---|
| 2 Year Peak Flood | 453 | ft^3/s | 26.1 |
| 5 Year Peak Flood | 726 | ft^3/s | 27 |
| 10 Year Peak Flood | 940 | ft^3/s | 28.9 |
| 25 Year Peak Flood | 1250 | ft^3/s | 31.6 |
| 50 Year Peak Flood | 1500 | ft^3/s | 34.8 |
| 100 Year Peak Flood | 1780 | ft^3/s | 37.8 |
| 200 Year Peak Flood | 2090 | ft^3/s | 41.6 |
| 500 Year Peak Flood | 2550 | ft^3/s | 46.1 |

*Peak-Flow Statistics Citations*

**Roland, M.A., and Stuckey, M.H.,2019, Development of regression equations for the estimation of flood flows at ungaged streams in Pennsylvania: U.S. Geological Survey Scientific Investigations Report 2019–5094, 36 p. (https:// doi.org/10.3133/sir20195094)**

Low-Flow Statistics Parameters[Low Flow Region 4]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 10.5 | square miles | 2.26 | 1400 |
| ELEV | Mean Basin Elevation | 1201 | feet | 1050 | 2580 |

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

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

| Statistic | Value | Unit | SE | SEp |
|---|---|---|---|---|
| 7 Day 2 Year Low Flow | 0.409 | ft^3/s | 43 | 43 |
| 30 Day 2 Year Low Flow | 0.708 | ft^3/s | 38 | 38 |
| 7 Day 10 Year Low Flow | 0.149 | ft^3/s | 66 | 66 |
| 30 Day 10 Year Low Flow | 0.268 | ft^3/s | 54 | 54 |
| 90 Day 10 Year Low Flow | 0.489 | ft^3/s | 41 | 41 |

*Low-Flow Statistics Citations*

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

Annual Flow Statistics Parameters[Statewide Mean and Base Flow]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 10.5 | square miles | 2.26 | 1720 |
| ELEV | Mean Basin Elevation | 1201 | feet | 130 | 2700 |
| PRECIP | Mean Annual Precipitation | 39 | inches | 33.1 | 50.4 |
| FOREST | Percent Forest | 41.6856 | percent | 5.1 | 100 |
| URBAN | Percent Urban | 5.9293 | percent | 0 | 89 |
| CARBON | Percent Carbonate | 0 | percent | 0 | 99 |

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

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

| Statistic | Value | Unit | SE | SEp |
|---|---|---|---|---|
| Mean Annual Flow | 13.1 | ft^3/s | 12 | 12 |
| Harmonic Mean Streamflow | 2.2 | ft^3/s | 38 | 38 |

*Annual Flow Statistics Citations*

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

Base Flow Statistics Parameters[Statewide Mean and Base Flow]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 10.5 | square miles | 2.26 | 1720 |
| PRECIP | Mean Annual Precipitation | 39 | inches | 33.1 | 50.4 |
| CARBON | Percent Carbonate | 0 | percent | 0 | 99 |
| FOREST | Percent Forest | 41.6856 | percent | 5.1 | 100 |
| URBAN | Percent Urban | 5.9293 | percent | 0 | 89 |

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

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

| Statistic | Value | Unit | SE | SEp |
|---|---|---|---|---|
| Base Flow 10 Year Recurrence Interval | 3.96 | ft^3/s | 21 | 21 |
| Base Flow 25 Year Recurrence Interval | 3.43 | ft^3/s | 21 | 21 |
| Base Flow 50 Year Recurrence Interval | 3.13 | ft^3/s | 23 | 23 |

*Base Flow Statistics Citations*

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

Bankfull Statistics Parameters[Statewide Bankfull Noncarbonate 2018 5066]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 10.5 | square miles | 2.62 | 207 |
| CARBON | Percent Carbonate | 0 | percent | | |

Bankfull Statistics Flow Report[Statewide Bankfull Noncarbonate 2018 5066]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

| Statistic | Value | Unit | SE |
|---|---|---|---|
| Bankfull Area | 80 | ft^2 | 64 |
| Bankfull Streamflow | 350 | ft^3/s | 74 |
| Bankfull Width | 42 | ft | 59 |
| Bankfull Depth | 1.94 | ft | 56 |

*Bankfull Statistics Citations*

**Clune, J.W., Chaplin, J.J., and White, K.E.,2018, Comparison of regression relations of bankfull discharge and channel geometry for the glaciated and nonglaciated settings of Pennsylvania and southern New York: U.S. Geological Survey Scientific Investigations Report 2018 -5066, 20 p. (https://doi.org/10.3133/sir20185066)**



Application Version: 4.4.0

# Attachment C – TMS Model Output File

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

# Discharge Information

Instructions | Discharge | Stream

Facility: **Former American Zinc & Chemical Co - Cleanu** NPDES Permit No.: **PA0255815** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Contaminated Seep/SW Discharge**

| Discharge Characteristics | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Design Flow (MGD)* | Hardness (mg/l)* | pH (SU)* | Partial Mix Factors (PMFs) | | | | Complete Mix Times (min) | |
| | | | AFC | CFC | THH | CRL | $Q_{7-10}$ | $Q_h$ |
| 0.00288 | 794 | 6.33 | | | | | | |

| | | | | | *0 if left blank* | | *0.5 if left blank* | | *0 if left blank* | | | *1 if left blank* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Discharge Pollutant | Units | Max Discharge Conc | | Trib Conc | Stream Conc | Daily CV | Hourly CV | Strea m CV | Fate Coeff | FOS | Criteri a Mod | Chem Transl |
| Group 1 | Total Dissolved Solids (PWS) | mg/L | | 1140 | | | | | | | | | |
| | Chloride (PWS) | mg/L | | 26.6 | | | | | | | | | |
| | Bromide | mg/L | < | 0.6 | | | | | | | | | |
| | Sulfate (PWS) | mg/L | | 694 | | | | | | | | | |
| | Fluoride (PWS) | mg/L | | 0.36 | | | | | | | | | |
| Group 2 | Total Aluminum | µg/L | | 419 | | | | | | | | | |
| | Total Antimony | µg/L | | 1.6 | | | | | | | | | |
| | Total Arsenic | µg/L | < | 1.5 | | | | | | | | | |
| | Total Barium | µg/L | | 44 | | | | | | | | | |
| | Total Beryllium | µg/L | < | 0.5 | | | | | | | | | |
| | Total Boron | µg/L | | 150 | | | | | | | | | |
| | Total Cadmium | µg/L | | 30 | | | | | | | | | |
| | Total Chromium (III) | µg/L | | 1.6 | | | | | | | | | |
| | Hexavalent Chromium | µg/L | | 1.5 | | | | | | | | | |
| | Total Cobalt | µg/L | | 6.6 | | | | | | | | | |
| | Total Copper | µg/L | | 56 | | | | | | | | | |
| | Free Cyanide | µg/L | | | | | | | | | | | |
| | Total Cyanide | µg/L | < | 2 | | | | | | | | | |
| | Dissolved Iron | µg/L | | 110 | | | | | | | | | |
| | Total Iron | µg/L | | 130 | | | | | | | | | |
| | Total Lead | µg/L | | 34 | | | | | | | | | |
| | Total Manganese | µg/L | | 890 | | | | | | | | | |
| | Total Mercury | µg/L | | 0.0016 | | | | | | | | | |
| | Total Nickel | µg/L | | 17 | | | | | | | | | |
| | Total Phenols (Phenolics) (PWS) | µg/L | < | 0.005 | | | | | | | | | |
| | Total Selenium | µg/L | < | 2 | | | | | | | | | |
| | Total Silver | µg/L | < | 0.5 | | | | | | | | | |
| | Total Thallium | µg/L | < | 0.5 | | | | | | | | | |
| | Total Zinc | µg/L | | 2500 | | | | | | | | | |
| | Total Molybdenum | µg/L | | 82 | | | | | | | | | |
| | Acrolein | µg/L | < | 2.5 | | | | | | | | | |
| | Acrylamide | µg/L | | | | | | | | | | | |
| | 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 | < | | | | | | | | | | |
| | 1,1-Dichloroethane | µg/L | < | 0.5 | | | | | | | | | |
| | 1,2-Dichloroethane | µg/L | < | 0.5 | | | | | | | | | |
| | 1,1-Dichloroethylene | µg/L | < | | | | | | | | | | |
| | 1,2-Dichloropropane | µg/L | < | 0.5 | | | | | | | | | |
| | 1,3-Dichloropropylene | µg/L | < | | | | | | | | | | |
| | 1,4-Dioxane | µg/L | < | 2.9 | | | | | | | | | |
| | Ethylbenzene | µg/L | < | | | | | | | | | | |
| | Methyl Bromide | µg/L | < | | | | | | | | | | |
| | Methyl Chloride | µg/L | < | 1 | | | | | | | | | |
| | Methylene Chloride | µg/L | < | | | | | | | | | | |
| | 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 | < | | | | | | | | | | |
| | 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 | < | 1.5 | | | | | | | | | |
| | Acenaphthylene | µg/L | < | 1.5 | | | | | | | | | |
| | Anthracene | µg/L | < | 1.5 | | | | | | | | | |
| | Benzidine | µg/L | < | 3.9 | | | | | | | | | |
| | 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 | < | 2.9 | | | | | | | | | |
| | Bis(2-Chloroethyl)Ether | µg/L | < | 2.9 | | | | | | | | | |
| | Bis(2-Chloroisopropyl)Ether | µg/L | < | 2.9 | | | | | | | | | |
| | Bis(2-Ethylhexyl)Phthalate | µg/L | < | 2.9 | | | | | | | | | |
| | 4-Bromophenyl Phenyl Ether | µg/L | < | 2.9 | | | | | | | | | |
| | Butyl Benzyl Phthalate | µg/L | < | 2.9 | | | | | | | | | |
| | 2-Chloronaphthalene | µg/L | < | 2.9 | | | | | | | | | |
| | 4-Chlorophenyl Phenyl Ether | µg/L | < | 2.9 | | | | | | | | | |
| | Chrysene | µg/L | < | 1.5 | | | | | | | | | |
| | Dibenzo(a,h)Anthrancene | µg/L | < | 1.5 | | | | | | | | | |
| | 1,2-Dichlorobenzene | µg/L | < | 1 | | | | | | | | | |
| | 1,3-Dichlorobenzene | µg/L | < | 1 | | | | | | | | | |
| | 1,4-Dichlorobenzene | µg/L | < | 1 | | | | | | | | | |
| | 3,3-Dichlorobenzidine | µg/L | < | 2.9 | | | | | | | | | |
| | Diethyl Phthalate | µg/L | < | 2.9 | | | | | | | | | |
| | Dimethyl Phthalate | µg/L | < | 2.9 | | | | | | | | | |
| | Di-n-Butyl Phthalate | µg/L | < | 2.9 | | | | | | | | | |
| | 2,4-Dinitrotoluene | µg/L | < | 2.9 | | | | | | | | | |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2,6-Dinitrotoluene | µg/L | < | 2.9 | | | | | | | | | | |
| | Di-n-Octyl Phthalate | µg/L | < | 2.9 | | | | | | | | | | |
| | 1,2-Diphenylhydrazine | µg/L | < | 2.9 | | | | | | | | | | |
| | Fluoranthene | µg/L | < | 1.5 | | | | | | | | | | |
| | Fluorene | µg/L | < | 1.5 | | | | | | | | | | |
| | Hexachlorobenzene | µg/L | < | 2.9 | | | | | | | | | | |
| | Hexachlorobutadiene | µg/L | < | 2.9 | | | | | | | | | | |
| | Hexachlorocyclopentadiene | µg/L | < | 2.9 | | | | | | | | | | |
| | Hexachloroethane | µg/L | < | 2.9 | | | | | | | | | | |
| | Indeno(1,2,3-cd)Pyrene | µg/L | < | 1.5 | | | | | | | | | | |
| | Isophorone | µg/L | < | 2.9 | | | | | | | | | | |
| | Naphthalene | µg/L | < | 1.5 | | | | | | | | | | |
| | Nitrobenzene | µg/L | < | 2.9 | | | | | | | | | | |
| | n-Nitrosodimethylamine | µg/L | < | 2.9 | | | | | | | | | | |
| | n-Nitrosodi-n-Propylamine | µg/L | < | 2.9 | | | | | | | | | | |
| | n-Nitrosodiphenylamine | µg/L | < | 2.9 | | | | | | | | | | |
| | Phenanthrene | µg/L | < | 1.5 | | | | | | | | | | |
| | Pyrene | µg/L | < | 1.5 | | | | | | | | | | |
| | 1,2,4-Trichlorobenzene | µg/L | < | 2.9 | | | | | | | | | | |
| 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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pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

# Stream / Surface Water Information

**Former American Zinc & Chemical Co - Cleanup, NPDES Permit No. PA0255815, Outfall 001**

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Burgetts Fork**

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 | 033846 | 3.2 | 1006 | 10.5 | | | Yes |
| End of Reach 1 | 033846 | 2.7 | 993 | 11.1 | | | 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 | 3.2 | 0.1 | 0.149 | | | 26 | | | | | | 100 | 7 | | |
| End of Reach 1 | 2.7 | 0.1 | 0.16 | | | 40 | | | | | | | | | |

$Q_h$

| 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 | 3.2 | | | | | | | | | | | | | | |
| End of Reach 1 | 2.7 | | | | | | | | | | | | | | |

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

# Model Results

**Former American Zinc & Chemical Co - Cleanup, NPDES Permit No. PA0255815, Outfall 001**

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.244 Analysis Hardness (mg/l): 175.71 Analysis pH: 6.85

| 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 | 6,875 | |
| Total Antimony | 0 | 0 | | 0 | 1,100 | 1,100 | 10,083 | |
| Total Arsenic | 0 | 0 | | 0 | 340 | 340 | 3,117 | Chem Translator of 1 applied |
| Total Barium | 0 | 0 | | 0 | 21,000 | 21,000 | 192,496 | |
| Total Boron | 0 | 0 | | 0 | 8,100 | 8,100 | 74,248 | |
| Total Cadmium | 0 | 0 | | 0 | 3.482 | 3.78 | 34.7 | Chem Translator of 0.92 applied |
| Total Chromium (III) | 0 | 0 | | 0 | 904.033 | 2,861 | 26,224 | Chem Translator of 0.316 applied |
| Hexavalent Chromium | 0 | 0 | | 0 | 16 | 16.3 | 149 | Chem Translator of 0.982 applied |
| Total Cobalt | 0 | 0 | | 0 | 95 | 95.0 | 871 | |
| Total Copper | 0 | 0 | | 0 | 22.857 | 23.8 | 218 | 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 | 118.611 | 167 | 1,534 | Chem Translator of 0.709 applied |
| Total Manganese | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Mercury | 0 | 0 | | 0 | 1.400 | 1.65 | 15.1 | Chem Translator of 0.85 applied |
| Total Nickel | 0 | 0 | | 0 | 754.335 | 756 | 6,928 | 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 | 8.481 | 9.98 | 91.5 | Chem Translator of 0.85 applied |
| Total Thallium | 0 | 0 | | 0 | 65 | 65.0 | 596 | |
| Total Zinc | 0 | 0 | | 0 | 188.918 | 193 | 1,771 | Chem Translator of 0.978 applied |
| Acrolein | 0 | 0 | | 0 | 3 | 3.0 | 27.5 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Acrylonitrile | 0 | 0 | | 0 | 650 | 650 | 5,958 | |
| Benzene | 0 | 0 | | 0 | 640 | 640 | 5,867 | |
| Bromoform | 0 | 0 | | 0 | 1,800 | 1,800 | 16,500 | |
| Carbon Tetrachloride | 0 | 0 | | 0 | 2,800 | 2,800 | 25,666 | |
| Chlorobenzene | 0 | 0 | | 0 | 1,200 | 1,200 | 11,000 | |
| Chlorodibromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2-Chloroethyl Vinyl Ether | 0 | 0 | | 0 | 18,000 | 18,000 | 164,996 | |
| Chloroform | 0 | 0 | | 0 | 1,900 | 1,900 | 17,416 | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | 15,000 | 15,000 | 137,497 | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | 11,000 | 11,000 | 100,831 | |
| Methyl Chloride | 0 | 0 | | 0 | 28,000 | 28,000 | 256,661 | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | | 0 | 1,000 | 1,000 | 9,166 | |
| Tetrachloroethylene | 0 | 0 | | 0 | 700 | 700 | 6,417 | |
| Toluene | 0 | 0 | | 0 | 1,700 | 1,700 | 15,583 | |
| 1,2-trans-Dichloroethylene | 0 | 0 | | 0 | 6,800 | 6,800 | 62,332 | |
| 1,1,1-Trichloroethane | 0 | 0 | | 0 | 3,000 | 3,000 | 27,499 | |
| 1,1,2-Trichloroethane | 0 | 0 | | 0 | 3,400 | 3,400 | 31,166 | |
| Trichloroethylene | 0 | 0 | | 0 | 2,300 | 2,300 | 21,083 | |
| Vinyl Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acenaphthene | 0 | 0 | | 0 | 83 | 83.0 | 761 | |
| Anthracene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzidine | 0 | 0 | | 0 | 300 | 300 | 2,750 | |
| Benzo(a)Anthracene | 0 | 0 | | 0 | 0.5 | 0.5 | 4.58 | |
| 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 | 274,994 | |
| Bis(2-Chloroisopropyl)Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Ethylhexyl)Phthalate | 0 | 0 | | 0 | 4,500 | 4,500 | 41,249 | |
| 4-Bromophenyl Phenyl Ether | 0 | 0 | | 0 | 270 | 270 | 2,475 | |
| Butyl Benzyl Phthalate | 0 | 0 | | 0 | 140 | 140 | 1,283 | |
| 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 | 7,516 | |
| 1,3-Dichlorobenzene | 0 | 0 | | 0 | 350 | 350 | 3,208 | |
| 1,4-Dichlorobenzene | 0 | 0 | | 0 | 730 | 730 | 6,692 | |
| 3,3-Dichlorobenzidine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Diethyl Phthalate | 0 | 0 | | 0 | 4,000 | 4,000 | 36,666 | |
| Dimethyl Phthalate | 0 | 0 | | 0 | 2,500 | 2,500 | 22,916 | |
| Di-n-Butyl Phthalate | 0 | 0 | | 0 | 110 | 110 | 1,008 | |
| 2,4-Dinitrotoluene | 0 | 0 | | 0 | 1,600 | 1,600 | 14,666 | |
| 2,6-Dinitrotoluene | 0 | 0 | | 0 | 990 | 990 | 9,075 | |
| 1,2-Diphenylhydrazine | 0 | 0 | | 0 | 15 | 15.0 | 137 | |
| Fluoranthene | 0 | 0 | | 0 | 200 | 200 | 1,833 | |
| 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 | 91.7 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Hexachlorocyclopentadiene | 0 | 0 | | 0 | 5 | 5.0 | 45.8 | |
| Hexachloroethane | 0 | 0 | | 0 | 60 | 60.0 | 550 | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Isophorone | 0 | 0 | | 0 | 10,000 | 10,000 | 91,665 | |
| Naphthalene | 0 | 0 | | 0 | 140 | 140 | 1,283 | |
| Nitrobenzene | 0 | 0 | | 0 | 4,000 | 4,000 | 36,666 | |
| n-Nitrosodimethylamine | 0 | 0 | | 0 | 17,000 | 17,000 | 155,830 | |
| n-Nitrosodi-n-Propylamine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| n-Nitrosodiphenylamine | 0 | 0 | | 0 | 300 | 300 | 2,750 | |
| Phenanthrene | 0 | 0 | | 0 | 5 | 5.0 | 45.8 | |
| Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2,4-Trichlorobenzene | 0 | 0 | | 0 | 130 | 130 | 1,192 | |
| | | | | | | | | |

☑ *CFC* CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): 120.15 Analysis pH: 6.96

| 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 | 7,577 | |
| Total Arsenic | 0 | 0 | | 0 | 150 | 150 | 5,166 | Chem Translator of 1 applied |
| Total Barium | 0 | 0 | | 0 | 4,100 | 4,100 | 141,216 | |
| Total Boron | 0 | 0 | | 0 | 1,600 | 1,600 | 55,109 | |
| Total Cadmium | 0 | 0 | | 0 | 0.279 | 0.31 | 10.7 | Chem Translator of 0.901 applied |
| Total Chromium (III) | 0 | 0 | | 0 | 86.138 | 100 | 3,450 | Chem Translator of 0.86 applied |
| Hexavalent Chromium | 0 | 0 | | 0 | 10 | 10.4 | 358 | Chem Translator of 0.962 applied |
| Total Cobalt | 0 | 0 | | 0 | 19 | 19.0 | 654 | |
| Total Copper | 0 | 0 | | 0 | 10.477 | 10.9 | 376 | 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 | 51,664 | WQC = 30 day average; PMF = 1 |
| Total Lead | 0 | 0 | | 0 | 3.072 | 4.02 | 138 | Chem Translator of 0.764 applied |
| Total Manganese | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Mercury | 0 | 0 | | 0 | 0.770 | 0.91 | 31.2 | Chem Translator of 0.85 applied |
| Total Nickel | 0 | 0 | | 0 | 60.744 | 60.9 | 2,098 | 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 | 172 | 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 | 448 | |
| Total Zinc | 0 | 0 | | 0 | 138.020 | 140 | 4,821 | Chem Translator of 0.986 applied |
| Acrolein | 0 | 0 | | 0 | 3 | 3.0 | 103 | |
| Acrylonitrile | 0 | 0 | | 0 | 130 | 130 | 4,478 | |
| Benzene | 0 | 0 | | 0 | 130 | 130 | 4,478 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Bromoform | 0 | 0 | | 0 | 370 | 370 | 12,744 | |
| Carbon Tetrachloride | 0 | 0 | | 0 | 560 | 560 | 19,288 | |
| Chlorobenzene | 0 | 0 | | 0 | 240 | 240 | 8,266 | |
| Chlorodibromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2-Chloroethyl Vinyl Ether | 0 | 0 | | 0 | 3,500 | 3,500 | 120,550 | |
| Chloroform | 0 | 0 | | 0 | 390 | 390 | 13,433 | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | 3,100 | 3,100 | 106,773 | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | 2,200 | 2,200 | 75,774 | |
| Methyl Chloride | 0 | 0 | | 0 | 5,500 | 5,500 | 189,436 | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | | 0 | 210 | 210 | 7,233 | |
| Tetrachloroethylene | 0 | 0 | | 0 | 140 | 140 | 4,822 | |
| Toluene | 0 | 0 | | 0 | 330 | 330 | 11,366 | |
| 1,2-trans-Dichloroethylene | 0 | 0 | | 0 | 1,400 | 1,400 | 48,220 | |
| 1,1,1-Trichloroethane | 0 | 0 | | 0 | 610 | 610 | 21,010 | |
| 1,1,2-Trichloroethane | 0 | 0 | | 0 | 680 | 680 | 23,421 | |
| Trichloroethylene | 0 | 0 | | 0 | 450 | 450 | 15,499 | |
| Vinyl Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acenaphthene | 0 | 0 | | 0 | 17 | 17.0 | 586 | |
| Anthracene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzidine | 0 | 0 | | 0 | 59 | 59.0 | 2,032 | |
| Benzo(a)Anthracene | 0 | 0 | | 0 | 0.1 | 0.1 | 3.44 | |
| 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 | 206,657 | |
| Bis(2-Chloroisopropyl)Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Ethylhexyl)Phthalate | 0 | 0 | | 0 | 910 | 910 | 31,343 | |
| 4-Bromophenyl Phenyl Ether | 0 | 0 | | 0 | 54 | 54.0 | 1,860 | |
| Butyl Benzyl Phthalate | 0 | 0 | | 0 | 35 | 35.0 | 1,206 | |
| 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 | 5,511 | |
| 1,3-Dichlorobenzene | 0 | 0 | | 0 | 69 | 69.0 | 2,377 | |
| 1,4-Dichlorobenzene | 0 | 0 | | 0 | 150 | 150 | 5,166 | |
| 3,3-Dichlorobenzidine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Diethyl Phthalate | 0 | 0 | | 0 | 800 | 800 | 27,554 | |
| Dimethyl Phthalate | 0 | 0 | | 0 | 500 | 500 | 17,221 | |
| Di-n-Butyl Phthalate | 0 | 0 | | 0 | 21 | 21.0 | 723 | |
| 2,4-Dinitrotoluene | 0 | 0 | | 0 | 320 | 320 | 11,022 | |
| 2,6-Dinitrotoluene | 0 | 0 | | 0 | 200 | 200 | 6,889 | |
| 1,2-Diphenylhydrazine | 0 | 0 | | 0 | 3 | 3.0 | 103 | |
| Fluoranthene | 0 | 0 | | 0 | 40 | 40.0 | 1,378 | |
| 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 | 68.9 | |
| Hexachlorocyclopentadiene | 0 | 0 | | 0 | 1 | 1.0 | 34.4 | |
| Hexachloroethane | 0 | 0 | | 0 | 12 | 12.0 | 413 | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Isophorone | 0 | 0 | | 0 | 2,100 | 2,100 | 72,330 | |
| Naphthalene | 0 | 0 | | 0 | 43 | 43.0 | 1,481 | |
| Nitrobenzene | 0 | 0 | | 0 | 810 | 810 | 27,899 | |
| n-Nitrosodimethylamine | 0 | 0 | | 0 | 3,400 | 3,400 | 117,106 | |
| n-Nitrosodi-n-Propylamine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| n-Nitrosodiphenylamine | 0 | 0 | | 0 | 59 | 59.0 | 2,032 | |
| Phenanthrene | 0 | 0 | | 0 | 1 | 1.0 | 34.4 | |
| Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2,4-Trichlorobenzene | 0 | 0 | | 0 | 26 | 26.0 | 896 | |
| | | | | | | | | |

☑ *THH* 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 | 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 | 193 | |
| Total Arsenic | 0 | 0 | | 0 | 10 | 10.0 | 344 | |
| Total Barium | 0 | 0 | | 0 | 2,400 | 2,400 | 82,663 | |
| Total Boron | 0 | 0 | | 0 | 3,100 | 3,100 | 106,773 | |
| 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 | 10,333 | |
| 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 | 34,443 | |
| Total Mercury | 0 | 0 | | 0 | 0.050 | 0.05 | 1.72 | |
| Total Nickel | 0 | 0 | | 0 | 610 | 610 | 21,010 | |
| 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 | 8.27 | |
| Total Zinc | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acrolein | 0 | 0 | | 0 | 6 | 6.0 | 207 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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 | 130 | 130 | 4,478 | |
| 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 | N/A | N/A | N/A | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Methyl 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 | 1,300 | 1,300 | 44,776 | |
| 1,2-trans-Dichloroethylene | 0 | 0 | | 0 | 140 | 140 | 4,822 | |
| 1,1,1-Trichloroethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 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 | |
| Acenaphthene | 0 | 0 | | 0 | 670 | 670 | 23,077 | |
| Anthracene | 0 | 0 | | 0 | 8,300 | 8,300 | 285,876 | |
| 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 | 1,400 | 1,400 | 48,220 | |
| 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 | 150 | 150 | 5,166 | |
| 2-Chloronaphthalene | 0 | 0 | | 0 | 1,000 | 1,000 | 34,443 | |
| 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 | 420 | 420 | 14,466 | |
| 1,3-Dichlorobenzene | 0 | 0 | | 0 | 420 | 420 | 14,466 | |
| 1,4-Dichlorobenzene | 0 | 0 | | 0 | 420 | 420 | 14,466 | |
| 3,3-Dichlorobenzidine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Diethyl Phthalate | 0 | 0 | | 0 | 17,000 | 17,000 | 585,529 | |
| Dimethyl Phthalate | 0 | 0 | | 0 | 270,000 | 270,000 | 9,299,573 | |
| Di-n-Butyl Phthalate | 0 | 0 | | 0 | 2,000 | 2,000 | 68,886 | |
| 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 | 130 | 130 | 4,478 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Fluorene | 0 | 0 | | 0 | 1,100 | 1,100 | 37,887 | |
| Hexachlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachlorobutadiene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachlorocyclopentadiene | 0 | 0 | | 0 | 40 | 40.0 | 1,378 | |
| Hexachloroethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | | 0 | 0.0038 | 0.004 | 0.13 | |
| Isophorone | 0 | 0 | | 0 | 35 | 35.0 | 1,206 | |
| Naphthalene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Nitrobenzene | 0 | 0 | | 0 | 17 | 17.0 | 586 | |
| 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 | 830 | 830 | 28,588 | |
| 1,2,4-Trichlorobenzene | 0 | 0 | | 0 | 35 | 35.0 | 1,206 | |
| | | | | | | | | |

☑ *CRL* CCT (min): 61.292 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 | |
| Acrylonitrile | 0 | 0 | | 0 | 0.051 | 0.051 | 16.2 | |
| Benzene | 0 | 0 | | 0 | 1.2 | 1.2 | 380 | |
| Bromoform | 0 | 0 | | 0 | 4.3 | 4.3 | 1,362 | |
| Carbon Tetrachloride | 0 | 0 | | 0 | 0.23 | 0.23 | 72.9 | |
| Chlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chlorodibromomethane | 0 | 0 | | 0 | 0.4 | 0.4 | 127 | |
| 2-Chloroethyl Vinyl Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloroform | 0 | 0 | | 0 | 5.7 | 5.7 | 1,806 | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | 0.38 | 0.38 | 120 | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Methyl Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | | 0 | 0.17 | 0.17 | 53.9 | |
| Tetrachloroethylene | 0 | 0 | | 0 | 0.69 | 0.69 | 219 | |
| 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 | 0.59 | 0.59 | 187 | |
| Trichloroethylene | 0 | 0 | | 0 | 2.5 | 2.5 | 792 | |
| Vinyl Chloride | 0 | 0 | | 0 | 0.025 | 0.025 | 7.92 | |
| Acenaphthene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Anthracene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzidine | 0 | 0 | | 0 | 0.000086 | 0.00009 | 0.027 | |
| Benzo(a)Anthracene | 0 | 0 | | 0 | 0.0038 | 0.004 | 1.2 | |
| Benzo(a)Pyrene | 0 | 0 | | 0 | 0.0038 | 0.004 | 1.2 | |
| 3,4-Benzofluoranthene | 0 | 0 | | 0 | 0.0038 | 0.004 | 1.2 | |
| Benzo(k)Fluoranthene | 0 | 0 | | 0 | 0.0038 | 0.004 | 1.2 | |
| Bis(2-Chloroethyl)Ether | 0 | 0 | | 0 | 0.03 | 0.03 | 9.51 | |
| Bis(2-Chloroisopropyl)Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Ethylhexyl)Phthalate | 0 | 0 | | 0 | 1.2 | 1.2 | 380 | |
| 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 | 0.0038 | 0.004 | 1.2 | |
| Dibenzo(a,h)Anthrancene | 0 | 0 | | 0 | 0.0038 | 0.004 | 1.2 | |
| 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 | 0.021 | 0.021 | 6.65 | |
| 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 | 15.8 | |
| 2,6-Dinitrotoluene | 0 | 0 | | 0 | 0.05 | 0.05 | 15.8 | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1,2-Diphenylhydrazine | 0 | 0 | 0 | 0.036 | 0.036 | 11.4 | |
| Fluoranthene | 0 | 0 | 0 | N/A | N/A | N/A | |
| Fluorene | 0 | 0 | 0 | N/A | N/A | N/A | |
| Hexachlorobenzene | 0 | 0 | 0 | 0.00028 | 0.0003 | 0.089 | |
| Hexachlorobutadiene | 0 | 0 | 0 | 0.44 | 0.44 | 139 | |
| Hexachlorocyclopentadiene | 0 | 0 | 0 | N/A | N/A | N/A | |
| Hexachloroethane | 0 | 0 | 0 | 1.4 | 1.4 | 444 | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | 0 | N/A | N/A | N/A | |
| 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 | 0.00069 | 0.0007 | 0.22 | |
| n-Nitrosodi-n-Propylamine | 0 | 0 | 0 | 0.005 | 0.005 | 1.58 | |
| n-Nitrosodiphenylamine | 0 | 0 | 0 | 3.3 | 3.3 | 1,046 | |
| Phenanthrene | 0 | 0 | 0 | N/A | N/A | N/A | |
| Pyrene | 0 | 0 | 0 | N/A | N/A | N/A | |
| 1,2,4-Trichlorobenzene | 0 | 0 | 0 | N/A | N/A | N/A | |
| | | | | | | | |

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

**No. Samples/Month:** 4

| | *Mass Limits* | | *Concentration Limits* | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Pollutants | AML (lbs/day) | MDL (lbs/day) | AML | MDL | IMAX | Units | Governing WQBEL | WQBEL Basis | Comments |
| Total Cadmium | 0.0003 | 0.0004 | 10.7 | 16.7 | 26.7 | µg/L | 10.7 | CFC | Discharge Conc ≥ 50% WQBEL (RP) |
| Total Copper | Report | Report | Report | Report | Report | µg/L | 140 | AFC | Discharge Conc > 10% WQBEL (no RP) |
| Total Lead | Report | Report | Report | Report | Report | µg/L | 138 | CFC | Discharge Conc > 10% WQBEL (no RP) |
| Total Zinc | 0.027 | 0.043 | 1,135 | 1,771 | 2,837 | µg/L | 1,135 | AFC | Discharge Conc ≥ 50% WQBEL (RP) |
| | | | | | | | | | |
| | | | | | | | | | |

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

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

| Pollutants | Governing WQBEL | Units | Comments |
|---|---|---|---|
| Total Dissolved Solids (PWS) | N/A | N/A | PWS Not Applicable |
| Chloride (PWS) | N/A | N/A | PWS Not Applicable |
| Bromide | N/A | N/A | No WQS |
| Sulfate (PWS) | N/A | N/A | PWS Not Applicable |
| Fluoride (PWS) | N/A | N/A | PWS Not Applicable |
| Total Aluminum | 4,406 | µg/L | Discharge Conc ≤ 10% WQBEL |

| | | | |
|---|---|---|---|
| Total Antimony | 193 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Arsenic | N/A | N/A | Discharge Conc < TQL |
| Total Barium | 82,663 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Beryllium | N/A | N/A | No WQS |
| Total Boron | 47,590 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Chromium (III) | 3,450 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Hexavalent Chromium | 95.7 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Cobalt | 558 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Cyanide | N/A | N/A | No WQS |
| Dissolved Iron | 10,333 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Iron | 51,664 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Manganese | 34,443 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Mercury | 1.72 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Nickel | 2,098 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Phenols (Phenolics) (PWS) | | µg/L | Discharge Conc < TQL |
| Total Selenium | 172 | µg/L | Discharge Conc < TQL |
| Total Silver | 58.6 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Thallium | 8.27 | µg/L | Discharge Conc < TQL |
| Total Molybdenum | N/A | N/A | No WQS |
| Acrolein | 17.6 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Acrylonitrile | 16.2 | µg/L | Discharge Conc < TQL |
| Benzene | 380 | µg/L | Discharge Conc < TQL |
| Bromoform | 1,362 | µg/L | Discharge Conc < TQL |
| Carbon Tetrachloride | 72.9 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Chlorobenzene | 4,478 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Chlorodibromomethane | 127 | µg/L | Discharge Conc < TQL |
| Chloroethane | N/A | N/A | No WQS |
| 2-Chloroethyl Vinyl Ether | 105,756 | µg/L | Discharge Conc < TQL |
| Chloroform | 1,806 | µg/L | Discharge Conc < TQL |
| 1,1-Dichloroethane | N/A | N/A | No WQS |
| 1,2-Dichloroethane | 120 | µg/L | Discharge Conc < TQL |
| 1,2-Dichloropropane | 64,629 | µg/L | Discharge Conc < TQL |
| 1,4-Dioxane | N/A | N/A | No WQS |
| Methyl Chloride | 164,509 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,1,2,2-Tetrachloroethane | 53.9 | µg/L | Discharge Conc < TQL |
| Tetrachloroethylene | 219 | µg/L | Discharge Conc < TQL |
| Toluene | 9,988 | µg/L | Discharge Conc < TQL |
| 1,2-trans-Dichloroethylene | 4,822 | µg/L | Discharge Conc < TQL |
| 1,1,1-Trichloroethane | 17,626 | µg/L | Discharge Conc < TQL |
| 1,1,2-Trichloroethane | 187 | µg/L | Discharge Conc < TQL |
| Trichloroethylene | 792 | µg/L | Discharge Conc < TQL |
| Vinyl Chloride | 7.92 | µg/L | Discharge Conc < TQL |
| Acenaphthene | 488 | µg/L | Discharge Conc < TQL |
| Acenaphthylene | N/A | N/A | No WQS |
| Anthracene | 285,876 | µg/L | Discharge Conc < TQL |

| | | | |
|---|---|---|---|
| Benzidine | 0.027 | µg/L | Discharge Conc < TQL |
| Benzo(a)Anthracene | 1.2 | µg/L | Discharge Conc < TQL |
| Benzo(a)Pyrene | 1.2 | µg/L | Discharge Conc < TQL |
| 3,4-Benzofluoranthene | 1.2 | µg/L | Discharge Conc < TQL |
| Benzo(ghi)Perylene | N/A | N/A | No WQS |
| Benzo(k)Fluoranthene | 1.2 | µg/L | Discharge Conc < TQL |
| Bis(2-Chloroethoxy)Methane | N/A | N/A | No WQS |
| Bis(2-Chloroethyl)Ether | 9.51 | µg/L | Discharge Conc < TQL |
| Bis(2-Chloroisopropyl)Ether | 48,220 | µg/L | Discharge Conc < TQL |
| Bis(2-Ethylhexyl)Phthalate | 380 | µg/L | Discharge Conc < TQL |
| 4-Bromophenyl Phenyl Ether | 1,586 | µg/L | Discharge Conc < TQL |
| Butyl Benzyl Phthalate | 823 | µg/L | Discharge Conc < TQL |
| 2-Chloronaphthalene | 34,443 | µg/L | Discharge Conc < TQL |
| 4-Chlorophenyl Phenyl Ether | N/A | N/A | No WQS |
| Chrysene | 1.2 | µg/L | Discharge Conc < TQL |
| Dibenzo(a,h)Anthrancene | 1.2 | µg/L | Discharge Conc < TQL |
| 1,2-Dichlorobenzene | 4,818 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,3-Dichlorobenzene | 2,056 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,4-Dichlorobenzene | 4,289 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 3,3-Dichlorobenzidine | 6.65 | µg/L | Discharge Conc < TQL |
| Diethyl Phthalate | 23,501 | µg/L | Discharge Conc < TQL |
| Dimethyl Phthalate | 14,688 | µg/L | Discharge Conc < TQL |
| Di-n-Butyl Phthalate | 646 | µg/L | Discharge Conc < TQL |
| 2,4-Dinitrotoluene | 15.8 | µg/L | Discharge Conc < TQL |
| 2,6-Dinitrotoluene | 15.8 | µg/L | Discharge Conc < TQL |
| Di-n-Octyl Phthalate | N/A | N/A | No WQS |
| 1,2-Diphenylhydrazine | 11.4 | µg/L | Discharge Conc < TQL |
| Fluoranthene | 1,175 | µg/L | Discharge Conc < TQL |
| Fluorene | 37,887 | µg/L | Discharge Conc < TQL |
| Hexachlorobenzene | 0.089 | µg/L | Discharge Conc < TQL |
| Hexachlorobutadiene | 58.8 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Hexachlorocyclopentadiene | 29.4 | µg/L | Discharge Conc < TQL |
| Hexachloroethane | 353 | µg/L | Discharge Conc < TQL |
| Indeno(1,2,3-cd)Pyrene | 0.13 | µg/L | Discharge Conc < TQL |
| Isophorone | 1,206 | µg/L | Discharge Conc < TQL |
| Naphthalene | 823 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Nitrobenzene | 586 | µg/L | Discharge Conc < TQL |
| n-Nitrosodimethylamine | 0.22 | µg/L | Discharge Conc < TQL |
| n-Nitrosodi-n-Propylamine | 1.58 | µg/L | Discharge Conc < TQL |
| n-Nitrosodiphenylamine | 1,046 | µg/L | Discharge Conc < TQL |
| Phenanthrene | 29.4 | µg/L | Discharge Conc < TQL |
| Pyrene | 28,588 | µg/L | Discharge Conc < TQL |
| 1,2,4-Trichlorobenzene | 764 | µg/L | Discharge Conc ≤ 25% WQBEL |
| | | | |
| | | | |