pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

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|---|---|---|---|---|
| Application Type | **Renewal** | **NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER** | Application No. | **PA0217093** |
| Facility Type | **Industrial** | | APS ID | **778593** |
| Major / Minor | **Major** | | Authorization ID | **923446** |

## Applicant and Facility Information

| | | | |
|---|---|---|---|
| Applicant Name | **Johnstown Wire Technologies, Inc.** | Facility Name | **Johnstown Plant** |
| Applicant Address | 124 Laurel Avenue | Facility Address | 124 Laurel Avenue |
| | Johnstown, PA 15906-2246 | | Johnstown, PA 15906-2246 |
| Applicant Contact | Nick Teeter | Facility Contact | Nick Teeter |
| Applicant Phone | 814-532-5640 | Facility Phone | 814-532-5640 |
| Client ID | 87458 | Site ID | 263666 |
| SIC Code | 3315 | Municipality | Johnstown City |
| SIC Description | Manufacturing - Steel Wire and Related Products | County | Cambria |
| Date Application Received | March 20, 2012 | EPA Waived? | No |
| Date Application Accepted | April 17, 2012 | If No, Reason | Major Facility |

Purpose of Application: Renewal NPDES permit coverage for Industrial wastewater discharge

## Summary of Review

Johnstown Wire Technologies, Inc. is involved in rod and wire finishing that includes acid cleaning, wire drawing, zinc plating, aluminum hot dip and heat treating. Wastewater generated and discharged from this facility includes treated process wastewater, non-contact cooling water, stormwater and groundwater. Operations at the plant are classified under standard industrial classification code 3315, Steel Wire and Related Products.

The site has 8 outfalls, Outfall 601, 602, 603, 604, 605, 606, 607, and 608. All of the site's Outfalls discharge to the Conemaugh River, designated in 25 PA Code Chapter 93 as Warm Water Fishery. The site also has 6 internal monitoring points, IMP 613, 623, 614, 615, 625, and 617,

Outfall 603 discharges treat process wastewater, non-contact cooling water, stormwater, and groundwater. Outfalls 604, 605, and 607 discharge non-contact cooling water, storm water, and groundwater. Outfalls 601, 602, and 606 discharge stormwater and groundwater. Outfall 608 is new to the permit and is the intake strainer cleaning backwash wastewater.

The treated process wastewater discharges through Outfall 603 but is limited and monitored at internal monitoring point IMP 613 prior to mixing with any other waste streams. Wastewater from Bethanize Line, Aluminize Line and Cleaning House Operations is treated in the onsite wastewater treatment plant before discharging to the Conemaugh River via Outfall 603. The treatment plant utilized neutralization with lime, aeration and mixing, chemical precipitation, flocculation, and sedimentation. The effluent from the treatment plant is monitored at IMP 613 prior to comingling with other wastewater and discharging via Outfall 603.

The wastewater from the Bethanize Line, Aluminize Line and Cleaning House Operations are subject to Federal Effluent Limitation Guidelines. The Aluminize Line is subject to ELGs from 40 CFR 420 Iron and Steel Manufacturing Subpart I, Acid Pickling Subcategory, and Subpart L, Hot Coating Subcategory. The Bethanize Line is subject to ELGs from 40 CFR 433

| Approve | Deny | Signatures | Date |
|---|---|---|---|
| X | | Adam Olesnanik / Project Manager | 1/26/2022 |
| X | | Michael E. Fifth, P.E. / Environmental Engineer Manager | 1/28/2022 |

**Summary of Review**

Metal Finishing Point Source Category. The Cleaning House Operation is subject to ELGs from 40 CFR 420 Iron and Steel Manufacturing Subpart I, Acid Pickling Subcategory, Subpart K, Alkaline Cleaning, and 40 CFR 433 Metal Finishing Point Source Category.

The Bethanize line consists of heat-treating (annealing), HCL acid pickling, anodic cleaning using sulfuric acid, zinc electroplating and burnishing. Bethanizing, or zinc electroplating, done on this line consists of preparatory and burnishing processes. First, the wire is heat treated, the wire is drawn through molten lead, charring the drawing lubricant, then treating the wire by patent annealing, regular annealing, or stress relieving. Next, the wire is then cleaned, HCL is used to remove the charred drawing lubricant. Then, the wire is processes through electrochemical machining, the wire is charged as an anode in an electrolytic cell to repel surface particles such as contaminates and base metal into the electrolyte. The wire is then put through the zinc electroplating process. Finally, the wire is put through the burnishing processes where long springs are wrapped around the wire to polish its surface. Electro-galvanized wire is zinc coated steel wire used in a variety of high-strength, corrosion resistant applications. Applications include automotive, agricultural, power generation such as utility pole guy wires and guy grips, as well as construction nails and staples. In the process, strands of wire are electrically charged as they pass through a plating solution and between oppositely charged anodes making a circuit. The end result is the permanent deposition of zinc onto the steel surface.

The Aluminize line consists of heat-treating (annealing), HCL acid pickling, anodic cleaning using sulfuric acid, and flux bath followed by aluminum hot dip coating. The Aluminize line is similar to the Bethanize line. First, the wire is heat treated, the wire is drawn through molten lead, charring the drawing lubricant, then treating the wire by patent annealing, regular annealing, or stress relieving. Next, the wire is then cleaned, HCL is used to remove the charred drawing lubricant. Then, the wire is processes through electrochemical machining, the wire is charged as an anode in an electrolytic cell to repel surface particles such as contaminates and base metal into the electrolyte. The wire is then put through the zinc electroplating process. The wire is then processed through aluminum hot dip coating. Aluminized wire is an extremely corrosion resistant hot dip coated product. It is produced by cleaning and fluxing the strands of wire, then immersing them in molten aluminum. It is used in a variety of outdoor, high strength products such as power distribution and data transmission support wires, and premium chain link fencing.

The Cleaning House consists of HCL acid pickling, alkaline cleaning, zinc phosphate coating and HCL fume scrubber waste. The Cleaning House operations consist of putting the steel in HCL and then alkaline cleaning to remove oxides and scale, and to clean the steal prior to zinc phosphate coating. Rod pickling and coating can be done in either of the two automated cleaning lines. Hot rolled rod is typically cleaned and coated in the Automated Cleaning House #1, where the process is run completely by programmable controls, providing a consistently high-quality product. Both Cleaning Houses exclusively use hydrochloric acid to provide the cleanest, smoothest surface. Caustic permanganate is available for any hard-to-clean jobs. All rod sizes up to 1.125″ diameter and 52″ coil OD can be cleaned and coated. Coil weights up to 6000 pounds can be processed.

IMP 623 is the emergency overflow from the plating operations wastewater pumping station and IMP 615 is the emergency overflow from the acid rinse water pumping station.

IMPs 614, 625, and 617 are internal monitoring points to monitor the non-contact cooling waters that discharge to the respective outfalls, Outfalls 604, 605, and 607, before comingling with other wastewaters.

Clean Water Act § 316(b) – Cooling Water Intake Structures

On August 15, 2014, EPA promulgated Clean Water Act Section 316(b) regulations applicable to cooling water intake structures. The regulations established best technology available ("BTA") standards to reduce impingement mortality and entrainment of all life stages of fish and shellfish at existing power generating and manufacturing facilities. The Final Rule took effect on October 14, 2014. Regulations implementing the 2014 Final Rule (and the previously promulgated Phase I Rule) are provided in 40 CFR Part 125, Subparts I and J for new facilities and existing facilities, respectively. Associated NPDES permit application requirements for facilities with cooling water intake structures are provided in 40 CFR Part 122, Subpart B – Permit Application and Special NPDES Program Requirements (§ 122.21(r)).

Johnstown Wire Technologies is supplied with water for cooling by the Cambria Somerset Authority ("CSA"). CSA owns and operates five dams and associated reservoirs located in Cambria and Somerset Counties as well as the associated piping and appurtenances necessary for providing raw water from the dams to various users in the region. Johnstown Wire Technologies may variously receive raw water from at least three of CSA's five reservoirs including the Quemahoning Reservoir, the

**Summary of Review**

Hinckston Run Reservoir, and the Border Dam Reservoir. CSA's primary water supply source for its customers is the Quemahoning Reservoir with Hinckston Run and Border as backups.

Johnstown Wire Technologies is an "existing facility" as defined in 40 CFR § 125.92(k). As an existing facility, Johnstown Wire Technologies is subject to 40 CFR Part 125, Subpart J – Requirements Applicable to Cooling Water Intake Structures for Existing Facilities Under Section 316(b) of the Clean Water Act (§§ 125.90 – 125.99) if the facility meets the rule's applicability criteria. Pursuant to the applicability criteria given by § 125.91(a), Johnstown Wire Technologies is subject to the requirements of §§ 125.94 – 125.99 if:

(1) The facility is a point source;

(2) The facility uses or proposes to use one or more cooling water intake structures with a cumulative design intake flow (DIF) of greater than 2 million gallons per day (mgd) to withdraw water from waters of the United States; and

(3) Twenty-five percent or more of the water the facility withdraws on an actual intake flow basis is used exclusively for cooling purposes.

Johnstown Wire Technologies is a point source as defined in 40 CFR § 122.2. Johnstown Wire Technologies appears to use one or more cooling water intake structures (Quemahoning, Hinckston Run, or Border through Johnstown Wire Technologies' water supply arrangement with CSA) with a cumulative Design Intake Flow greater than 2 MGD (the Quemahoning intake alone can withdraw 71 MGD). And Johnstown Wire Technologies uses more than 25% of water it withdraws (via CSA) for cooling purposes, which exceeds the applicability threshold. Johnstown Wire Technologies appears to meet these initial applicability criteria. However, §§ 125.91(b) and (c) further state that:

> (b) Use of a cooling water intake structure includes obtaining cooling water by any sort of contract or arrangement with one or more independent suppliers of cooling water if the independent supplier withdraws water from waters of the United States but is not itself a new or existing facility as defined in subparts I or J of this part, except as provided in paragraphs (c) and (d) of this section. An owner or operator of an existing facility may not circumvent these requirements by creating arrangements to receive cooling water from an entity that is not itself a facility subject to subparts I or J of this part.
>
> (c) Obtaining cooling water from a public water system, using reclaimed water from wastewater treatment facilities or desalination plants, or recycling treated process wastewater effluent as cooling water does not constitute use of a cooling water intake structure for purposes of this subpart.

U.S. EPA Region 3 clarified the applicability of §§ 125.91(b) and (c) to CSA in a June 19, 2019 email as follows:

> Two intake structures at the Quemahoning and Wilmore Reservoirs that are owned and operated by CSA are subject to 316(b). Section 316(b) requires the use of the Best Technology Available to minimize adverse environmental impact at cooling water intake structures for power-generating and manufacturing facilities. While CSA is not a power-generating or manufacturing facility, the co-permittee, CPV Fairview, LLC, a power-generating facility, will directly use the water supplied by CSA for cooling purposes.
>
> 1) CSA meets the definition of an independent supplier.
> 2) CSA is not a public water system (they do not supply finished or potable water) so the public water system exemption doesn't apply to the facility.
> 3) In the case where CSA is a co-permittee, both CSA and CPV Fairview LLC are subject to the requirements of 316(b).

Section 125.92(p) defines "independent supplier" as "an entity, other than the regulated facility, that owns and operates its own cooling water intake structure and directly withdraws water from waters of the United States. The supplier provides the cooling water to other facilities for their use, but may itself also use a portion of the water. An entity that provides potable water to residential populations (e.g., public water system) is not a supplier for purposes of this subpart."

In an independent supplier scenario where the independent supplier is not an existing facility subject to 316(b) requirements, the facility that uses water supplied by the independent supplier for cooling purposes (i.e., Johnstown Wire Technologies) is subject to 316(b) requirements and the independent supplier (i.e., CSA) is not. As EPA stated in its June 19, 2019 email, even though CSA is an independent supplier, it is subject to 316(b) requirements because it is a co-permittee with CPV Fairview

**Summary of Review**

(NPDES PA0253359). Also, even though § 125.91(b) only states that the independent supplier must be an existing facility for the § 125.91(b) exemption to apply to facilities like Johnstown Wire Technologies, the preamble to the 2014 Existing Facilities rule (79 FR 48305) clarifies that the independent supplier must be an existing facility that is subject to 316(b) requirements for the facilities served by the independent supplier to be exempt as 'not using a cooling water intake structure'. The relevant portion of the preamble states:

> C. General Applicability
>
> > This rule applies to owners and operators of existing facilities that meet all following criteria:
> >
> > • The facility is a point source that uses or, in the case of new units at an existing facility, proposes to use cooling water from one or more cooling water intake structures, including a cooling water intake structure operated by an independent supplier not otherwise subject to 316(b) requirements that withdraws water from waters of the United States and provides cooling water to the facility by any sort of contract or other arrangement; […]

In summary, if the independent supplier is an existing facility subject to 316(b) requirements, then the facilities that use water supplied by that independent supplier for cooling purposes are not considered to be using a cooling water intake structure. Consequently, the independent supplier's customers who are served by the independent suppliers' cooling water intake structures do not satisfy the § 125.91(a)(2) applicability criterion. That is, Johnstown Wire Technologies does not use one or more cooling water intake structures with a design intake flow greater than 2 MGD because Johnstown Wire Technologies' water supply arrangement with CSA does not qualify (for Johnstown Wire Technologies) as "use of a cooling water intake structure". Since Johnstown Wire Technologies does not meet one of the three applicability criteria in § 125.91(a), Johnstown Wire Technologies is not subject to the requirements of §§ 125.94 – 125.99.

<u>Public Participation</u>

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. | 601 | Design Flow (MGD) | 0.0 |
| Latitude | 40º 21' 15" | Longitude | -78º 56' 23" |
| Quad Name | Johnstown | Quad Code | 1614 |
| Wastewater Description: | Stormwater and Groundwater | | |

| | | | |
|---|---|---|---|
| Receiving Waters | Conemaugh River (WWF) | Stream Code | 43832 |
| NHD Com ID | 123720447 | RMI | 50.3 |
| Drainage Area | 686 | Yield (cfs/mi$^2$) | 0.097 |
| $Q_{7\text{-}10}$ Flow (cfs) | 66.3 | $Q_{7\text{-}10}$ Basis | USGS Stream Stats |
| Elevation (ft) | 1124 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 18-D | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Not Assessed | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Waterworks | | |
| PWS Waters | Conemaugh River | Flow at Intake (cfs) | 124 |
| PWS RMI | 0.5 | Distance from Outfall (mi) | 49.9 |

| Discharge, Receiving Waters and Water Supply Information | | | |
|---|---|---|---|
| Outfall No. | 602 | Design Flow (MGD) | 0 |
| Latitude | 40º 21' 13" | Longitude | -78º 56' 23" |
| Quad Name | Johnstown | Quad Code | 1614 |
| Wastewater Description: | Stormwater and Groundwater | | |
| Receiving Waters | Conemaugh River (WWF) | Stream Code | 43832 |
| NHD Com ID | 123720447 | RMI | 50.32 |
| Drainage Area | 686 | Yield (cfs/mi$^2$) | 0.097 |
| $Q_{7-10}$ Flow (cfs) | 66.3 | $Q_{7-10}$ Basis | USGS Stream Stats |
| Elevation (ft) | 1124 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 18-D | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Not Assessed | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Waterworks | | |
| PWS Waters | | Flow at Intake (cfs) | |
| PWS RMI | | Distance from Outfall (mi) | |

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

| | | | |
|---|---|---|---|
| Outfall No. | 603 (IMP 613 and 623) | Design Flow (MGD) | 2.27 |
| Latitude | 40º 21' 07" | Longitude | -78º 56' 23" |
| Quad Name | Johnstown | Quad Code | 1614 |
| Wastewater Description: | IW Process Effluent with ELG, Noncontact Cooling Water (NCCW), Stormwater, and Groundwater | | |

| | | | |
|---|---|---|---|
| Receiving Waters | Conemaugh River (WWF) | Stream Code | 43832 |
| NHD Com ID | 123720447 | RMI | 50.4 |
| Drainage Area | 686 | Yield (cfs/mi$^2$) | 0.097 |
| $Q_{7-10}$ Flow (cfs) | 66.3 | $Q_{7-10}$ Basis | USGS Stream Stats |
| Elevation (ft) | 1124 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 18-D | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Not Assessed | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |

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|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Waterworks | | |
| PWS Waters | Conemaugh River | Flow at Intake (cfs) | 124 |
| PWS RMI | 0.5 | Distance from Outfall (mi) | 49.9 |

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

| | | | |
|---|---|---|---|
| Outfall No. | 604 (IMP 614) | Design Flow (MGD) | 0.398 |
| Latitude | 40º 21' 06" | Longitude | -78º 56' 32" |
| Quad Name | Johnstown | Quad Code | 1614 |
| Wastewater Description: | Noncontact Cooling Water (NCCW), Stormwater, and Groundwater | | |

| | | | |
|---|---|---|---|
| Receiving Waters | Conemaugh River (WWF) | Stream Code | 43832 |
| NHD Com ID | 123720447 | RMI | 50.46 |
| Drainage Area | 686 | Yield (cfs/mi$^2$) | 0.097 |
| $Q_{7-10}$ Flow (cfs) | 66.3 | $Q_{7-10}$ Basis | USGS Stream Stats |
| Elevation (ft) | 1124 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 18-D | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Not Assessed | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Waterworks | | |
| PWS Waters | Conemaugh River | Flow at Intake (cfs) | 124 |
| PWS RMI | 0.5 | Distance from Outfall (mi) | 49.9 |

## Discharge, Receiving Waters and Water Supply Information

| | | | |
|---|---|---|---|
| Outfall No. | 605 (IMP 615 and 625) | Design Flow (MGD) | 0.24 |
| Latitude | 40º 21' 05" | Longitude | -78º 56' 32" |
| Quad Name | Johnstown | Quad Code | 1614 |
| Wastewater Description: | Emergency Overflow, Noncontact Cooling Water (NCCW), Stormwater, and Groundwater | | |

| | | | |
|---|---|---|---|
| Receiving Waters | Conemaugh River (WWF) | Stream Code | 43832 |
| NHD Com ID | 123720447 | RMI | 50.47 |
| Drainage Area | 686 | Yield (cfs/mi$^2$) | 0.097 |
| $Q_{7-10}$ Flow (cfs) | 66.3 | $Q_{7-10}$ Basis | USGS Stream Stats |
| Elevation (ft) | 1124 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 18-D | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Not Assessed | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Waterworks | | |
| PWS Waters | Conemaugh River | Flow at Intake (cfs) | 124 |
| PWS RMI | 0.5 | Distance from Outfall (mi) | 49.9 |

## Discharge, Receiving Waters and Water Supply Information

| | | | |
|---|---|---|---|
| Outfall No. | 606 | Design Flow (MGD) | 0 |
| Latitude | 40º 21' 00" | Longitude | -78º 56' 25" |
| Quad Name | Johnstown | Quad Code | 1614 |
| Wastewater Description: | Stormwater and Groundwater | | |

| | | | |
|---|---|---|---|
| Receiving Waters | Conemaugh River (WWF) | Stream Code | 43832 |
| NHD Com ID | 123720447 | RMI | 50.56 |
| Drainage Area | 686 | Yield (cfs/mi$^2$) | 0.097 |
| $Q_{7-10}$ Flow (cfs) | 66.3 | $Q_{7-10}$ Basis | USGS Stream Stats |
| Elevation (ft) | 1124 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 18-D | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Not Assessed | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Waterworks | | |
| PWS Waters | Conemaugh River | Flow at Intake (cfs) | 124 |
| PWS RMI | 0.5 | Distance from Outfall (mi) | 49.9 |

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

| | | | |
|---|---|---|---|
| Outfall No. | 607 (IMP 617) | Design Flow (MGD) | 0 |
| Latitude | 40º 21' 00" | Longitude | -78º 56' 25" |
| Quad Name | Johnstown | Quad Code | 1614 |
| Wastewater Description: | Boiler Blowdown, Softener Backwash Water, Noncontact Cooling Water (NCCW), Stormwater, and Groundwater | | |

| | | | |
|---|---|---|---|
| Receiving Waters | Conemaugh River (WWF) | Stream Code | 43832 |
| NHD Com ID | 123720447 | RMI | 50.56 |
| Drainage Area | 686 | Yield (cfs/mi$^2$) | 0.097 |
| $Q_{7-10}$ Flow (cfs) | 66.3 | $Q_{7-10}$ Basis | USGS Stream Stats |
| Elevation (ft) | 1124 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 18-D | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Not Assessed | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |

| | | | |
|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Waterworks | | |
| PWS Waters | Conemaugh River | Flow at Intake (cfs) | 124 |
| PWS RMI | 0.5 | Distance from Outfall (mi) | 49.9 |

## Discharge, Receiving Waters and Water Supply Information

| | | | |
|---|---|---|---|
| Outfall No. | 608 | Design Flow (MGD) | 0.0001 |
| Latitude | 40º 21' 03.4" | Longitude | -78º 56' 24" |
| Quad Name | Johnstown | Quad Code | 1614 |
| Wastewater Description: | Intake strainer backwash water | | |

| | | | |
|---|---|---|---|
| Receiving Waters | Conemaugh River (WWF) | Stream Code | 43832 |
| NHD Com ID | 123720447 | RMI | 50.56 |
| Drainage Area | 686 | Yield (cfs/mi$^2$) | 0.097 |
| $Q_{7-10}$ Flow (cfs) | 66.3 | $Q_{7-10}$ Basis | USGS Stream Stats |
| Elevation (ft) | 1124 | Slope (ft/ft) | 0.0001 |
| Watershed No. | 18-D | Chapter 93 Class. | WWF |
| Existing Use | | Existing Use Qualifier | |
| Exceptions to Use | | Exceptions to Criteria | |
| Assessment Status | Not Assessed | | |
| Cause(s) of Impairment | | | |
| Source(s) of Impairment | | | |
| TMDL Status | Final | Name | Kiskiminetas-Conemaugh River Watersheds TMDL |

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|---|---|---|---|
| Nearest Downstream Public Water Supply Intake | Saltsburg Municipal Waterworks | | |
| PWS Waters | Conemaugh River | Flow at Intake (cfs) | 124 |
| PWS RMI | 0.5 | Distance from Outfall (mi) | 49.9 |

**Development of Effluent Limitations**

**Outfall No.** 601 **Design Flow (MGD)** 0
**Latitude** 40º 21' 15" **Longitude** -78º 56' 23"
**Wastewater Description:** Stormwater and Groundwater

Stormwater Technology Limits

Outfall 601 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3315 and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B. The reporting requirements applicable to stormwater discharges are shown in Table 1 below.

**Table 1: PAG-03 Appendix (B) Monitoring Requirements**

| Parameter | Max Daily Concentration | Measurement Frequency | Sample Type |
|---|---|---|---|
| Total Suspended Solids (TSS) | Monitor and Report | 1/6 Months | Grab |
| Total Aluminum | Monitor and Report | 1/6 Months | Grab |
| Total Zinc | Monitor and Report | 1/6 Months | Grab |
| Total Copper | Monitor and Report | 1/6 Months | Grab |
| Total Iron | Monitor and Report | 1/6 Months | Grab |
| Total Lead | Monitor and Report | 1/6 Months | Grab |

**Water Quality-Based Limitations**

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Outfall 601 are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Total Maximum Daily Loads

Wastewater discharges from Johnstown Wire Tech are located within the Kiskiminetas-Conemaugh Watershed for which the Department has developed a TMDL. The TMDL was finalized on January 29, 2010 and establishes waste load allocations for the discharge of aluminum, iron and manganese within the Kiskiminetas-Conemaugh Watershed. The site's NPDES permit (PA0217093) is listed in the Appendix G of the Kiskiminetas-Conemaugh Watershed TMDL, requiring load allocations. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA 1991a). Stream reaches within the Kiskiminetas-Conemaugh Watershed are included in the state's 2008 Section 303(d) list because of various impairments, including metals, pH and sediment. The TMDL includes consideration for each river and tributary within the target watershed and its impairment sources. Stream data is then used to calculate minimum pollutant reductions that are necessary to attain water quality criteria levels. Target concentrations published in the TMDL were based on established water quality criteria of 0.750 $^{mg}/_{L}$ total recoverable aluminum, 1.5 $^{mg}/_{L}$ total recoverable iron based on a 30-day average and 1.0 $^{mg}/_{L}$ total recoverable manganese. The reduction needed to meet the minimum water quality standards is then divided between each known point and non-point pollutant source in the form of a watershed allocation. TMDLs prescribe allocations that minimally achieve water quality criteria (i.e., 100 percent use of a stream's assimilative capacity). However, the discharges from Outfall 601 are groundwater and stormwater and based on the sampling data provided in the permit application, these discharges do not contribute to the impairment of the Watershed. Therefore, TMDL load allocations and concentration-based limitations will not be imposed, but monitoring for total iron, total manganese, and total aluminum will be imposed.

**Anti-Backsliding**

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). The previous limitations for Outfalls 601 are displayed below in Table 2. Along with the monitoring requirements, the current permit had discharge goals for the stormwater, Zinc goal of 0.117 mg/L and Nitrate-Nitrite Nitrogen goal of 0.68 m/L. These goals are going to be removed from the proposed permit because these goals are not required for the most recent PAG-03 general permit. The permit also required the sampling to be conducted during a storm event. This is due to the continual contribution of waste streams other than stormwater runoff to the outfall.

**Table 2: Effluent Limitations in the Current Permit for Outfall 601**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Total Zinc | XXX | XXX | Report | Report | XXX | 1/month | Grab |
| Nitrate-Nitrite Nitrogen | XXX | XXX | Report | Report | XXX | 1/month | Grab |

**Proposed Effluent Limitations and Monitoring Requirements**

The proposed effluent monitoring requirements for Outfall 601 are displayed in Table 3 below, they are the most stringent values from the above effluent limitation development. The monitoring frequency for the existing monitoring requirements has been changed from 1/month to semi-annually to reflect the monitoring frequency in the PAG-03 general permit. The Draft Permit requires a Corrective Action Plan when there are two consecutive exceedances of the benchmark values, which are also included in the Part C condition. The benchmark values are displayed below in Table 3. These values are not effluent limitations, an exceedance of the benchmark value is not a violation. As described above, if there are two consecutive exceedances of the benchmark value, a corrective action plan must be conducted to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater.

**Table 3: Proposed Effluent Monitoring Requirements – Outfall 601**

| Parameter | Max Daily Concentration | Benchmark Values (mg/L) | Measurement Frequency | Sample Type |
|---|---|---|---|---|
| Total Suspended Solids (TSS) | Report | 100 | 1/6 Months | Grab |
| Total Aluminum | Report | XXX | 1/6 Months | Grab |
| Total Zinc | Report | XXX | 1/6 Months | Grab |
| Total Copper | Report | XXX | 1/6 Months | Grab |
| Total Iron | Report | XXX | 1/6 Months | Grab |
| Total Lead | Report | XXX | 1/6 Months | Grab |
| Nitrate-Nitrite Nitrogen | Report | XXX | 1/6 Months | Grab |
| Total Manganese | Report | XXX | 1/6 Months | Grab |

| Development of Effluent Limitations |
|---|

**Outfall No.** 602 **Design Flow (MGD)** 0
**Latitude** 40º 21' 13" **Longitude** -78º 56' 23"
**Wastewater Description:** Stormwater and Groundwater

Stormwater Technology Limits

Outfall 602 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3315 and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B. The reporting requirements applicable to stormwater discharges are shown in Table 4 below.

**Table 4: PAG-03 Appendix (B) Monitoring Requirements**

| Parameter | Max Daily Concentration | Measurement Frequency | Sample Type |
|---|---|---|---|
| Total Suspended Solids (TSS) | Monitor and Report | 1/6 Months | Grab |
| Total Aluminum | Monitor and Report | 1/6 Months | Grab |
| Total Zinc | Monitor and Report | 1/6 Months | Grab |
| Total Copper | Monitor and Report | 1/6 Months | Grab |
| Total Iron | Monitor and Report | 1/6 Months | Grab |
| Total Lead | Monitor and Report | 1/6 Months | Grab |

**Water Quality-Based Limitations**

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Outfall 602 are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Total Maximum Daily Loads

Wastewater discharges from Johnstown Wire Tech are located within the Kiskiminetas-Conemaugh Watershed for which the Department has developed a TMDL. The TMDL was finalized on January 29, 2010 and establishes waste load allocations for the discharge of aluminum, iron and manganese within the Kiskiminetas-Conemaugh Watershed. The site's NPDES permit (PA0217093) is listed in the Appendix G of the Kiskiminetas-Conemaugh Watershed TMDL, requiring load allocations. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA 1991a). Stream reaches within the Kiskiminetas-Conemaugh Watershed are included in the state's 2008 Section 303(d) list because of various impairments, including metals, pH and sediment. The TMDL includes consideration for each river and tributary within the target watershed and its impairment sources. Stream data is then used to calculate minimum pollutant reductions that are necessary to attain water quality criteria levels. Target concentrations published in the TMDL were based on established water quality criteria of 0.750 $^{mg}/_{L}$ total recoverable aluminum, 1.5 $^{mg}/_{L}$ total recoverable iron based on a 30-day average and 1.0 $^{mg}/_{L}$ total recoverable manganese. The reduction needed to meet the minimum water quality standards is then divided between each known point and non-point pollutant source in the form of a watershed allocation. TMDLs prescribe allocations that minimally achieve water quality criteria (i.e., 100 percent use of a stream's assimilative capacity). However, the discharges from Outfall 602 are groundwater and stormwater and based on the sampling data provided in the permit application, these discharges do not contribute to the impairment of the Watershed. Therefore, TMDL load allocations and concentration-based limitations will not be imposed, but monitoring for total iron, total manganese, and total aluminum will be imposed.

## Anti-Backsliding

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). The previous limitations for Outfalls 602 are displayed below in Table 5. Along with the monitoring requirements, the current permit had discharge goals for the stormwater, Zinc goal of 0.117 mg/L and Nitrate-Nitrite Nitrogen goal of 0.68 m/L. These goals are going to be removed from the proposed permit because these goals are not required for the most recent PAG-03 general permit. The permit also required the sampling to be conducted during a storm event. This is due to the continual contribution of waste streams other than stormwater runoff to the outfall.

**Table 5: Effluent Limitations in the Current Permit for Outfall 602**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Total Zinc* | XXX | XXX | Report** | Report** | XXX | 1/month | Grab |
| Nitrate-Nitrite Nitrogen * | XXX | XXX | Report** | Report** | XXX | 1/month | Grab |

## Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for Outfall 602 are displayed in Table 6 below, they are the most stringent values from the above effluent limitation development. The monitoring frequency for the existing monitoring requirements has been changed from 1/month to semi-annually to reflect that monitoring frequency in the PAG-03 general permit. The Draft Permit requires a Corrective Action Plan when there are two consecutive exceedances of the benchmark values, which are also included in the Part C condition. The benchmark values are displayed below in Table 6. These values are not effluent limitations, an exceedance of the benchmark value is not a violation. As described above, if there are two consecutive exceedances of the benchmark value, a corrective action plan must be conducted to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater.

**Table 6: Proposed Effluent Monitoring Requirements – Outfall 602**

| Parameter | Max Daily Concentration | Benchmark Values (mg/L) | Measurement Frequency | Sample Type |
|---|---|---|---|---|
| Total Suspended Solids (TSS) | Report | 100 | 1/6 Months | Grab |
| Total Aluminum | Report | XXX | 1/6 Months | Grab |
| Total Zinc | Report | XXX | 1/6 Months | Grab |
| Total Copper | Report | XXX | 1/6 Months | Grab |
| Total Iron | Report | XXX | 1/6 Months | Grab |
| Total Lead | Report | XXX | 1/6 Months | Grab |
| Nitrate-Nitrite Nitrogen | Report | XXX | 1/6 Months | Grab |
| Total Manganese | Report | XXX | 1/6 Months | Grab |

**Development of Effluent Limitations**

| | | | |
|---|---|---|---|
| **Outfall No.** | 603 | **Design Flow (MGD)** | 1.46 |
| **Latitude** | 40º 21' 07" | **Longitude** | -78º 56' 23" |
| **Wastewater Description:** | IW Process Effluent with ELG, Noncontact Cooling Water (NCCW), Stormwater, and Groundwater | | |

**Technology-Based Limitations**

Federal Effluent Limitation Guidelines (ELGs)

The ELG monitoring requirements and limitations will be imposed at Internal Monitoring Point 623.

Regulatory Effluent Standards and Monitoring Requirements

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.

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

As oil-bearing wastewaters, discharges from Outfall 603 are subject to effluent standards for oil and grease from 25 Pa. Code § 95.2(2)

Temperature limits will be imposed per the Department's "*Implementation Guidance for Temperature Criteria*." As a policy, DEP normally imposes a maximum temperature limit of 110°F on discharges that contain residual heat. The limit is intended as a safety measure to protect sampling personnel or anyone who may come into contact with the heated discharge where it enters the receiving water.

**Table 7: Regulatory Effluent Standards and Monitoring Requirements for Outfall 603**

| Parameter | Monthly Average | Daily Maximum | Instantaneous Maximum | Units |
|---|---|---|---|---|
| Flow | Monitor and Report | | - | MGD |
| Oil and Grease | 15.0 | 30.0 | | mg/L |
| Temperature | - | - | 110 | °F |
| pH | Between 6.0 and 9.0 | | | S.U. |

Stormwater Technology Limits

Outfall 603 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3315 and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B. The reporting requirements applicable to stormwater discharges are shown in Table 8 below.

**Table 8: PAG-03 Appendix (B) Monitoring Requirements**

| Parameter | Max Daily Concentration | Measurement Frequency | Sample Type |
|---|---|---|---|
| Total Suspended Solids (TSS) | Monitor and Report | 1/6 Months | Grab |
| Total Aluminum | Monitor and Report | 1/6 Months | Grab |
| Total Zinc | Monitor and Report | 1/6 Months | Grab |
| Total Copper | Monitor and Report | 1/6 Months | Grab |
| Total Iron | Monitor and Report | 1/6 Months | Grab |
| Total Lead | Monitor and Report | 1/6 Months | Grab |

**Water Quality-Based Limitations**

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.

<u>Reasonable Potential Analysis and WQBEL Development for Outfall 603</u>

Discharges from Outfall 603 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 9. For IW discharges, the design flow used in modeling is the average flow during production or operation taken from the permit application. Pollutants for which water quality standards have not been promulgated (e.g., TSS, oil and grease) are excluded from the analysis. All the parameters are evaluated using the model to determine the water quality-based effluent limits applicable to the discharge and the receiving stream. The spreadsheet then compares the reported discharge concentrations to the calculated water quality-based effluent limitations to determine if a reasonable potential exists to exceed the calculated WQBELs. Effluent limitations are established in the draft permit where a pollutant's maximum reported discharge concentration equals or exceeds 50% of the WQBEL. For non-conservative pollutants, monitoring requirements are established where the maximum reported concentration is between 25% - 50% of the WQBEL. For conservative pollutants, monitoring requirements are established where the maximum reported concentration is between 10% - 50% of the WQBEL. The information described above including the maximum reported discharge concentrations, the most stringent water quality criteria, the pollutant-of-concern (reasonable potential) determinations, the calculated WQBELs, and the WQBEL/monitoring recommendations are displayed in the Toxics Management Spread Sheet in Attachment B of this Fact Sheet. The water quality-based effluent limitations and monitoring requirements that are recommended by the Toxics Management Spread Sheet are displayed below in Table 10. Acrylamide received WQBELs 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 Johnstown Wire Tech certifies that chemical additives used in the processes that discharge via Outfall 603 during the 30-day comment period, then the limitations for Acrylamide may be removed from the Final Permit.

***Table 9: TMS Inputs for Outfall 603***

| Parameter | Value |
|---|---|
| River Mile Index | 50.4 |
| Discharge Flow (MGD) | 1.46 |
| **Basin/Stream Characteristics** | |
| **Parameter** | **Value** |
| Area in Square Miles | 686 |
| $Q_{7-10}$ (cfs) | 66.3 |
| Low-flow yield (cfs/mi$^2$) | 0.097 |
| Elevation (ft) | 1124 |
| Slope | 0.0001 |

**Table 10: Water Quality Based Effluent Limitations at Outfall 603**

| Parameters | Average Monthly (µg/L) | Daily Maximum (µg/L) |
|---|---|---|
| Total Lead | Report | Report |
| Total Zinc | 1,634 | 2,550 |
| Acrylamide | 9.07 | 14.2 |

Thermal WQBELs for Heated Discharges

Thermal WQBELs are evaluated using DEP's "Thermal Discharge Limit Calculation Spreadsheet" created with Microsoft Excel for Windows. The program calculates temperature WLAs through the application of a heat transfer equation, which takes two forms in the program depending on the source of the facility's cooling water. In Case 1, intake water to a facility is from the receiving stream. In Case 2, intake water is from a source other than the receiving stream (e.g., municipal water supply). The determination of which case applies to a given discharge is determined by the input data which include the receiving stream flow rate ($Q_{7\text{-}10}$ or the minimum regulated flow for large rivers), the stream intake flow rate, external source intake flow rates, consumptive flow rates and site-specific ambient stream temperatures. Case 1 limits are generally expressed as heat rejection rates while Case 2 limits are usually expressed as temperatures.

Since the temperature criteria from 25 Pa. Code Chapter 93.7(a) are expressed on monthly and semi-monthly bases for three different aquatic life-uses—cold water fishes, warm water fishes and trout stocking—the program generates monthly and semi-monthly limits for each use. DEP selects the output that corresponds to the aquatic life-use of the receiving stream and consequently which limits apply to the discharge. Temperature WLAs are bounded by an upper limit of 110°F for the safety of sampling personnel and anyone who may come into contact with the heated discharge where it enters the receiving water. If no WLAs below 110°F are calculated, an instantaneous maximum limit of 110°F is recommended by the program.

Due to the nature of the discharges and their relative locations on the receiving stream, all heated discharges will be evaluated as one discharge to ensure the temperature criteria is met instream from all of the heated discharges and a combined flow of 1.525 MGD was used in the model. Discharges from the site are classified under Case 2 because water is obtained from municipal water supply. The results of the thermal analysis, included in Attachment C, indicate that no WQBELs for temperature are required at Outfall 603. Therefore, the 110°F daily maximum temperature limit will be imposed at Outfall 603.

Total Maximum Daily Loads for Outfall 603

The Johnstown Wire Techs Johnstown Plant is within the watershed area covered by the Kiskiminetas-Conemaugh Watershed TMDL, approved as final by EPA in 2010. This TMDL addresses certain impairments of water quality standards associated with elevated instream concentrations of iron, aluminum, and manganese. A pH impairment is addressed through a surrogate relationship with these metals. This TMDL establishes wasteload allocations for these metals for point sources, and load allocations for these metals for nonpoint sources in the watershed. DEP must assure that any effluent limitations assigned to point sources are consistent with the assumptions and requirements of any available wasteload allocation for the discharge pursuant to 40 CFR 130.7 (i.e., a final TMDL). The Site's permit PA0217093 is listed in the Appendix G of the Kiskiminetas-Conemaugh River Watershed TMDL, requiring load allocations. Wasteload allocations were delegated for Outfall 603. These wasteload allocations are equivalent to the listed concentration limits under various flow scenarios. In this case, the concentration limits are prosed rather than the load limits to simplify compliance assessments. The effluent limits from the TMDL are displayed below in Table 11.

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

The specific water quality criterion for iron is expressed as a 30-day average of 1.5 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of aquatic life and is associated with chronic exposure. There are no other criteria for total iron. Since the duration of the total iron criterion coincides with the 30-day duration of the AML, the 30-day average criterion for total iron is set equal to the AML. In addition, because the total iron criterion is associated with chronic exposure, the MDL (representing acute exposure) and the IMAX may be made less stringent according to established procedures described in Section III.C.3.h on Page 13 of the Water Quality Toxics Management Strategy (Doc. # 361-0100-003). These procedures state that a MDL and IMAX may be set at 2 times and 2.5 times the AML, respectively, or there is the option to use multipliers from EPA's Technical Support Document for Water Quality-based Toxics Control, if data are available to support the use of alternative multipliers.

The specific water quality criterion for manganese is expressed as an acute or maximum daily of 1.0 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of human health and is associated with chronic exposure associated with a potable water supply (PWS). Since no duration is given in Chapter 93 for the manganese criterion, a duration of 30 days is used based on the water quality criteria duration for Threshold Human Health (THH) criteria given in Section III.C.3.a., Table 1 on Page 10 of DEP's Water Quality Toxics Management Strategy. The 30-day duration for THH criteria coincides with the 30-day duration of an AML, which is why the manganese criterion is set equal to the AML for a "permitting at criteria" scenario. Because the manganese criterion is interpreted as having chronic exposure, the manganese MDL and IMAX may be made less stringent according to procedures established in Section III.C.2.h. of the Water Quality Toxics Management Strategy (AML multipliers of 2.0 and 2.5 for the MDL and IMAX respectively).

**Table 11 – TMDL Limits for Outfall 603**

| Parameter | TMDL Limits | | Units |
|---|---|---|---|
| | Average Monthly | Maximum Daily | |
| Aluminum, total | 0.75 | 0.75 | mg/L |
| Iron, total | 1.5 | 3.0 | mg/L |
| Manganese, total | 1.0 | 2.0 | mg/L |

**Anti-Backsliding**

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). The previous limitations for Outfall 603 are displayed below in Table 12. The stormwater parameters, Nitrate-Nitrite Nitrogen, was required to be sampled during a storm event. Along with the monitoring requirements, the current permit had discharge goals for the stormwater, Nitrate-Nitrite Nitrogen goal of 0.68 m/L. These goals are going to be removed from the proposed permit because these goals are not required for the most recent PAG-03 general permit.

**Table 12: Effluent Limitations in the Current Permit for Outfall 603**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | 2/month | Measures |
| Temperature | XXX | XXX | XXX | 110 | XXX | 2/month | I-S |
| Oil and Grease | XXX | XXX | 15 | XXX | 30 | 2/month | Grab |
| Total Zinc | XXX | XXX | 0.95 | 1.9 | XXX | 2/month | Grab |
| Nitrate-Nitrite Nitrogen | XXX | XXX | Report | Report | XXX | 1/month | Grab |
| pH (S.U.) | Not less than 6.0 nor greater than 9.0 | | | | | 2/month | Grab |

**Proposed Effluent Limitations**

The proposed effluent limitations for Outfall 603 are displayed in Table 13 below, they are the most stringent values from the above effluent limitation development. Because the TMDL limitations for Aluminum, Iron and Manganese and the water quality based effluent limitations for Acrylamide are new to the Outfall 603, Outfall 603 will receive monitor and report interim limitations for the first three years of the permit cycle to ensure that the site can meet the final effluent limitations. A foot note will be included in Part A of the permit requiring the stormwater parameters to be sampled prior to mixing with other wastewaters. The monitoring frequency for the existing stormwater monitoring requirements has been changed from 1/month to semi-annually to reflect that monitoring frequency in the PAG-03 general permit. The Draft Permit will also require a Corrective Action Plan when there are two consecutive exceedances of the benchmark values, which are also included in the Part C condition. The benchmark values are displayed below in Table 14. These values are not effluent limitations, an exceedance of the benchmark value is not a violation. As described above, if there are two consecutive exceedances of the benchmark value, a corrective action plan must be conducted to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater.

**Table 13: Propose Effluent Limitations for Outfall 603**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Instant. Minimum (mg/L) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | 2/month | Measures |
| Temperature | XXX | XXX | XXX | XXX | 110 | XXX | 2/month | I-S |
| Oil and Grease | XXX | XXX | XXX | 15.0 | 30.0 | XXX | 2/month | Grab |
| Total Zinc | XXX | XXX | XXX | 0.95 | 1.9 | XXX | 2/month | Grab |
| Total Lead | XXX | XXX | XXX | Report | Report | XXX | 2/month | Grab |
| Acrylamide (µg/L) | XXX | XXX | XXX | 9.07 | 14.2 | XXX | 2/month | Grab |
| Total Aluminum | XXX | XXX | XXX | 0.75 | 0.75 | XXX | 2/month | Grab |
| Total Iron | XXX | XXX | XXX | 1.5 | 3.0 | XXX | 2/month | Grab |
| Total Manganese | XXX | XXX | XXX | 1.0 | 2.0 | XXX | 2/month | Grab |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 2/month | Grab |
| Total Suspended Solids * | XXX | XXX | XXX | XXX | Report | XXX | 1/6months | Grab |
| Total Copper * | XXX | XXX | XXX | XXX | Report | XXX | 1/6months | Grab |
| Nitrate-Nitrite Nitrogen * | XXX | XXX | XXX | XXX | Report | XXX | 1/6months | Grab |

**Table 14: Stormwater Benchmark Values**

| Parameters | Benchmark Values (mg/L) |
|---|---|
| Total Suspended Solids | 100 |

| Development of Effluent Limitations |
|---|

| | | | |
|---|---|---|---|
| **IMP No.** | 613 | **Design Flow (MGD)** | 1.44 |
| **Latitude** | 40º 21' 07" | **Longitude** | -78º 56' 32" |
| **Wastewater Description:** | IW Process Effluent with ELG (Various wastewater from rod and wire operations) | | |

**Technology-Based Limitations**

Federal Effluent Limitation Guidelines (ELGs)

IMP 316 is subject to Federal Effluent Limitation Guidelines (ELGs) under 40 CFR 420 Iron and Steel Manufacturing and 40 CFR 433 Metal Finishing.

The Aluminize line is subject to 420.92 (a) (1), (Iron and Steel Manufacturing Subpart I- Sulfuric Acid Pickling, Rod, Wire, and Coil subcategory), 420.92 (b) (1) (Iron and Steel Manufacturing Subpart I- Hydrochloric acid pickling, Rod, Wire, and Coil subcategory, and 420.122 (b) (1) Galvanizing and Other Coatings, Wire Products and Fasteners.

The Bethanize line is subject to 433.13(a) (Metal Finishing Subcategory).

The Cleaning House Operations is subject to 420.92 (b) (1) (Iron and Steel Manufacturing Subpart I- Hydrochloric acid pickling, Rod, Wire, and Coil subcategory, 420.92 (b) (4) (Iron and Steel Manufacturing Subpart I- Hydrochloric acid pickling, Fume Scrubber subcategory, 420.112(a) (Iron and Steel Manufacturing Subpart K - Alkaline Cleaning – Batch Subcategory), and 433.13(a) (Metal Finishing Subcategory).

Each subcategory of each production line is broken down in detail in Attachment D. The average daily production rate from the past five years was used to calculate the production. The limitations from the ELGs are displayed below in Table 15. The limits are the summation of all of the above subparts for each of the production lines. The limitations from 40 CFR 420 are mass based and the effluent limitations from 40 CFR 433 are concentration based. Additionally, it should be noted that the Oil and Grease limitations from 420.92(a)(1), 420.92(b)(1), and 420.92(b)(4), on the Aluminize line and Cleaning line are not applicable because cold rolling wastewaters are not treated with the acid pickling wastewaters. Also, it should be noted that Hexavalent Chromium from 420.122(b)(1) on the Aluminize line is not applicable because the galvanizing operation does not discharge wastewaters from a chromate rinse step.

The metal finishing ELG limits the following parameters on a concentration basis: cadmium, copper, cyanide, chromium, lead, zinc, nickel, silver, Total Toxic Organics (TTO), oil and grease, and total suspended solids (TSS).

The iron and steel manufacturing ELG limits the following parameters based on production: lead, zinc, TSS, and Oil and Grease. Because the in 40 CFR 433 are concentration based, for parameters that are also covered under 40 CFR 420 (lead, zinc, TSS, and Oil and Grease), concentration limits will be converted to mass limitations using the average wastewater flow for each applicable process coved by 40 CFR 433. For parameters included in 40 CFR 433 that are not included in 40 CFR 420 (cadmium, copper, cyanide, chromium, nickel, TTO and silver), the limitations are expressed only as concentrations consistent with the ELG.

In accordance with 40 CFR 433.12(a), a part C condition in the permit will be added to provide the permittee the opportunity to make a certification statement in lieu of required monitoring for the Total Toxic Organics (TTO). 40 CFR 433.12 states:

a) In lieu of requiring monitoring for TTO, the permitting authority (or, in the case of indirect dischargers, the control authority) may allow dischargers to make the following certification statement: “Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation [or pretreatment standard] for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewaters has occurred since filing of the last discharge monitoring report. I further certify that this facility is implementing the toxic organic management plan submitted to the permitting [or control] authority.” For direct dischargers, this statement is to be included as a “comment” on the Discharge Monitoring Report required by 40 CFR 122.44(i), formerly 40 CFR 122.62(i). For indirect dischargers, the statement is to be included as a comment to the periodic reports required by 40 CFR 403.12(e). If monitoring is necessary to measure compliance with the TTO standard, the industrial discharger need analyze for only those pollutants which would reasonably be expected to be present.

b) In requesting the certification alternative, a discharger shall submit a solvent management plan that specifies to the satisfaction of the permitting authority (or, in the case of indirect dischargers, the control authority) the toxic organic compounds used; the method of disposal used instead of dumping, such as reclamation, contract hauling, or incineration; and procedures for ensuring that toxic organics do not routinely spill or leak into the wastewater. For direct dischargers, the permitting authority shall incorporate the plan as a provision of the permit.

**Table 15: ELG Limitations**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) |
|---|---|---|---|---|
| Total Suspended Solids | 203.388 | 412.366 | 31.0 | 60.0 |
| Oil and Grease | 136.772 | 279.209 | 26.0 | 52.0 |
| Total Cadmium | XXX | XXX | 0.26 | 0.69 |
| Total Chromium | XXX | XXX | 1.71 | 2.77 |
| Total Copper | XXX | XXX | 2.07 | 3.38 |
| Total Lead | 2.346 | 4.74 | 0.43 | 0.69 |
| Total Nickel | XXX | XXX | 2.38 | 3.98 |
| Total Silver | XXX | XXX | 0.24 | 0.43 |
| Total Zinc | 7.700 | 13.872 | 1.48 | 2.61 |
| Total Cyanide | XXX | XXX | 0.65 | 1.20 |
| Total Toxic Organics | XXX | XXX | XX | 2.13 |
| pH (S.U.) | Not less than 6.0 nor greater than 9.0 | | | |

**Water Quality-Based Limitations**

Water quality based effluent limitations will be evaluated and imposed at the receiving outfall, Outfall 603.

**Anti-Backsliding**

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). The previous limitations for IMP 613 are displayed below in Table 16. Along with the effluent limitations, the pervious permit had multiple footnotes and requirements for the discharges from IMP 613. These footnotes are described below and will be included in the Draft permit. The Mass-Based limitations will be replaced with new limits based on the current production and operation.

**Table 16: Effluent Limitations in the Current Permit for IMP 613**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | 1/week | Measures |
| Total Suspended Solids | 375.27 | 808.07 | 31.0 | 60.0 | 75* | 1/week | 24-hr composite |
| Oil and Grease | 275.97 | 361.62 | 26.0 | 52.0 | XXX | 1/week | Grab |
| Total Cadmium | XXX | XXX | 0.021 | 0.042 | 0.053* | 1/week | 24-hr composite |
| Total Chromium | XXX | XXX | 1.71 | 2.77 | 3.46* | 1/week | 24-hr composite |
| Total Copper | XXX | XXX | 0.13 | 0.26 | 0.33* | 1/week | 24-hr composite |
| Total Lead | 3.08 | 5.96 | 0.34 | 0.68 | 0.85* | 1/week | 24-hr composite |
| Total Nickel | XXX | XXX | 2.38 | 3.98 | 4.98* | 1/week | 24-hr composite |
| Total Silver | XXX | XXX | 0.062 | 0.12 | 0.16* | 1/week | 24-hr composite |
| Total Zinc | 10.56 | 17.20 | 1.05 | 2.10 | 2.63* | 1/week | 24-hr composite |
| Total Cyanide | XXX | XXX | 0.65 | 1.20 | 1.50* | 1/week | 24-hr composite |
| Total Toxic Organics** | XXX | XXX | XX | 2.13 | XXX | 1/week | 24-hr composite |
| Total Iron | XXX | XXX | 3.5 | 7.0 | 8.75* | 1/week | 24-hr composite |
| pH (S.U.) | Not less than 6.0 nor greater than 10.0 | | | | | 1/week | Grab |

*****Instantaneous maximum limitations are imposed to allow for a grab sample to be collected by the appropriate regulatory agency to determine compliance. The permittee is not required to monitor for the instantaneous maximum limitations. However, if grab samples are collected by the permittee, the results must be reported.

**As provided by 40 CFR 433.12(a), in lieu of requiring monitoring for TTO, the Department may allow the discharger to make the following certification statement:

"Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewater has occurred since filing of the last discharge monitoring report. I further certify that the facility is implementing the Toxic Organic Management Plan submitted to the permitting authority."

This statement is to be included as a "comment" on or attached to the Discharge Monitoring Report. If monitoring is necessary to measure compliance with the TTO standard, analyzed for only those pollutants which would reasonably be expected to be present.

**Proposed Effluent Limitations**

The proposed effluent limitations for IMP 613 are displayed in Table 17 below, they are the most stringent values from the above effluent limitation development.

**Table 17: Proposed Effluent Limitations for IMP 613**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | 1/week | Measures |
| Total Suspended Solids | 203 | 412 | 31.0 | 60.0 | 75* | 1/week | 24-hr composite |
| Oil and Grease | 137 | 279 | 26.0 | 52.0 | XXX | 1/week | Grab |
| Total Cadmium | XXX | XXX | 0.021 | 0.042 | 0.053* | 1/week | 24-hr composite |
| Total Chromium | XXX | XXX | 1.71 | 2.77 | 3.46* | 1/week | 24-hr composite |
| Total Copper | XXX | XXX | 0.13 | 0.26 | 0.33* | 1/week | 24-hr composite |
| Total Lead | 2.35 | 4.74 | 0.34 | 0.68 | 0.85* | 1/week | 24-composite |
| Total Nickel | XXX | XXX | 2.38 | 3.98 | 4.98* | 1/week | 24-hr composite |
| Total Silver | XXX | XXX | 0.062 | 0.12 | 0.16* | 1/week | 24-hr composite |
| Total Zinc | 7.70 | 13.9 | 1.05 | 2.10 | 2.63* | 1/week | 24-hr composite |
| Total Cyanide | XXX | XXX | 0.65 | 1.20 | 1.50* | 1/week | 24-hr composite |
| Total Toxic Organics** | XXX | XXX | XX | 2.13 | XXX | 1/week | 24-hr composite |
| Total Iron | XXX | XXX | 3.5 | 7.0 | 8.75* | 1/week | 24-hr composite |
| pH (S.U.) | Not less than 6.0 nor greater than 9.0 | | | | | 1/week | Grab |

*****Instantaneous maximum limitations are imposed to allow for a grab sample to be collected by the appropriate regulatory agency to determine compliance. The permittee is not required to monitor for the instantaneous maximum limitations. However, if grab samples are collected by the permittee, the results must be reported.

**As provided by 40 CFR 433.12(a), in lieu of requiring monitoring for TTO, the Department may allow the discharger to make the following certification statement:

"Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewater has occurred since filing of the last discharge monitoring report. I further certify that the facility is implementing the Toxic Organic Management Plan submitted to the permitting authority."

This statement is to be included as a "comment" on or attached to the Discharge Monitoring Report. If monitoring is necessary to measure compliance with the TTO standard, analyzed for only those pollutants which would reasonably be expected to be present.

## Development of Effluent Limitations

**IMP No.** 623 **Design Flow (MGD)** 0.0
**Latitude** 40º 21' 02" **Longitude** -78º 56' 24"
**Wastewater Description:** Emergency overflow from the plating operations wastewater pumping station

### Proposed Effluent Limitations

The proposed effluent limitations for IMP 623 are displayed in Table 18 below. IMP 623 is the emergency overflow from the plating operations wastewater pumping station. This discharge is considered categorical wastes subject to the limitations contained in the ELG, therefore, during an emergency overflow discharge, the limits for IMP 623 will be the same as IMP 613. The previous permit imposed the same limitations on IMP 623 as IMP 613 for the same reason as discussed above. The previous permit also contained a part C condition requiring the total combined mass loading discharged from IMP 613, IMP 623, and IMP 615 to not exceed the mass loading limitations for IMP 613.This part C condition will be included in the renewal permit.

**Table 18: Proposed Effluent Limitations for IMP 623**

| Parameter | Average Monthly (lbs/day) ** | Daily Maximum (lbs/day) ** | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | 2/discharge | Measures |
| Total Suspended Solids | 203 | 412 | 31.0 | 60.0 | XXX | 2/discharge | Grab |
| Oil and Grease | 137 | 279 | 26.0 | 52.0 | XXX | 2/discharge | Grab |
| Total Cadmium | XXX | XXX | 0.021 | 0.042 | XXX | 2/discharge | Grab |
| Total Chromium | XXX | XXX | 1.71 | 2.77 | XXX | 2/discharge | Grab |
| Total Copper | XXX | XXX | 0.13 | 0.26 | XXX | 2/discharge | Grab |
| Total Lead | 2.35 | 4.74 | 0.34 | 0.68 | XXX | 2/discharge | Grab |
| Total Nickel | XXX | XXX | 2.38 | 3.98 | XXX | 2/discharge | Grab |
| Total Silver | XXX | XXX | 0.062 | 0.12 | XXX | 2/discharge | Grab |
| Total Zinc | 7.70 | 13.9 | 1.05 | 2.10 | XXX | 2/discharge | Grab |
| Total Cyanide | XXX | XXX | 0.65 | 1.20 | XXX | 2/discharge | Grab |
| Total Toxic Organics* | XXX | XXX | XX | 2.13 | XXX | 2/discharge | Grab |
| Total Iron | XXX | XXX | 3.5 | 7.0 | XXX | 2/discharge | Grab |
| pH (S.U.) | Not less than 6.0 nor greater than 9.0 | | | | | 2/discharge | Grab |

*As provided by 40 CFR 433.12(a), in lieu of requiring monitoring for TTO, the Department may allow the discharger to make the following certification statement:

“Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewater has occurred since filing of the last discharge monitoring report. I further certify that the facility is implementing the Toxic Organic Management Plan submitted to the permitting authority.”

This statement is to be included as a “comment” or attached to the Discharge Monitoring Report. If monitoring is necessary to measure compliance with the TTO standard, analyzed for only those pollutants which would reasonably be expected to be present.

** The total combined mass loading discharged from IMP 613, IMP 623, and IMP 615 shall not exceed the mass loading limitations for IMP 613 as listed in Part A of the Permit.

| Development of Effluent Limitations |
|---|

| | | | |
|---|---|---|---|
| **Outfall No.** | 604 | **Design Flow (MGD)** | 0.398 |
| **Latitude** | 40º 21' 06" | **Longitude** | -78º 56' 32" |
| **Wastewater Description:** | Noncontact Cooling Water (NCCW), Stormwater, and Groundwater | | |

Noncontact cooling water that discharges via Outfall 604 is monitored at IMP 614.

Stormwater Technology Limits

Outfall 604 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall discharges stormwater associated with industrial activity. The SIC code for the site is 3315 and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B. The reporting requirements applicable to stormwater discharges are shown in Table 19 below.

**Table 19: PAG-03 Appendix (B) Monitoring Requirements**

| Parameter | Max Daily Concentration | Measurement Frequency | Sample Type |
|---|---|---|---|
| Total Suspended Solids (TSS) | Monitor and Report | 1/6 Months | Grab |
| Total Aluminum | Monitor and Report | 1/6 Months | Grab |
| Total Zinc | Monitor and Report | 1/6 Months | Grab |
| Total Copper | Monitor and Report | 1/6 Months | Grab |
| Total Iron | Monitor and Report | 1/6 Months | Grab |
| Total Lead | Monitor and Report | 1/6 Months | Grab |

**Water Quality-Based Limitations**

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Outfall 604 are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations are not proposed.

Total Maximum Daily Loads for Outfall 604

The Johnstown Wire Techs Johnstown Plant is located within the watershed area covered by the Kiskiminetas-Conemaugh Watershed TMDL, approved as final by the EPA in 2010. This TMDL addresses certain impairments of water quality standards associated with elevated instream concentrations of iron, aluminum, and manganese. A pH impairment is addressed through a surrogate relationship with these metals. This TMDL establishes wasteload allocations for these metals for point sources, and load allocations for these metals for nonpoint sources in the watershed. DEP must assure that any effluent limitations assigned to point sources are consistent with the assumptions and requirements of any available wasteload allocation for the discharge pursuant to 40 CFR 130.7 (i.e., a final TMDL). The Site's permit PA0217093 is listed in the Appendix G of the Kiskiminetas-Conemaugh River Watershed TMDL, requiring load allocations. Wasteload allocations were delegated for Outfall 604. These wasteload allocations are equivalent to the listed concentration limits under various flow scenarios. In this case, the concentration limits are proposed rather than the load limits to simplify compliance assessments. The effluent limits from the TMDL are displayed below in Table 20.

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

The specific water quality criterion for iron is expressed as a 30-day average of 1.5 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of aquatic life and is associated with chronic exposure. There are no other criteria for total iron. Since the duration of the total iron criterion coincides with the 30-day duration of the AML, the 30-day average criterion for total iron is set equal to the AML. In addition, because the total iron criterion is associated with chronic exposure, the MDL (representing acute exposure) and the IMAX may be made less stringent according to established procedures described in Section III.C.3.h on Page 13 of the Water Quality Toxics Management Strategy (Doc. # 361-0100-003). These procedures state that a MDL and IMAX may be set at 2 times and 2.5 times the AML, respectively, or there is the option to use multipliers from EPA's Technical Support Document for Water Quality-based Toxics Control, if data are available to support the use of alternative multipliers.

The specific water quality criterion for manganese is expressed as an acute or maximum daily of 1.0 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of human health and is associated with chronic exposure associated with a potable water supply (PWS). Since no duration is given in Chapter 93 for the manganese criterion, a duration of 30 days is used based on the water quality criteria duration for Threshold Human Health (THH) criteria given in Section III.C.3.a., Table 1 on Page 10 of DEP's Water Quality Toxics Management Strategy. The 30-day duration for THH criteria coincides with the 30-day duration of an AML, which is why the manganese criterion is set equal to the AML for a "permitting at criteria" scenario. Because the manganese criterion is interpreted as having chronic exposure, the manganese MDL and IMAX may be made less stringent according to procedures established in Section III.C.2.h. of the Water Quality Toxics Management Strategy (AML multipliers of 2.0 and 2.5 for the MDL and IMAX respectively).

**Table 20 – TMDL Limits for Outfall 604**

| Parameter | TMDL Limits | | Units |
|---|---|---|---|
| | Average Monthly | Maximum Daily | |
| Aluminum, total | 0.75 | 0.75 | mg/L |
| Iron, total | 1.5 | 3.0 | mg/L |
| Manganese, total | 1.0 | 2.0 | mg/L |

**Anti-Backsliding**

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). The previous limitations for Outfalls 604 are displayed below in Table 21. Along with the monitoring requirements, the current permit had discharge goals for the stormwater, Zinc goal of 0.117 mg/L and Nitrate-Nitrite Nitrogen goal of 0.68 m/L. These goals are going to be removed from the proposed permit because these goals are not required for the most recent PAG-03 general permit. The permit also required the sampling to be conducted during a storm event. This is due to the continual contribution of waste streams other than stormwater runoff to the outfall.

**Table 21: Effluent Limitations in the Current Permit for Outfall 604**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Total Zinc | XXX | XXX | Report** | Report** | XXX | 1/month | Grab |
| Nitrate-Nitrite Nitrogen | XXX | XXX | Report** | Report** | XXX | 1/month | Grab |

**Proposed Effluent Limitations and Monitoring Requirements**

The proposed effluent monitoring requirements for Outfall 604 are displayed in Table 22 below, they are the most stringent values from the above effluent limitation development. The monitoring frequency for the existing monitoring requirements has been changed from 1/quarter to semi-annually to reflect that monitoring frequency in the PAG-03 general permit. The Draft Permit requires a Corrective Action Plan when there are two consecutive exceedances of the benchmark values, which are also included in the Part C condition. The benchmark values are displayed below in Table 23. These values are not effluent limitations, an exceedance of the benchmark value is not a violation. As described above, if there are two consecutive exceedances of the benchmark value, a corrective action plan must be conducted to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater.

**Table 22: Proposed Effluent Limitation for Outfall 604**

| Parameters | Mass (lb/day) | | Concentration (mg/L) | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Average Monthly | Daily Maximum | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | Frequency | Sample Type |
| Total Aluminum | XXX | XXX | XXX | 0.75 | 0.75 | XXX | 2/Month | Grab |
| Total Iron | XXX | XXX | XXX | 1.5 | 3.0 | XXX | 2/Month | Grab |
| Total Manganese | XXX | XXX | XXX | 1.0 | 2.0 | XXX | 2/Month | Grab |
| Total Suspended Solids (TSS)* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Total Zinc* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Total Copper* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Total Lead* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Nitrate-Nitrite Nitrogen* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |

***** stormwater parameters, the parameters shall be sampled during a storm event.

**Table 23: Part C Stormwater Benchmark Values**

| Parameters | Discharge Goals (mg/L) |
|---|---|
| Total Suspended Solids (TSS) | 100 |
| Total Zinc | XXX |
| Total Copper | XXX |
| Total Lead | XXX |
| Nitrate-Nitrite Nitrogen | XXX |

## Development of Effluent Limitations

**IMP No.** 614 **Design Flow (MGD)** 0.04
**Latitude** 40º 21' 06" **Longitude** -78º 56' 21"
**Wastewater Description:** Noncontact Cooling Water (NCCW)

### Technology Based Limitations

Regulatory Effluent Standards and Monitoring Requirements

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

Temperature limits will be imposed per the Department's "*Implementation Guidance for Temperature Criteria*." As a policy, DEP normally imposes a maximum temperature limit of 110°F on discharges that contain residual heat. The limit is intended as a safety measure to protect sampling personnel or anyone who may come into contact with the heated discharge where it enters the receiving water.

Effluent standards for pH are also imposed on industrial wastes by 25 Pa. Code § 95.2(1) as indicated in Table 24.

**Table 24: Regulatory Effluent Standards and Monitoring Requirements for IMP 614**

| Parameter | Monthly Average | Daily Maximum | IMAX | Units |
|---|---|---|---|---|
| Flow | Monitor and Report | | XXX | MGD |
| Temperature | XXX | XXX | 110 | °F |
| pH | Not less than 6.0 nor greater than 9.0 | | | S.U. |

### Water Quality-Based Limitations

Toxic Pollutants Water Quality Analysis

The discharges from IMP 614 consist of non-contact cooling water and are non-process discharges, therefore a toxic pollutant water quality analysis was not conducted for the discharge.

Thermal WQBELs for Heated Discharges

Thermal WQBELs are evaluated using a DEP program called "Thermal Discharge Limit Calculation Spreadsheet" created with Microsoft Excel for Windows. The program calculates temperature WLAs through the application of a heat transfer equation, which takes two forms in the program depending on the source of the facility's cooling water. In Case 1, intake water to a facility is from the receiving stream. In Case 2, intake water is from a source other than the receiving stream (e.g., municipal water supply). The determination of which case applies to a given discharge is determined by the input data which include the receiving stream flow rate ($Q_{7-10}$ or the minimum regulated flow for large rivers), the stream intake flow rate, external source intake flow rates, consumptive flow rates and site-specific ambient stream temperatures. Case 1 limits are generally expressed as heat rejection rates while Case 2 limits are usually expressed as temperatures.

Since the temperature criteria from 25 Pa. Code Chapter 93.7(a) are expressed on monthly and semi-monthly bases for three different aquatic life-uses—cold water fishes, warm water fishes and trout stocking—the program generates monthly and semi-monthly limits for each use. DEP selects the output that corresponds to the aquatic life-use of the receiving stream and consequently which limits apply to the discharge. Temperature WLAs are bounded by an upper limit of 110°F for the safety of sampling personnel and anyone who may come into contact with the heated discharge where it enters the receiving water. If no WLAs below 110°F are calculated, an instantaneous maximum limit of 110°F is recommended by the program.

Due to the nature of the discharges and their relative locations on the receiving stream, all heated discharges will be evaluated as one discharge to ensure the temperature criteria is met instream from all of the heated discharges and a combined flow of 1.525 MGD was used in the model. Discharges from the site are classified under Case 2 because water is obtained from municipal water supply. The results of the thermal analysis, included in Attachment B, indicate that no WQBELs for temperature are required at IMP 614. Therefore, the 110°F daily maximum temperature limit will be imposed at IMP 614.

## Anti-backsliding

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed below in Table 25.

**Table 25: Effluent Limitations in the Current Permit for IMP 614**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | 2/month | Measures |
| Temperature | XXX | XXX | XXX | 110 | XXX | 2/month | I-S |
| pH (S.U.) | Not less than 6.0 nor greater than 9.0 | | | | | 2/month | Grab |

## Proposed Effluent Limitations for IMP 614

The proposed effluent limitations and monitoring requirements for IMP 614 are shown below in Table 26. The limits are the most stringent values from the above limitation analysis.

**Table 26: Propose Effluent Limitations for IMP 614**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Instant. Minimum (mg/L) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | 2/month | Measures |
| Temperature | XXX | XXX | XXX | XXX | 110 | XXX | 2/month | I-S |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 2/month | Grab |

## Development of Effluent Limitations

**Outfall No.** 605 **Design Flow (MGD)** 0.24
**Latitude** 40º 21' 05" **Longitude** -78º 56' 32"
**Wastewater Description:** Emergency Overflow, Noncontact Cooling Water (NCCW), Stormwater, and Groundwater

Emergency Overflow is monitored at IMP 615.

Noncontact Cooling Water is monitored at IMP 625.

Stormwater Technology Limits

Outfall 605 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall discharges stormwater associated with industrial activity. The SIC code for the site is 3315 and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B. The reporting requirements applicable to stormwater discharges are shown in Table 27 below.

**Table 27: PAG-03 Appendix (B) Monitoring Requirements**

| Parameter | Max Daily Concentration | Measurement Frequency | Sample Type |
|---|---|---|---|
| Total Suspended Solids (TSS) | Monitor and Report | 1/6 Months | Grab |
| Total Aluminum | Monitor and Report | 1/6 Months | Grab |
| Total Zinc | Monitor and Report | 1/6 Months | Grab |
| Total Copper | Monitor and Report | 1/6 Months | Grab |
| Total Iron | Monitor and Report | 1/6 Months | Grab |
| Total Lead | Monitor and Report | 1/6 Months | Grab |

**Water Quality-Based Limitations**

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Outfall 605 are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Total Maximum Daily Loads for Outfall 605

The Johnstown Wire Techs Johnstown Plant is located within the watershed area covered by the Kiskiminetas-Conemaugh Watershed TMDL, approved as final by the EPA in 2010. This TMDL addresses certain impairments of water quality standards associated with elevated instream concentrations of iron, aluminum, and manganese. A pH impairment is addressed through a surrogate relationship with these metals. This TMDL establishes wasteload allocations for these metals for point sources, and load allocations for these metals for nonpoint sources in the watershed. DEP must assure that any effluent limitations assigned to point sources are consistent with the assumptions and requirements of any available wasteload allocation for the discharge pursuant to 40 CFR 130.7 (i.e., a final TMDL). The Site's permit PA0217093 is listed in the Appendix G of the Kiskiminetas-Conemaugh River Watershed TMDL, requiring load allocations. Wasteload allocations were delegated for Outfall 605. These wasteload allocations are equivalent to the listed concentration limits under various flow scenarios. In this case, the concentration limits are prosed rather than the load limits to simplify compliance assessments. The effluent limits from the TMDL are displayed below in Table 28.

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

The specific water quality criterion for iron is expressed as a 30-day average of 1.5 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of aquatic life and is associated with chronic exposure. There are no other criteria for total iron. Since the duration of the total iron criterion coincides with the 30-day duration of the AML, the 30-day average criterion for total iron is set equal to the AML. In addition, because the total iron criterion is associated with chronic exposure, the MDL (representing acute exposure) and the IMAX may be made less stringent according to established procedures described in Section III.C.3.h on Page 13 of the Water Quality Toxics Management Strategy (Doc. # 361-0100-003). These procedures state that a MDL and IMAX may be set at 2 times and 2.5 times the AML, respectively, or there is the option to use multipliers from EPA's Technical Support Document for Water Quality-based Toxics Control, if data are available to support the use of alternative multipliers.

The specific water quality criterion for manganese is expressed as an acute or maximum daily of 1.0 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of human health and is associated with chronic exposure associated with a potable water supply (PWS). Since no duration is given in Chapter 93 for the manganese criterion, a duration of 30 days is used based on the water quality criteria duration for Threshold Human Health (THH) criteria given in Section III.C.3.a., Table 1 on Page 10 of DEP's Water Quality Toxics Management Strategy. The 30-day duration for THH criteria coincides with the 30-day duration of an AML, which is why the manganese criterion is set equal to the AML for a "permitting at criteria" scenario. Because the manganese criterion is interpreted as having chronic exposure, the manganese MDL and IMAX may be made less stringent according to procedures established in Section III.C.2.h. of the Water Quality Toxics Management Strategy (AML multipliers of 2.0 and 2.5 for the MDL and IMAX respectively).

**Table 28 – TMDL Limits for Outfall 605**

| Parameter | TMDL Limits | | Units |
|---|---|---|---|
| | Average Monthly | Maximum Daily | |
| Aluminum, total | 0.75 | 0.75 | mg/L |
| Iron, total | 1.5 | 3.0 | mg/L |
| Manganese, total | 1.0 | 2.0 | mg/L |

## Anti-Backsliding

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). The previous limitations for Outfalls 605 are displayed below in Table 29. Along with the monitoring requirements, the current permit had discharge goals for the stormwater, Zinc goal of 0.117 mg/L and Nitrate-Nitrite Nitrogen goal of 0.68 m/L. These goals are going to be removed from the proposed permit because these goals are not required for the most recent PAG-03 general permit. The permit also required the sampling to be conducted during a storm event. This is due to the continual contribution of waste streams other than stormwater runoff to the outfall.

**Table 29: Effluent Limitations in the Current Permit for Outfall 605**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Total Zinc* | XXX | XXX | Report** | Report** | XXX | 1/month | Grab |
| Nitrate-Nitrite Nitrogen * | XXX | XXX | Report** | Report** | XXX | 1/month | Grab |

## Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for Outfall 605 are displayed in Table 30 below, they are the most stringent values from the above effluent limitation development. The monitoring frequency for the existing monitoring requirements has been changed from 1/Month to semi-annually to reflect that monitoring frequency in the PAG-03 general permit. The Draft Permit requires a Corrective Action Plan when there are two consecutive exceedances of the benchmark values, which are also included in the Part C condition. The benchmark values are displayed below in Table 31. These values are not effluent limitations, an exceedance of the benchmark value is not a violation. As described above, if there are two consecutive exceedances of the benchmark value, a corrective action plan must be conducted to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater.

**Table 30: Proposed Effluent Limitation for Outfall 605**

| Parameters | Mass (lb/day) | | Concentration (mg/L) | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Average Monthly | Daily Maximum | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | Frequency | Sample Type |
| Total Aluminum | XXX | XXX | XXX | 0.75 | 0.75 | XXX | 2/Month | Grab |
| Total Iron | XXX | XXX | XXX | 1.5 | 3.0 | XXX | 2/Month | Grab |
| Total Manganese | XXX | XXX | XXX | 1.0 | 2.0 | XXX | 2/Month | Grab |
| Total Suspended Solids (TSS)* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Total Zinc* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Total Copper* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Total Lead* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Nitrate-Nitrite Nitrogen* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |

***** stormwater parameters, the parameters shall be sampled during a storm event.

**Table 31: Part C Stormwater Benchmark Values**

| Parameters | Discharge Goals (mg/L) |
|---|---|
| Total Suspended Solids (TSS) | 100 |
| Total Zinc | XXX |
| Total Copper | XXX |
| Total Lead | XXX |
| Nitrate-Nitrite Nitrogen | XXX |

## Development of Effluent Limitations

| | | | |
|---|---|---|---|
| **IMP No.** | 615 | **Design Flow (MGD)** | 0.0 |
| **Latitude** | 40º 21' 02" | **Longitude** | -78º 56' 24" |
| **Wastewater Description:** | Emergency Overflow from the acid rinse water pumping station | | |

**Proposed Effluent Limitations**

The proposed effluent limitations for IMP 615 are displayed in Table 32 below. IMP 615 is the emergency overflow from the plating operations wastewater pumping station. This discharge is considered categorical wastes subject to the limitations contained in the ELG, therefore, during an emergency overflow discharge, the limits for IMP 615 will be the same as IMP 613. The previous permit imposed the same limitations on IMP 615 as IMP 613 for the same reason as discussed above. The previous permit also contained a part C condition requiring the total combined mass loading discharged from IMP 613, IMP 623, and IMP 615 to not exceed the mass loading limitations for IMP 613.This part C condition will be included in the renewal permit.

**Table 32: Proposed Effluent Limitations for IMP 615**

| Parameter | Average Monthly (lbs/day) ** | Daily Maximum (lbs/day) ** | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | 2/discharge | Measures |
| Total Suspended Solids | 203 | 412 | 31.0 | 60.0 | XXX | 2/discharge | Grab |
| Oil and Grease | 137 | 279 | 26.0 | 52.0 | XXX | 2/discharge | Grab |
| Total Cadmium | XXX | XXX | 0.021 | 0.042 | XXX | 2/discharge | Grab |
| Total Chromium | XXX | XXX | 1.71 | 2.77 | XXX | 2/discharge | Grab |
| Total Copper | XXX | XXX | 0.13 | 0.26 | XXX | 2/discharge | Grab |
| Total Lead | 2.35 | 4.74 | 0.34 | 0.68 | XXX | 2/discharge | Grab |
| Total Nickel | XXX | XXX | 2.38 | 3.98 | XXX | 2/discharge | Grab |
| Total Silver | XXX | XXX | 0.062 | 0.12 | XXX | 2/discharge | Grab |
| Total Zinc | 7.70 | 13.9 | 1.05 | 2.10 | XXX | 2/discharge | Grab |
| Total Cyanide | XXX | XXX | 0.65 | 1.20 | XXX | 2/discharge | Grab |
| Total Toxic Organics* | XXX | XXX | XX | 2.13 | XXX | 2/discharge | Grab |
| Total Iron | XXX | XXX | 3.5 | 7.0 | XXX | 2/discharge | Grab |
| pH (S.U.) | Not less than 6.0 nor greater than 9.0 | | | | | 2/discharge | Grab |

*As provided by 40 CFR 433.12(a), in lieu of requiring monitoring for TTO, the Department may allow the discharger to make the following certification statement:

“Based on my inquiry of the person or persons directly responsible for managing compliance with the permit limitation for total toxic organics (TTO), I certify that, to the best of my knowledge and belief, no dumping of concentrated toxic organics into the wastewater has occurred since filing of the last discharge monitoring report. I further certify that the facility is implementing the Toxic Organic Management Plan submitted to the permitting authority.”

This statement is to be included as a “comment” on or attached to the Discharge Monitoring Report. If monitoring is necessary to measure compliance with the TTO standard, analyzed or only those pollutants which would reasonably be expected to be present.

** The total combined mass loading discharged from IMP 613, IMP 623, and IMP 615 shall not exceed the mass loading limitations for IMP 613 as listed in Part A of the Permit.

## Development of Effluent Limitations

**IMP No.** 625 **Design Flow (MGD)** 0.034
**Latitude** 40º 21' 02" **Longitude** -78º 56' 24"
**Wastewater Description:** Noncontact Cooling Water (NCCW)

### Technology Based Limitations

Regulatory Effluent Standards and Monitoring Requirements

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

Temperature limits will be imposed per the Department's "*Implementation Guidance for Temperature Criteria*." As a policy, DEP normally imposes a maximum temperature limit of 110°F on discharges that contain residual heat. The limit is intended as a safety measure to protect sampling personnel or anyone who may come into contact with the heated discharge where it enters the receiving water.

Effluent standards for pH are also imposed on industrial wastes by 25 Pa. Code § 95.2(1) as indicated in Table 33.

**Table 33: Regulatory Effluent Standards and Monitoring Requirements for IMP 625**

| Parameter | Monthly Average | Daily Maximum | IMAX | Units |
|---|---|---|---|---|
| Flow | Monitor and Report | | XXX | MGD |
| Temperature | XXX | XXX | 110 | °F |
| pH | Not less than 6.0 nor greater than 9.0 | | | S.U. |

### Water Quality-Based Limitations

Toxic Pollutants Water Quality Analysis

The discharges from Outfall 625 are non-contact cooling water and are non-process discharges, therefore a toxic pollutant water quality analysis was not conducted for the discharge from Outfall 625.

Thermal WQBELs for Heated Discharges

Thermal WQBELs are evaluated using a DEP program called "Thermal Discharge Limit Calculation Spreadsheet" created with Microsoft Excel for Windows. The program calculates temperature WLAs through the application of a heat transfer equation, which takes two forms in the program depending on the source of the facility's cooling water. In Case 1, intake water to a facility is from the receiving stream. In Case 2, intake water is from a source other than the receiving stream (e.g., municipal water supply). The determination of which case applies to a given discharge is determined by the input data which include the receiving stream flow rate ($Q_{7\text{-}10}$ or the minimum regulated flow for large rivers), the stream intake flow rate, external source intake flow rates, consumptive flow rates and site-specific ambient stream temperatures. Case 1 limits are generally expressed as heat rejection rates while Case 2 limits are usually expressed as temperatures.

Since the temperature criteria from 25 Pa. Code Chapter 93.7(a) are expressed on monthly and semi-monthly bases for three different aquatic life-uses—cold water fishes, warm water fishes and trout stocking—the program generates monthly and semi-monthly limits for each use. DEP selects the output that corresponds to the aquatic life-use of the receiving stream and consequently which limits apply to the discharge. Temperature WLAs are bounded by an upper limit of 110°F for the safety of sampling personnel and anyone who may come into contact with the heated discharge where it enters the receiving water. If no WLAs below 110°F are calculated, an instantaneous maximum limit of 110°F is recommended by the program.

Due to the nature of the discharges and their relative locations on the receiving stream, all heated discharges will be evaluated as one discharge to ensure the temperature criteria is met instream from all of the heated discharges and a combined flow of 1.525 MGD was used in the model. Discharges from the site are classified under Case 2 because water is obtained from municipal water supply. The results of the thermal analysis, included in Attachment B, indicate that no WQBELs for temperature are required at IMP 625. Therefore, the 110°F daily maximum temperature limit will be imposed at IMP 625.

## Anti-backsliding

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed below in Table 34.

**Table 34: Effluent Limitations in the Current Permit for IMP 625**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | 2/month | Measures |
| Temperature | XXX | XXX | XXX | 110 | XXX | 2/month | I-S |
| pH (S.U.) | Not less than 6.0 nor greater than 9.0 | | | | | 2/month | Grab |

## Proposed Effluent Limitations for IMP 625

The proposed effluent limitations and monitoring requirements for IMP 625 are shown below in Table 35. The limits are the most stringent values from the above limitation analysis.

**Table 35: Propose Effluent Limitations for IMP 625**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Instant. Minimum (mg/L) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | 2/month | Measures |
| Temperature | XXX | XXX | XXX | XXX | 110 | XXX | 2/month | I-S |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 2/month | Grab |

## Development of Effluent Limitations

**Outfall No.** 606 **Design Flow (MGD)** 0
**Latitude** 40º 21' 00" **Longitude** -78º 56' 25"
**Wastewater Description:** Stormwater and Groundwater

Stormwater Technology Limits

Outfall 606 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall discharges stormwater associated with industrial activity. The SIC code for the site is 3315 and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B. The reporting requirements applicable to stormwater discharges are shown in Table 36 below.

**Table 36: PAG-03 Appendix (B) Monitoring Requirements**

| Parameter | Max Daily Concentration | Measurement Frequency | Sample Type |
|---|---|---|---|
| Total Suspended Solids (TSS) | Monitor and Report | 1/6 Months | Grab |
| Total Aluminum | Monitor and Report | 1/6 Months | Grab |
| Total Zinc | Monitor and Report | 1/6 Months | Grab |
| Total Copper | Monitor and Report | 1/6 Months | Grab |
| Total Iron | Monitor and Report | 1/6 Months | Grab |
| Total Lead | Monitor and Report | 1/6 Months | Grab |

**Water Quality-Based Limitations**

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Outfall 606 are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Total Maximum Daily Loads

Wastewater discharges from Johnstown Wire Tech are located within the Kiskiminetas-Conemaugh Watershed for which the Department has developed a TMDL. The TMDL was finalized on January 29, 2010 and establishes waste load allocations for the discharge of aluminum, iron and manganese within the Kiskiminetas-Conemaugh Watershed. The site's NPDES permit (PA0217093) is listed in the Appendix G of the Kiskiminetas-Conemaugh Watershed TMDL, requiring load allocations. Section 303(d) of the Clean Water Act and the U.S. Environmental Protection Agency's Water Quality Planning and Management Regulations (codified at Title 40 of the *Code of Federal Regulations* Part 130) require states to develop a TMDL for impaired water bodies. A TMDL establishes the amount of a pollutant that a water body can assimilate without exceeding the water quality criteria for that pollutant. TMDLs provide the scientific basis for a state to establish water quality-based controls to reduce pollution from both point and non-point sources in order to restore and maintain the quality of the state's water resources (USEPA 1991a). Stream reaches within the Kiskiminetas-Conemaugh Watershed are included in the state's 2008 Section 303(d) list because of various impairments, including metals, pH and sediment. The TMDL includes consideration for each river and tributary within the target watershed and its impairment sources. Stream data is then used to calculate minimum pollutant reductions that are necessary to attain water quality criteria levels. Target concentrations published in the TMDL were based on established water quality criteria of 0.750 $^{mg}/_{L}$ total recoverable aluminum, 1.5 $^{mg}/_{L}$ total recoverable iron based on a 30-day average and 1.0 $^{mg}/_{L}$ total recoverable manganese. The reduction needed to meet the minimum water quality standards is then divided between each known point and non-point pollutant source in the form of a watershed allocation. TMDLs prescribe allocations that minimally achieve water quality criteria (i.e., 100 percent use of a stream's assimilative capacity). However, the discharges from Outfall 601 are groundwater and stormwater and based on the sampling data provided in the permit application, these discharges do not contribute to the impairment of the Watershed. Therefore, TMDL load allocations and concentration-based limitations will not be imposed, but monitoring for total iron, total manganese, and total aluminum will be imposed.

## Anti-Backsliding

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). The previous limitations for Outfalls 606 are displayed below in Table 37. Along with the monitoring requirements, the current permit had discharge goals for the stormwater, Zinc goal of 0.117 mg/L and Nitrate-Nitrite Nitrogen goal of 0.68 m/L. These goals are going to be removed from the proposed permit because these goals are not required for the most recent PAG-03 general permit. The permit also required the sampling to be conducted during a storm event. This is due to the continual contribution of waste streams other than stormwater runoff to the outfall.

**Table 37: Effluent Limitations in the Current Permit for Outfall 606**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Total Zinc* | XXX | XXX | Report** | Report** | XXX | 1/month | Grab |
| Nitrate-Nitrite Nitrogen * | XXX | XXX | Report** | Report** | XXX | 1/month | Grab |

## Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for Outfall 606 are displayed in Table 38 below, they are the most stringent values from the above effluent limitation development. The monitoring frequency for the existing monitoring requirements has been changed from 1/quarter to semi-annually to reflect that monitoring frequency in the PAG-03 general permit. The Draft Permit requires a Corrective Action Plan when there are two consecutive exceedances of the benchmark values, which are also included in the Part C condition. The benchmark values are displayed below in Table 38. These values are not effluent limitations, an exceedance of the benchmark value is not a violation. As described above, if there are two consecutive exceedances of the benchmark value, a corrective action plan must be conducted to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater.

**Table38: Proposed Effluent Monitoring Requirements – Outfall 606**

| Parameter | Max Daily Concentration | Benchmark Values (mg/L) | Measurement Frequency | Sample Type |
|---|---|---|---|---|
| Total Suspended Solids (TSS) | Report | 100 | 1/6 Months | Grab |
| Total Aluminum | Report | XXX | 1/6 Months | Grab |
| Total Zinc | Report | XXX | 1/6 Months | Grab |
| Total Copper | Report | XXX | 1/6 Months | Grab |
| Total Iron | Report | XXX | 1/6 Months | Grab |
| Total Lead | Report | XXX | 1/6 Months | Grab |
| Nitrate-Nitrite Nitrogen | Report | XXX | 1/6 Months | Grab |
| Total Manganese | Report | XXX | 1/6 Months | Grab |

## Development of Effluent Limitations

| | | | |
|---|---|---|---|
| **Outfall No.** | 607 | **Design Flow (MGD)** | 0.27 |
| **Latitude** | 40º 21' 00" | **Longitude** | -78º 56' 25" |

**Wastewater Description:** Boiler Blowdown, Softener Backwash Water, Noncontact Cooling Water (NCCW), Stormwater, and Groundwater

Noncontact cooling water is monitored at IMP 617.

Stormwater Technology Limits

Outfall 607 will be subject to PAG-03 General Stormwater Permit conditions as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3315 and the corresponding appendix of the PAG-03 that would apply to the facility is Appendix B. The reporting requirements applicable to stormwater discharges are shown in Table 39 below.

**Table 39: PAG-03 Appendix (B) Monitoring Requirements**

| Parameter | Max Daily Concentration | Measurement Frequency | Sample Type |
|---|---|---|---|
| Total Suspended Solids (TSS) | Monitor and Report | 1/6 Months | Grab |
| Total Aluminum | Monitor and Report | 1/6 Months | Grab |
| Total Zinc | Monitor and Report | 1/6 Months | Grab |
| Total Copper | Monitor and Report | 1/6 Months | Grab |
| Total Iron | Monitor and Report | 1/6 Months | Grab |
| Total Lead | Monitor and Report | 1/6 Months | Grab |

**Water Quality-Based Limitations**

Stormwater WQBELs

Water quality analyses are typically performed under low-flow (Q7-10) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q7-10 conditions. Since the discharges from Outfall 607 are composed entirely of stormwater, a formal water quality analysis cannot be accurately conducted. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Total Maximum Daily Loads for Outfall 607

The Johnstown Wire Techs Johnstown Plant is located within the watershed area covered by the Kiskiminetas-Conemaugh Watershed TMDL, approved as final by EPA in 2010. This TMDL addresses certain impairments of water quality standards associated with elevated instream concentrations of iron, aluminum, and manganese. A pH impairment is addressed through a surrogate relationship with these metals. This TMDL establishes wasteload allocations for these metals for point sources, and load allocations for these metals for nonpoint sources in the watershed. DEP must assure that any effluent limitations assigned to point sources are consistent with the assumptions and requirements of any available wasteload allocation for the discharge pursuant to 40 CFR 130.7 (i.e., a final TMDL). The Site's permit PA0217093 is listed in the Appendix G of the Kiskiminetas-Conemaugh River Watershed TMDL, requiring load allocations. Wasteload allocations were delegated for Outfall 603. These wasteload allocations are equivalent to the listed concentration limits under various flow scenarios. In this case, the concentration limits are prosed rather than the load limits to simplify compliance assessments. The effluent limits from the TMDL are displayed below in Table 40.

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

The specific water quality criterion for iron is expressed as a 30-day average of 1.5 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of aquatic life and is associated with chronic exposure. There are no other criteria for total iron. Since the duration of the total iron criterion coincides with the 30-day duration of the AML, the 30-day average criterion for total iron is set equal to the AML. In addition, because the total iron criterion is associated with chronic exposure, the MDL (representing acute exposure) and the IMAX may be made less stringent according to established procedures described in Section III.C.3.h on Page 13 of the Water Quality Toxics Management Strategy (Doc. # 361-0100-003). These procedures state that a MDL and IMAX may be set at 2 times and 2.5 times the AML, respectively, or there is the option to use multipliers from EPA's Technical Support Document for Water Quality-based Toxics Control, if data are available to support the use of alternative multipliers.

The specific water quality criterion for manganese is expressed as an acute or maximum daily of 1.0 mg/L in 25 Pa. Code § 93.7(a). The criterion is based on the protection of human health and is associated with chronic exposure associated with a potable water supply (PWS). Since no duration is given in Chapter 93 for the manganese criterion, a duration of 30 days is used based on the water quality criteria duration for Threshold Human Health (THH) criteria given in Section III.C.3.a., Table 1 on Page 10 of DEP's Water Quality Toxics Management Strategy. The 30-day duration for THH criteria coincides with the 30-day duration of an AML, which is why the manganese criterion is set equal to the AML for a "permitting at criteria" scenario. Because the manganese criterion is interpreted as having chronic exposure, the manganese MDL and IMAX may be made less stringent according to procedures established in Section III.C.2.h. of the Water Quality Toxics Management Strategy (AML multipliers of 2.0 and 2.5 for the MDL and IMAX respectively).

**Table 40 – TMDL Limits for Outfall 607**

| Parameter | TMDL Limits | | Units |
|---|---|---|---|
| | Average Monthly | Maximum Daily | |
| Aluminum, total | 0.75 | 0.75 | mg/L |
| Iron, total | 1.5 | 3.0 | mg/L |
| Manganese, total | 1.0 | 2.0 | mg/L |

## Anti-Backsliding

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l). The previous limitations for Outfalls 607 are displayed below in Table 41. Along with the monitoring requirements, the current permit had discharge goals for the stormwater, Zinc goal of 0.117 mg/L and Nitrate-Nitrite Nitrogen goal of 0.68 m/L. These goals are going to be removed from the proposed permit because these goals are not required for the most recent PAG-03 general permit. The permit also required the sampling to be conducted during a storm event. This is due to the continual contribution of waste streams other than stormwater runoff to the outfall.

**Table 41: Effluent Limitations in the Current Permit for Outfall 607**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Total Zinc* | XXX | XXX | Report** | Report** | XXX | 1/month | Grab |
| Nitrate-Nitrite Nitrogen * | XXX | XXX | Report** | Report** | XXX | 1/month | Grab |

## Proposed Effluent Limitations and Monitoring Requirements

The proposed effluent monitoring requirements for Outfall 607 are displayed in Table 42 below, they are the most stringent values from the above effluent limitation development. The monitoring frequency for the existing monitoring requirements has been changed from 1/quarter to semi-annually to reflect that monitoring frequency in the PAG-03 general permit. The Draft Permit requires a Corrective Action Plan when there are two consecutive exceedances of the benchmark values, which are also included in the Part C condition. The benchmark values are displayed below in Table 43. These values are not effluent limitations, an exceedance of the benchmark value is not a violation. As described above, if there are two consecutive exceedances of the benchmark value, a corrective action plan must be conducted to evaluate site stormwater controls and BMPs. Benchmark monitoring is a feedback tool, along with routine inspections and visual assessments, for assessing the effectiveness of stormwater controls and BMPs. An exceedance of the benchmark provides permittees with an indication that the facility's controls may not be sufficiently controlling pollutants in stormwater.

**Table 42: Proposed Effluent Limitation for Outfall 607**

| Parameters | Mass (lb/day) | | Concentration (mg/L) | | | | Monitoring Requirements | |
|---|---|---|---|---|---|---|---|---|
| | Average Monthly | Daily Maximum | Minimum | Average Monthly | Daily Maximum | Instant. Maximum | Frequency | Sample Type |
| Total Aluminum | XXX | XXX | XXX | 0.75 | 0.75 | XXX | 2/Month | Grab |
| Total Iron | XXX | XXX | XXX | 1.5 | 3.0 | XXX | 2/Month | Grab |
| Total Manganese | XXX | XXX | XXX | 1.0 | 2.0 | XXX | 2/Month | Grab |
| Total Suspended Solids (TSS)* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Total Zinc* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Total Copper* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Total Lead* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |
| Nitrate-Nitrite Nitrogen* | XXX | XXX | XXX | XXX | Monitor | XXX | 1/6Month | Grab |

***** stormwater parameters, the parameters shall be sampled during a storm event.

**Table 43: Part C Stormwater Benchmark Values**

| Parameters | Discharge Goals (mg/L) |
|---|---|
| Total Suspended Solids (TSS) | 100 |
| Total Zinc | XXX |
| Total Copper | XXX |
| Total Lead | XXX |
| Nitrate-Nitrite Nitrogen | XXX |

## Development of Effluent Limitations

**IMP No.** 617 **Design Flow (MGD)** 0.05
**Latitude** 40º 20' 58" **Longitude** -78º 56' 26"
**Wastewater Description:** Noncontact Cooling Water (NCCW)

### Technology Based Limitations

Regulatory Effluent Standards and Monitoring Requirements

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

Temperature limits will be imposed per the Department's "*Implementation Guidance for Temperature Criteria*." As a policy, DEP normally imposes a maximum temperature limit of 110°F on discharges that contain residual heat. The limit is intended as a safety measure to protect sampling personnel or anyone who may come into contact with the heated discharge where it enters the receiving water.

Effluent standards for pH are also imposed on industrial wastes by 25 Pa. Code § 95.2(1) as indicated in Table 44.

**Table 44: Regulatory Effluent Standards and Monitoring Requirements for IMP 617**

| Parameter | Monthly Average | Daily Maximum | IMAX | Units |
|---|---|---|---|---|
| Flow | Monitor and Report | | XXX | MGD |
| Temperature | XXX | XXX | 110 | °F |
| pH | Not less than 6.0 nor greater than 9.0 | | | S.U. |

### Water Quality-Based Limitations

Toxic Pollutants Water Quality Analysis

The discharges from IMP 617 are non-contact cooling water and are non-process discharges, therefore a toxic pollutant water quality analysis was not conducted for the discharge.

Thermal WQBELs for Heated Discharges

Thermal WQBELs are evaluated using a DEP program called "Thermal Discharge Limit Calculation Spreadsheet" created with Microsoft Excel for Windows. The program calculates temperature WLAs through the application of a heat transfer equation, which takes two forms in the program depending on the source of the facility's cooling water. In Case 1, intake water to a facility is from the receiving stream. In Case 2, intake water is from a source other than the receiving stream (e.g., municipal water supply). The determination of which case applies to a given discharge is determined by the input data which include the receiving stream flow rate ($Q_{7-10}$ or the minimum regulated flow for large rivers), the stream intake flow rate, external source intake flow rates, consumptive flow rates and site-specific ambient stream temperatures. Case 1 limits are generally expressed as heat rejection rates while Case 2 limits are usually expressed as temperatures.

Since the temperature criteria from 25 Pa. Code Chapter 93.7(a) are expressed on monthly and semi-monthly bases for three different aquatic life-uses—cold water fishes, warm water fishes and trout stocking—the program generates monthly and semi-monthly limits for each use. DEP selects the output that corresponds to the aquatic life-use of the receiving stream and consequently which limits apply to the discharge. Temperature WLAs are bounded by an upper limit of 110°F for the safety of sampling personnel and anyone who may come into contact with the heated discharge where it enters the receiving water. If no WLAs below 110°F are calculated, an instantaneous maximum limit of 110°F is recommended by the program.

Due to the nature of the discharges and their relative locations on the receiving stream, all heated discharges will be evaluated as one discharge to ensure the temperature criteria is met instream from all of the heated discharges and a combined flow of 1.525 MGD was used in the model. Discharges from the site are classified under Case 2 because water is obtained from municipal water supply. The results of the thermal analysis, included in Attachment B, indicate that no WQBELs for temperature are required at IMP 614. Therefore, the 110°F daily maximum temperature limit will be imposed at IMP 617.

**Anti-backsliding**

Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l) and are displayed below in Table 45.

**Table 45: Effluent Limitations in the Current Permit for IMP 617**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | 2/month | Measures |
| Temperature | XXX | XXX | XXX | 110 | XXX | 2/month | I-S |
| pH (S.U.) | Not less than 6.0 nor greater than 9.0 | | | | | 2/month | Grab |

**Proposed Effluent Limitations for IMP 617**

The proposed effluent limitations and monitoring requirements for IMP 617 are shown below in Table 46. The limits are the most stringent values from the above limitation analysis.

**Table 46: Propose Effluent Limitations for IMP 617**

| Parameter | Average Monthly (lbs/day) | Daily Maximum (lbs/day) | Instant. Minimum (mg/L) | Average Monthly (mg/L) | Daily Maximum (mg/L) | Instant. Maximum (mg/L) | Sample Frequency | Sample Type |
|---|---|---|---|---|---|---|---|---|
| Flow (MGD) | Report | Report | XXX | XXX | XXX | XXX | 2/month | Measures |
| Temperature | XXX | XXX | XXX | XXX | 110 | XXX | 2/month | I-S |
| pH (S.U.) | XXX | XXX | 6.0 | XXX | XXX | 9.0 | 2/month | Grab |

**Development of Effluent Limitations**

| | | | |
|---|---|---|---|
| **Outfall No.** | 608 | **Design Flow (MGD)** | 0.0001 |
| **Latitude** | 40º 21' 03.4" | **Longitude** | -78º 56' 24" |
| **Wastewater Description:** | Intake strainer backwash water | | |

The following statement will be included in Part A of the permit:

*Debris collected on the intake strainer shall not be returned to the waterway*.

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

## Attachments

Attachment A: StreamStats Report

Attachment B: Outfall 603 Toxics Management Spreadsheet

Attachment C: Site Thermal Discharge Evaluation

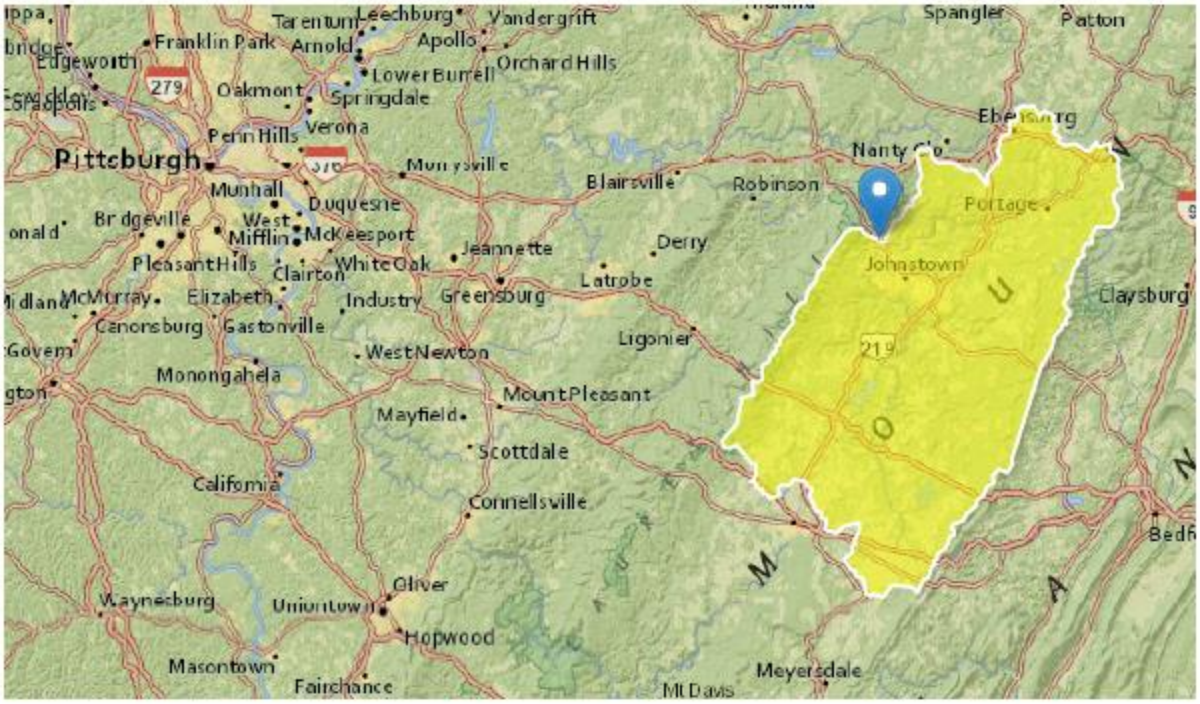
Attachment D: IMP 613 Federal Effluent Limitation Guideline Calculations

Attachment A:

StreamStats Report

# StreamStats Report

**Region ID:** PA
**Workspace ID:** PA20211026143422048000
**Clicked Point (Latitude, Longitude):** 40.35192, -78.93921
**Time:** 2021-10-26 10:34:42 -0400




Basin Characteristics

| Parameter Code | Parameter Description | Value | Unit |
|---|---|---|---|
| DRNAREA | Area that drains to a point on a stream | 686 | square miles |
| ELEV | Mean Basin Elevation | 2108 | feet |
| PRECIP | Mean Annual Precipitation | 45 | inches |

Low-Flow Statistics Parameters [99.9 Percent (685 square miles) Low Flow Region 3]

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|

| Parameter Code | Parameter Name | Value | Units | Min Limit | Max Limit |
|---|---|---|---|---|---|
| DRNAREA | Drainage Area | 686 | square miles | 2.33 | 1720 |
| ELEV | Mean Basin Elevation | 2108 | feet | 898 | 2700 |
| PRECIP | Mean Annual Precipitation | 45 | inches | 38.7 | 47.9 |

Low-Flow Statistics Flow Report [99.9 Percent (685 square miles) Low Flow Region 3]

PIl: Prediction Interval-Lower, Plu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

| Statistic | Value | Unit | SE | ASEp |
|---|---|---|---|---|
| 7 Day 2 Year Low Flow | 110 | ft^3/s | 43 | 43 |
| 30 Day 2 Year Low Flow | 145 | ft^3/s | 38 | 38 |
| 7 Day 10 Year Low Flow | 66.3 | ft^3/s | 54 | 54 |
| 30 Day 10 Year Low Flow | 79.4 | ft^3/s | 49 | 49 |
| 90 Day 10 Year Low Flow | 110 | 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/)**



Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Attachment B:

Outfall 603 Toxics Management Spreadsheet

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Toxics Management Spreadsheet
Version 1.3, March 2021

# Discharge Information

Instructions | Discharge | Stream

Facility: **Johnstown Wire Tech**    NPDES Permit No.: **PA0217093**    Outfall No.: **603**

Evaluation Type: **Major Sewage / Industrial Waste**    Wastewater Description: **IW Process, NCCW**

| Discharge Characteristics | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Design Flow (MGD)* | Hardness (mg/l)* | pH (SU)* | Partial Mix Factors (PMFs) | | | | Complete Mix Times (min) | |
| | | | AFC | CFC | THH | CRL | $Q_{7-10}$ | $Q_h$ |
| 1.46 | 100 | 7 | | | | | | |

| | Discharge Pollutant | Units | | Max Discharge Conc | Trib Conc | Stream Conc | Daily CV | Hourly CV | Stream CV | Fate Coeff | FOS | Criteria Mod | Chem Transl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 0 if left blank | | 0.5 if left blank | | 0 if left blank | | | 1 if left blank | |
| Group 1 | Total Dissolved Solids (PWS) | mg/L | | 1430 | | | | | | | | | |
| | Chloride (PWS) | mg/L | | 521 | | | | | | | | | |
| | Bromide | mg/L | < | 0.2 | | | | | | | | | |
| | Sulfate (PWS) | mg/L | | 264 | | | | | | | | | |
| | Fluoride (PWS) | mg/L | < | 0.1 | | | | | | | | | |
| Group 2 | Total Aluminum | µg/L | | 74.8 | | | | | | | | | |
| | Total Antimony | µg/L | < | 1 | | | | | | | | | |
| | Total Arsenic | µg/L | < | 1 | | | | | | | | | |
| | Total Barium | µg/L | | 21.2 | | | | | | | | | |
| | Total Beryllium | µg/L | < | 1 | | | | | | | | | |
| | Total Boron | µg/L | | 645 | | | | | | | | | |
| | Total Cadmium | µg/L | < | 0.2 | | | | | | | | | |
| | Total Chromium (III) | µg/L | | 1.7 | | | | | | | | | |
| | Hexavalent Chromium | µg/L | < | 1 | | | | | | | | | |
| | Total Cobalt | µg/L | | 1.6 | | | | | | | | | |
| | Total Copper | µg/L | | 3.1 | | | | | | | | | |
| | Free Cyanide | µg/L | | | | | | | | | | | |
| | Total Cyanide | µg/L | < | 20 | | | | | | | | | |
| | Dissolved Iron | µg/L | | 49 | | | | | | | | | |
| | Total Iron | µg/L | | 2430 | | | | | | | | | |
| | Total Lead | µg/L | | 34.9 | | | | | | | | | |
| | Total Manganese | µg/L | | 150 | | | | | | | | | |
| | Total Mercury | µg/L | < | 0.2 | | | | | | | | | |
| | Total Nickel | µg/L | | 5.8 | | | | | | | | | |
| | Total Phenols (Phenolics) (PWS) | µg/L | | 2.5 | | | | | | | | | |
| | Total Selenium | µg/L | < | 1 | | | | | | | | | |
| | Total Silver | µg/L | < | 0.2 | | | | | | | | | |
| | Total Thallium | µg/L | < | 0.2 | | | | | | | | | |
| | Total Zinc | µg/L | | 2900 | | | | | | | | | |
| | Total Molybdenum | µg/L | | 38.9 | | | | | | | | | |
| | Acrolein | µg/L | < | 2 | | | | | | | | | |
| | Acrylamide | µg/L | < | 10000 | | | | | | | | | |
| | Acrylonitrile | µg/L | < | 1 | | | | | | | | | |
| | Benzene | µg/L | < | 0.5 | | | | | | | | | |
| | Bromoform | µg/L | < | 0.5 | | | | | | | | | |

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

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2,6-Dinitrotoluene | µg/L | < | 0.2 | | | | | | | | | |
| | Di-n-Octyl Phthalate | µg/L | < | 2 | | | | | | | | | |
| | 1,2-Diphenylhydrazine | µg/L | < | 0.2 | | | | | | | | | |
| | Fluoranthene | µg/L | < | 0.2 | | | | | | | | | |
| | Fluorene | µg/L | < | 0.2 | | | | | | | | | |
| | Hexachlorobenzene | µg/L | < | 0.2 | | | | | | | | | |
| | Hexachlorobutadiene | µg/L | < | 0.2 | | | | | | | | | |
| | Hexachlorocyclopentadiene | µg/L | < | 1 | | | | | | | | | |
| | Hexachloroethane | µg/L | < | 0.2 | | | | | | | | | |
| | Indeno(1,2,3-cd)Pyrene | µg/L | < | 0.2 | | | | | | | | | |
| | Isophorone | µg/L | < | 0.5 | | | | | | | | | |
| | Naphthalene | µg/L | < | 0.2 | | | | | | | | | |
| | Nitrobenzene | µg/L | < | 0.2 | | | | | | | | | |
| | n-Nitrosodimethylamine | µg/L | < | 0.2 | | | | | | | | | |
| | n-Nitrosodi-n-Propylamine | µg/L | < | 0.2 | | | | | | | | | |
| | n-Nitrosodiphenylamine | µg/L | < | 0.2 | | | | | | | | | |
| | Phenanthrene | µg/L | < | 0.2 | | | | | | | | | |
| | Pyrene | µg/L | < | 0.2 | | | | | | | | | |
| | 1,2,4-Trichlorobenzene | µg/L | < | 0.2 | | | | | | | | | |

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# Stream / Surface Water Information

Johnstown Wire Tech, NPDES Permit No. PA0217093, Outfall 603

Instructions | Discharge | Stream

Receiving Surface Water Name: **Conemaugh River**

No. Reaches to Model: 1

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

| Location | Stream Code* | RMI* | Elevation (ft)* | DA ($mi^2$)* | Slope (ft/ft) | PWS Withdrawal (MGD) | Apply Fish Criteria* |
|---|---|---|---|---|---|---|---|
| Point of Discharge | 043832 | 50.4 | 1124 | 686 | | | Yes |
| End of Reach 1 | 043832 | 49.4 | 1123 | 687 | | | 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 | 50.4 | 0.1 | 66.3 | | | 140 | 15 | | | | | 100 | 7 | | |
| End of Reach 1 | 49.4 | 0.1 | 66.3 | | | 140 | 15 | | | | | | | | |

**$Q_h$**

| 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 | 50.4 | | | | | | | | | | | | | | |
| End of Reach 1 | 49.4 | | | | | | | | | | | | | | |

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# Model Results

**Johnstown Wire Tech, NPDES Permit No. PA0217093, Outfall 603**

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ *AFC* CCT (min): 15 PMF: 0.691 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

| Pollutants | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Fluoride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Aluminum | 0 | 0 | | 0 | 750 | 750 | 15,961 | |
| Total Antimony | 0 | 0 | | 0 | 1,100 | 1,100 | 23,409 | |
| Total Arsenic | 0 | 0 | | 0 | 340 | 340 | 7,235 | Chem Translator of 1 applied |
| Total Barium | 0 | 0 | | 0 | 21,000 | 21,000 | 446,894 | |
| Total Boron | 0 | 0 | | 0 | 8,100 | 8,100 | 172,374 | |
| Total Cadmium | 0 | 0 | | 0 | 2.014 | 2.13 | 45.4 | Chem Translator of 0.944 applied |
| Total Chromium (III) | 0 | 0 | | 0 | 569.763 | 1,803 | 38,370 | Chem Translator of 0.316 applied |
| Hexavalent Chromium | 0 | 0 | | 0 | 16 | 16.3 | 347 | Chem Translator of 0.982 applied |
| Total Cobalt | 0 | 0 | | 0 | 95 | 95.0 | 2,022 | |
| Total Copper | 0 | 0 | | 0 | 13.439 | 14.0 | 298 | 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 | 64.581 | 81.6 | 1,737 | Chem Translator of 0.791 applied |
| Total Manganese | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Mercury | 0 | 0 | | 0 | 1.400 | 1.65 | 35.1 | Chem Translator of 0.85 applied |
| Total Nickel | 0 | 0 | | 0 | 468.236 | 469 | 9,984 | Chem Translator of 0.998 applied |
| Total Phenols (Phenolics) (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Selenium | 0 | 0 | | 0 | N/A | N/A | N/A | Chem Translator of 0.922 applied |
| Total Silver | 0 | 0 | | 0 | 3.217 | 3.78 | 80.5 | Chem Translator of 0.85 applied |
| Total Thallium | 0 | 0 | | 0 | 65 | 65.0 | 1,383 | |
| Total Zinc | 0 | 0 | | 0 | 117.180 | 120 | 2,550 | Chem Translator of 0.978 applied |
| Acrolein | 0 | 0 | | 0 | 3 | 3.0 | 63.8 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Acrylamide | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acrylonitrile | 0 | 0 | | 0 | 650 | 650 | 13,832 | |
| Benzene | 0 | 0 | | 0 | 640 | 640 | 13,620 | |
| Bromoform | 0 | 0 | | 0 | 1,800 | 1,800 | 38,305 | |
| Carbon Tetrachloride | 0 | 0 | | 0 | 2,800 | 2,800 | 59,586 | |
| Chlorobenzene | 0 | 0 | | 0 | 1,200 | 1,200 | 25,537 | |
| Chlorodibromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2-Chloroethyl Vinyl Ether | 0 | 0 | | 0 | 18,000 | 18,000 | 383,052 | |
| Chloroform | 0 | 0 | | 0 | 1,900 | 1,900 | 40,433 | |
| Dichlorobromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | 15,000 | 15,000 | 319,210 | |
| 1,1-Dichloroethylene | 0 | 0 | | 0 | 7,500 | 7,500 | 159,605 | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | 11,000 | 11,000 | 234,088 | |
| 1,3-Dichloropropylene | 0 | 0 | | 0 | 310 | 310 | 6,597 | |
| Ethylbenzene | 0 | 0 | | 0 | 2,900 | 2,900 | 61,714 | |
| Methyl Bromide | 0 | 0 | | 0 | 550 | 550 | 11,704 | |
| Methyl Chloride | 0 | 0 | | 0 | 28,000 | 28,000 | 595,859 | |
| Methylene Chloride | 0 | 0 | | 0 | 12,000 | 12,000 | 255,368 | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | | 0 | 1,000 | 1,000 | 21,281 | |
| Tetrachloroethylene | 0 | 0 | | 0 | 700 | 700 | 14,896 | |
| Toluene | 0 | 0 | | 0 | 1,700 | 1,700 | 36,177 | |
| 1,2-trans-Dichloroethylene | 0 | 0 | | 0 | 6,800 | 6,800 | 144,709 | |
| 1,1,1-Trichloroethane | 0 | 0 | | 0 | 3,000 | 3,000 | 63,842 | |
| 1,1,2-Trichloroethane | 0 | 0 | | 0 | 3,400 | 3,400 | 72,354 | |
| Trichloroethylene | 0 | 0 | | 0 | 2,300 | 2,300 | 48,946 | |
| Vinyl Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2-Chlorophenol | 0 | 0 | | 0 | 560 | 560 | 11,917 | |
| 2,4-Dichlorophenol | 0 | 0 | | 0 | 1,700 | 1,700 | 36,177 | |
| 2,4-Dimethylphenol | 0 | 0 | | 0 | 660 | 660 | 14,045 | |
| 4,6-Dinitro-o-Cresol | 0 | 0 | | 0 | 80 | 80.0 | 1,702 | |
| 2,4-Dinitrophenol | 0 | 0 | | 0 | 660 | 660 | 14,045 | |
| 2-Nitrophenol | 0 | 0 | | 0 | 8,000 | 8,000 | 170,245 | |
| 4-Nitrophenol | 0 | 0 | | 0 | 2,300 | 2,300 | 48,946 | |
| p-Chloro-m-Cresol | 0 | 0 | | 0 | 160 | 160 | 3,405 | |
| Pentachlorophenol | 0 | 0 | | 0 | 8.723 | 8.72 | 186 | |
| Phenol | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2,4,6-Trichlorophenol | 0 | 0 | | 0 | 460 | 460 | 9,789 | |
| Acenaphthene | 0 | 0 | | 0 | 83 | 83.0 | 1,766 | |
| Anthracene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzidine | 0 | 0 | | 0 | 300 | 300 | 6,384 | |
| Benzo(a)Anthracene | 0 | 0 | | 0 | 0.5 | 0.5 | 10.6 | |
| 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 | 638,421 | |
| Bis(2-Chloroisopropyl)Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Ethylhexyl)Phthalate | 0 | 0 | | 0 | 4,500 | 4,500 | 95,763 | |
| 4-Bromophenyl Phenyl Ether | 0 | 0 | | 0 | 270 | 270 | 5,746 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Butyl Benzyl Phthalate | 0 | 0 | | 0 | 140 | 140 | 2,979 | |
| 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 | 17,450 | |
| 1,3-Dichlorobenzene | 0 | 0 | | 0 | 350 | 350 | 7,448 | |
| 1,4-Dichlorobenzene | 0 | 0 | | 0 | 730 | 730 | 15,535 | |
| 3,3-Dichlorobenzidine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Diethyl Phthalate | 0 | 0 | | 0 | 4,000 | 4,000 | 85,123 | |
| Dimethyl Phthalate | 0 | 0 | | 0 | 2,500 | 2,500 | 53,202 | |
| Di-n-Butyl Phthalate | 0 | 0 | | 0 | 110 | 110 | 2,341 | |
| 2,4-Dinitrotoluene | 0 | 0 | | 0 | 1,600 | 1,600 | 34,049 | |
| 2,6-Dinitrotoluene | 0 | 0 | | 0 | 990 | 990 | 21,068 | |
| 1,2-Diphenylhydrazine | 0 | 0 | | 0 | 15 | 15.0 | 319 | |
| Fluoranthene | 0 | 0 | | 0 | 200 | 200 | 4,256 | |
| 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 | 213 | |
| Hexachlorocyclopentadiene | 0 | 0 | | 0 | 5 | 5.0 | 106 | |
| Hexachloroethane | 0 | 0 | | 0 | 60 | 60.0 | 1,277 | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Isophorone | 0 | 0 | | 0 | 10,000 | 10,000 | 212,807 | |
| Naphthalene | 0 | 0 | | 0 | 140 | 140 | 2,979 | |
| Nitrobenzene | 0 | 0 | | 0 | 4,000 | 4,000 | 85,123 | |
| n-Nitrosodimethylamine | 0 | 0 | | 0 | 17,000 | 17,000 | 361,772 | |
| n-Nitrosodi-n-Propylamine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| n-Nitrosodiphenylamine | 0 | 0 | | 0 | 300 | 300 | 6,384 | |
| Phenanthrene | 0 | 0 | | 0 | 5 | 5.0 | 106 | |
| Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2,4-Trichlorobenzene | 0 | 0 | | 0 | 130 | 130 | 2,766 | |

☑ *CFC* CCT (min): 31.424 PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

| Pollutants | Stream Conc (µg/L) | Stream CV | Trib Conc (µg/L) | Fate Coef | WQC (µg/L) | WQ Obj (µg/L) | WLA (µg/L) | Comments |
|---|---|---|---|---|---|---|---|---|
| Total Dissolved Solids (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloride (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Sulfate (PWS) | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 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 | 6,678 | |
| Total Arsenic | 0 | 0 | | 0 | 150 | 150 | 4,553 | Chem Translator of 1 applied |
| Total Barium | 0 | 0 | | 0 | 4,100 | 4,100 | 124,452 | |
| Total Boron | 0 | 0 | | 0 | 1,600 | 1,600 | 48,567 | |
| Total Cadmium | 0 | 0 | | 0 | 0.246 | 0.27 | 8.21 | Chem Translator of 0.909 applied |
| Total Chromium (III) | 0 | 0 | | 0 | 74.115 | 86.2 | 2,616 | Chem Translator of 0.86 applied |
| Hexavalent Chromium | 0 | 0 | | 0 | 10 | 10.4 | 316 | Chem Translator of 0.962 applied |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Total Cobalt | 0 | 0 | | 0 | 19 | 19.0 | 577 | |
| Total Copper | 0 | 0 | | 0 | 8.956 | 9.33 | 283 | 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 | 45,531 | WQC = 30 day average; PMF = 1 |
| Total Lead | 0 | 0 | | 0 | 2.517 | 3.18 | 96.6 | Chem Translator of 0.791 applied |
| Total Manganese | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Total Mercury | 0 | 0 | | 0 | 0.770 | 0.91 | 27.5 | Chem Translator of 0.85 applied |
| Total Nickel | 0 | 0 | | 0 | 52.007 | 52.2 | 1,583 | 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 | 151 | 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 | 395 | |
| Total Zinc | 0 | 0 | | 0 | 118.139 | 120 | 3,637 | Chem Translator of 0.986 applied |
| Acrolein | 0 | 0 | | 0 | 3 | 3.0 | 91.1 | |
| Acrylamide | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acrylonitrile | 0 | 0 | | 0 | 130 | 130 | 3,946 | |
| Benzene | 0 | 0 | | 0 | 130 | 130 | 3,946 | |
| Bromoform | 0 | 0 | | 0 | 370 | 370 | 11,231 | |
| Carbon Tetrachloride | 0 | 0 | | 0 | 560 | 560 | 16,998 | |
| Chlorobenzene | 0 | 0 | | 0 | 240 | 240 | 7,285 | |
| Chlorodibromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2-Chloroethyl Vinyl Ether | 0 | 0 | | 0 | 3,500 | 3,500 | 106,240 | |
| Chloroform | 0 | 0 | | 0 | 390 | 390 | 11,838 | |
| Dichlorobromomethane | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | 3,100 | 3,100 | 94,098 | |
| 1,1-Dichloroethylene | 0 | 0 | | 0 | 1,500 | 1,500 | 45,531 | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | 2,200 | 2,200 | 66,779 | |
| 1,3-Dichloropropylene | 0 | 0 | | 0 | 61 | 61.0 | 1,852 | |
| Ethylbenzene | 0 | 0 | | 0 | 580 | 580 | 17,605 | |
| Methyl Bromide | 0 | 0 | | 0 | 110 | 110 | 3,339 | |
| Methyl Chloride | 0 | 0 | | 0 | 5,500 | 5,500 | 166,948 | |
| Methylene Chloride | 0 | 0 | | 0 | 2,400 | 2,400 | 72,850 | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | | 0 | 210 | 210 | 6,374 | |
| Tetrachloroethylene | 0 | 0 | | 0 | 140 | 140 | 4,250 | |
| Toluene | 0 | 0 | | 0 | 330 | 330 | 10,017 | |
| 1,2-trans-Dichloroethylene | 0 | 0 | | 0 | 1,400 | 1,400 | 42,496 | |
| 1,1,1-Trichloroethane | 0 | 0 | | 0 | 610 | 610 | 18,516 | |
| 1,1,2-Trichloroethane | 0 | 0 | | 0 | 680 | 680 | 20,641 | |
| Trichloroethylene | 0 | 0 | | 0 | 450 | 450 | 13,659 | |
| Vinyl Chloride | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2-Chlorophenol | 0 | 0 | | 0 | 110 | 110 | 3,339 | |
| 2,4-Dichlorophenol | 0 | 0 | | 0 | 340 | 340 | 10,320 | |
| 2,4-Dimethylphenol | 0 | 0 | | 0 | 130 | 130 | 3,946 | |
| 4,6-Dinitro-o-Cresol | 0 | 0 | | 0 | 16 | 16.0 | 486 | |
| 2,4-Dinitrophenol | 0 | 0 | | 0 | 130 | 130 | 3,946 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 2-Nitrophenol | 0 | 0 | | 0 | 1,600 | 1,600 | 48,567 | |
| 4-Nitrophenol | 0 | 0 | | 0 | 470 | 470 | 14,266 | |
| p-Chloro-m-Cresol | 0 | 0 | | 0 | 500 | 500 | 15,177 | |
| Pentachlorophenol | 0 | 0 | | 0 | 6.693 | 6.69 | 203 | |
| Phenol | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2,4,6-Trichlorophenol | 0 | 0 | | 0 | 91 | 91.0 | 2,762 | |
| Acenaphthene | 0 | 0 | | 0 | 17 | 17.0 | 516 | |
| Anthracene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Benzidine | 0 | 0 | | 0 | 59 | 59.0 | 1,791 | |
| Benzo(a)Anthracene | 0 | 0 | | 0 | 0.1 | 0.1 | 3.04 | |
| 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 | 182,125 | |
| Bis(2-Chloroisopropyl)Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Ethylhexyl)Phthalate | 0 | 0 | | 0 | 910 | 910 | 27,622 | |
| 4-Bromophenyl Phenyl Ether | 0 | 0 | | 0 | 54 | 54.0 | 1,639 | |
| Butyl Benzyl Phthalate | 0 | 0 | | 0 | 35 | 35.0 | 1,062 | |
| 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 | 4,857 | |
| 1,3-Dichlorobenzene | 0 | 0 | | 0 | 69 | 69.0 | 2,094 | |
| 1,4-Dichlorobenzene | 0 | 0 | | 0 | 150 | 150 | 4,553 | |
| 3,3-Dichlorobenzidine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Diethyl Phthalate | 0 | 0 | | 0 | 800 | 800 | 24,283 | |
| Dimethyl Phthalate | 0 | 0 | | 0 | 500 | 500 | 15,177 | |
| Di-n-Butyl Phthalate | 0 | 0 | | 0 | 21 | 21.0 | 637 | |
| 2,4-Dinitrotoluene | 0 | 0 | | 0 | 320 | 320 | 9,713 | |
| 2,6-Dinitrotoluene | 0 | 0 | | 0 | 200 | 200 | 6,071 | |
| 1,2-Diphenylhydrazine | 0 | 0 | | 0 | 3 | 3.0 | 91.1 | |
| Fluoranthene | 0 | 0 | | 0 | 40 | 40.0 | 1,214 | |
| 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 | 60.7 | |
| Hexachlorocyclopentadiene | 0 | 0 | | 0 | 1 | 1.0 | 30.4 | |
| Hexachloroethane | 0 | 0 | | 0 | 12 | 12.0 | 364 | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Isophorone | 0 | 0 | | 0 | 2,100 | 2,100 | 63,744 | |
| Naphthalene | 0 | 0 | | 0 | 43 | 43.0 | 1,305 | |
| Nitrobenzene | 0 | 0 | | 0 | 810 | 810 | 24,587 | |
| n-Nitrosodimethylamine | 0 | 0 | | 0 | 3,400 | 3,400 | 103,204 | |
| n-Nitrosodi-n-Propylamine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| n-Nitrosodiphenylamine | 0 | 0 | | 0 | 59 | 59.0 | 1,791 | |
| Phenanthrene | 0 | 0 | | 0 | 1 | 1.0 | 30.4 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Pyrene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2,4-Trichlorobenzene | 0 | 0 | | 0 | 26 | 26.0 | 789 | |

☑ *THH* CCT (min): 31.424 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 | 170 | |
| Total Arsenic | 0 | 0 | | 0 | 10 | 10.0 | 304 | |
| Total Barium | 0 | 0 | | 0 | 2,400 | 2,400 | 72,850 | |
| Total Boron | 0 | 0 | | 0 | 3,100 | 3,100 | 94,098 | |
| 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 | 9,106 | |
| 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 | 30,354 | |
| Total Mercury | 0 | 0 | | 0 | 0.050 | 0.05 | 1.52 | |
| Total Nickel | 0 | 0 | | 0 | 610 | 610 | 18,516 | |
| 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 | 7.29 | |
| Total Zinc | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acrolein | 0 | 0 | | 0 | 3 | 3.0 | 91.1 | |
| 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 | 3,035 | |
| 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 | |
| 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 | 1,002 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 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 | 2,064 | |
| Methyl Bromide | 0 | 0 | | 0 | 100 | 100.0 | 3,035 | |
| 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 | 1,730 | |
| 1,2-trans-Dichloroethylene | 0 | 0 | | 0 | 100 | 100.0 | 3,035 | |
| 1,1,1-Trichloroethane | 0 | 0 | | 0 | 10,000 | 10,000 | 303,542 | |
| 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 | 911 | |
| 2,4-Dichlorophenol | 0 | 0 | | 0 | 10 | 10.0 | 304 | |
| 2,4-Dimethylphenol | 0 | 0 | | 0 | 100 | 100.0 | 3,035 | |
| 4,6-Dinitro-o-Cresol | 0 | 0 | | 0 | 2 | 2.0 | 60.7 | |
| 2,4-Dinitrophenol | 0 | 0 | | 0 | 10 | 10.0 | 304 | |
| 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 | 121,417 | |
| 2,4,6-Trichlorophenol | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Acenaphthene | 0 | 0 | | 0 | 70 | 70.0 | 2,125 | |
| Anthracene | 0 | 0 | | 0 | 300 | 300 | 9,106 | |
| 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 | 6,071 | |
| 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 | 3.04 | |
| 2-Chloronaphthalene | 0 | 0 | | 0 | 800 | 800 | 24,283 | |
| 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 | 30,354 | |
| 1,3-Dichlorobenzene | 0 | 0 | | 0 | 7 | 7.0 | 212 | |
| 1,4-Dichlorobenzene | 0 | 0 | | 0 | 300 | 300 | 9,106 | |
| 3,3-Dichlorobenzidine | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Diethyl Phthalate | 0 | 0 | | 0 | 600 | 600 | 18,213 | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Dimethyl Phthalate | 0 | 0 | | 0 | 2,000 | 2,000 | 60,708 | |
| Di-n-Butyl Phthalate | 0 | 0 | | 0 | 20 | 20.0 | 607 | |
| 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 | 607 | |
| Fluorene | 0 | 0 | | 0 | 50 | 50.0 | 1,518 | |
| 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 | 121 | |
| 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 | 1,032 | |
| Naphthalene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Nitrobenzene | 0 | 0 | | 0 | 10 | 10.0 | 304 | |
| 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 | 607 | |
| 1,2,4-Trichlorobenzene | 0 | 0 | | 0 | 0.07 | 0.07 | 2.12 | |

☑ *CRL* CCT (min): 12.695 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 | 9.07 | |
| Acrylonitrile | 0 | 0 | | 0 | 0.06 | 0.06 | 7.77 | |
| Benzene | 0 | 0 | | 0 | 0.58 | 0.58 | 75.2 | |
| Bromoform | 0 | 0 | | 0 | 7 | 7.0 | 907 | |
| Carbon Tetrachloride | 0 | 0 | | 0 | 0.4 | 0.4 | 51.8 | |
| Chlorobenzene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chlorodibromomethane | 0 | 0 | | 0 | 0.8 | 0.8 | 104 | |
| 2-Chloroethyl Vinyl Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Chloroform | 0 | 0 | | 0 | 5.7 | 5.7 | 739 | |
| Dichlorobromomethane | 0 | 0 | | 0 | 0.95 | 0.95 | 123 | |
| 1,2-Dichloroethane | 0 | 0 | | 0 | 9.9 | 9.9 | 1,283 | |
| 1,1-Dichloroethylene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 1,2-Dichloropropane | 0 | 0 | | 0 | 0.9 | 0.9 | 117 | |
| 1,3-Dichloropropylene | 0 | 0 | | 0 | 0.27 | 0.27 | 35.0 | |
| 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 | 2,591 | |
| 1,1,2,2-Tetrachloroethane | 0 | 0 | | 0 | 0.2 | 0.2 | 25.9 | |
| Tetrachloroethylene | 0 | 0 | | 0 | 10 | 10.0 | 1,296 | |
| 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 | 71.3 | |
| Trichloroethylene | 0 | 0 | | 0 | 0.6 | 0.6 | 77.7 | |
| Vinyl Chloride | 0 | 0 | | 0 | 0.02 | 0.02 | 2.59 | |
| 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 | 3.89 | |
| Phenol | 0 | 0 | | 0 | N/A | N/A | N/A | |
| 2,4,6-Trichlorophenol | 0 | 0 | | 0 | 1.5 | 1.5 | 194 | |
| 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 | 0.013 | |
| Benzo(a)Anthracene | 0 | 0 | | 0 | 0.001 | 0.001 | 0.13 | |
| Benzo(a)Pyrene | 0 | 0 | | 0 | 0.0001 | 0.0001 | 0.013 | |
| 3,4-Benzofluoranthene | 0 | 0 | | 0 | 0.001 | 0.001 | 0.13 | |
| Benzo(k)Fluoranthene | 0 | 0 | | 0 | 0.01 | 0.01 | 1.3 | |
| Bis(2-Chloroethyl)Ether | 0 | 0 | | 0 | 0.03 | 0.03 | 3.89 | |
| Bis(2-Chloroisopropyl)Ether | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Bis(2-Ethylhexyl)Phthalate | 0 | 0 | | 0 | 0.32 | 0.32 | 41.5 | |
| 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 | 15.5 | |
| Dibenzo(a,h)Anthrancene | 0 | 0 | | 0 | 0.0001 | 0.0001 | 0.013 | |
| 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 | 6.48 | |
| 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 | 6.48 | |
| 2,6-Dinitrotoluene | 0 | 0 | | 0 | 0.05 | 0.05 | 6.48 | |
| 1,2-Diphenylhydrazine | 0 | 0 | | 0 | 0.03 | 0.03 | 3.89 | |
| 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 | 0.01 | |
| Hexachlorobutadiene | 0 | 0 | | 0 | 0.01 | 0.01 | 1.3 | |
| Hexachlorocyclopentadiene | 0 | 0 | | 0 | N/A | N/A | N/A | |
| Hexachloroethane | 0 | 0 | | 0 | 0.1 | 0.1 | 13.0 | |
| Indeno(1,2,3-cd)Pyrene | 0 | 0 | | 0 | 0.001 | 0.001 | 0.13 | |
| 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 | 0.091 | |
| n-Nitrosodi-n-Propylamine | 0 | 0 | | 0 | 0.005 | 0.005 | 0.65 | |
| n-Nitrosodiphenylamine | 0 | 0 | | 0 | 3.3 | 3.3 | 428 | |
| 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 | Units | Governing WQBEL | WQBEL Basis | Comments |
|---|---|---|---|---|---|---|---|---|---|
| Total Lead | Report | Report | Report | Report | Report | µg/L | 96.6 | CFC | Discharge Conc > 10% WQBEL (no RP) |
| Total Zinc | 19.9 | 31.0 | 1,634 | 2,550 | 4,086 | µg/L | 1,634 | AFC | Discharge Conc ≥ 50% WQBEL (RP) |
| Acrylamide | 0.11 | 0.17 | 9.07 | 14.2 | 22.7 | µg/L | 9.07 | CRL | Discharge Conc ≥ 50% WQBEL (RP) |
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☑ ***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 | Discharge Conc < TQL |
| Total Aluminum | 10,230 | 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 | 72,850 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Beryllium | N/A | N/A | No WQS |
| Total Boron | 48,567 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Cadmium | 8.21 | µg/L | Discharge Conc < TQL |
| Total Chromium (III) | 2,616 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Hexavalent Chromium | 222 | µg/L | Discharge Conc < TQL |
| Total Cobalt | 577 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Copper | 191 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Cyanide | N/A | N/A | No WQS |
| Dissolved Iron | 9,106 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Iron | 45,531 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Manganese | 30,354 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Mercury | 1.52 | µg/L | Discharge Conc < TQL |
| Total Nickel | 1,583 | µg/L | Discharge Conc ≤ 10% WQBEL |
| Total Phenols (Phenolics) (PWS) | | µg/L | PWS Not Applicable |
| Total Selenium | 151 | µg/L | Discharge Conc < TQL |
| Total Silver | 51.6 | µg/L | Discharge Conc < TQL |

| | | | |
|---|---|---|---|
| Total Thallium | 7.29 | µg/L | Discharge Conc < TQL |
| Total Molybdenum | N/A | N/A | No WQS |
| Acrolein | 40.9 | µg/L | Discharge Conc < TQL |
| Acrylonitrile | 7.77 | µg/L | Discharge Conc < TQL |
| Benzene | 75.2 | µg/L | Discharge Conc < TQL |
| Bromoform | 907 | µg/L | Discharge Conc < TQL |
| Carbon Tetrachloride | 51.8 | µg/L | Discharge Conc < TQL |
| Chlorobenzene | 3,035 | µg/L | Discharge Conc < TQL |
| Chlorodibromomethane | 104 | µg/L | Discharge Conc < TQL |
| Chloroethane | N/A | N/A | No WQS |
| 2-Chloroethyl Vinyl Ether | 106,240 | µg/L | Discharge Conc < TQL |
| Chloroform | 739 | µg/L | Discharge Conc < TQL |
| Dichlorobromomethane | 123 | µg/L | Discharge Conc < TQL |
| 1,1-Dichloroethane | N/A | N/A | No WQS |
| 1,2-Dichloroethane | 1,283 | µg/L | Discharge Conc < TQL |
| 1,1-Dichloroethylene | 1,002 | µg/L | Discharge Conc < TQL |
| 1,2-Dichloropropane | 117 | µg/L | Discharge Conc < TQL |
| 1,3-Dichloropropylene | 35.0 | µg/L | Discharge Conc < TQL |
| 1,4-Dioxane | N/A | N/A | No WQS |
| Ethylbenzene | 2,064 | µg/L | Discharge Conc < TQL |
| Methyl Bromide | 3,035 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Methyl Chloride | 166,948 | µg/L | Discharge Conc < TQL |
| Methylene Chloride | 2,591 | µg/L | Discharge Conc < TQL |
| 1,1,2,2-Tetrachloroethane | 25.9 | µg/L | Discharge Conc < TQL |
| Tetrachloroethylene | 1,296 | µg/L | Discharge Conc < TQL |
| Toluene | 1,730 | µg/L | Discharge Conc < TQL |
| 1,2-trans-Dichloroethylene | 3,035 | µg/L | Discharge Conc ≤ 25% WQBEL |
| 1,1,1-Trichloroethane | 18,516 | µg/L | Discharge Conc < TQL |
| 1,1,2-Trichloroethane | 71.3 | µg/L | Discharge Conc ≤ 25% WQBEL |
| Trichloroethylene | 77.7 | µg/L | Discharge Conc < TQL |
| Vinyl Chloride | 2.59 | µg/L | Discharge Conc < TQL |
| 2-Chlorophenol | 911 | µg/L | Discharge Conc < TQL |
| 2,4-Dichlorophenol | 304 | µg/L | Discharge Conc < TQL |
| 2,4-Dimethylphenol | 3,035 | µg/L | Discharge Conc < TQL |
| 4,6-Dinitro-o-Cresol | 60.7 | µg/L | Discharge Conc < TQL |
| 2,4-Dinitrophenol | 304 | µg/L | Discharge Conc < TQL |
| 2-Nitrophenol | 48,567 | µg/L | Discharge Conc < TQL |
| 4-Nitrophenol | 14,266 | µg/L | Discharge Conc < TQL |
| p-Chloro-m-Cresol | 2,182 | µg/L | Discharge Conc < TQL |
| Pentachlorophenol | 3.89 | µg/L | Discharge Conc < TQL |
| Phenol | 121,417 | µg/L | Discharge Conc < TQL |
| 2,4,6-Trichlorophenol | 194 | µg/L | Discharge Conc < TQL |
| Acenaphthene | 516 | µg/L | Discharge Conc < TQL |
| Acenaphthylene | N/A | N/A | No WQS |
| Anthracene | 9,106 | µg/L | Discharge Conc < TQL |

| | | | |
|---|---|---|---|
| Benzidine | 0.013 | µg/L | Discharge Conc < TQL |
| Benzo(a)Anthracene | 0.13 | µg/L | Discharge Conc < TQL |
| Benzo(a)Pyrene | 0.013 | µg/L | Discharge Conc < TQL |
| 3,4-Benzofluoranthene | 0.13 | µg/L | Discharge Conc < TQL |
| Benzo(ghi)Perylene | N/A | N/A | No WQS |
| Benzo(k)Fluoranthene | 1.3 | µg/L | Discharge Conc < TQL |
| Bis(2-Chloroethoxy)Methane | N/A | N/A | No WQS |
| Bis(2-Chloroethyl)Ether | 3.89 | µg/L | Discharge Conc < TQL |
| Bis(2-Chloroisopropyl)Ether | 6,071 | µg/L | Discharge Conc < TQL |
| Bis(2-Ethylhexyl)Phthalate | 41.5 | µg/L | Discharge Conc < TQL |
| 4-Bromophenyl Phenyl Ether | 1,639 | µg/L | Discharge Conc < TQL |
| Butyl Benzyl Phthalate | 3.04 | µg/L | Discharge Conc < TQL |
| 2-Chloronaphthalene | 24,283 | µg/L | Discharge Conc < TQL |
| 4-Chlorophenyl Phenyl Ether | N/A | N/A | No WQS |
| Chrysene | 15.5 | µg/L | Discharge Conc < TQL |
| Dibenzo(a,h)Anthrancene | 0.013 | µg/L | Discharge Conc < TQL |
| 1,2-Dichlorobenzene | 4,857 | µg/L | Discharge Conc < TQL |
| 1,3-Dichlorobenzene | 212 | µg/L | Discharge Conc < TQL |
| 1,4-Dichlorobenzene | 4,553 | µg/L | Discharge Conc < TQL |
| 3,3-Dichlorobenzidine | 6.48 | µg/L | Discharge Conc < TQL |
| Diethyl Phthalate | 18,213 | µg/L | Discharge Conc < TQL |
| Dimethyl Phthalate | 15,177 | µg/L | Discharge Conc < TQL |
| Di-n-Butyl Phthalate | 607 | µg/L | Discharge Conc < TQL |
| 2,4-Dinitrotoluene | 6.48 | µg/L | Discharge Conc < TQL |
| 2,6-Dinitrotoluene | 6.48 | µg/L | Discharge Conc < TQL |
| Di-n-Octyl Phthalate | N/A | N/A | No WQS |
| 1,2-Diphenylhydrazine | 3.89 | µg/L | Discharge Conc < TQL |
| Fluoranthene | 607 | µg/L | Discharge Conc < TQL |
| Fluorene | 1,518 | µg/L | Discharge Conc < TQL |
| Hexachlorobenzene | 0.01 | µg/L | Discharge Conc < TQL |
| Hexachlorobutadiene | 1.3 | µg/L | Discharge Conc < TQL |
| Hexachlorocyclopentadiene | 30.4 | µg/L | Discharge Conc < TQL |
| Hexachloroethane | 13.0 | µg/L | Discharge Conc < TQL |
| Indeno(1,2,3-cd)Pyrene | 0.13 | µg/L | Discharge Conc < TQL |
| Isophorone | 1,032 | µg/L | Discharge Conc < TQL |
| Naphthalene | 1,305 | µg/L | Discharge Conc < TQL |
| Nitrobenzene | 304 | µg/L | Discharge Conc < TQL |
| n-Nitrosodimethylamine | 0.091 | µg/L | Discharge Conc < TQL |
| n-Nitrosodi-n-Propylamine | 0.65 | µg/L | Discharge Conc < TQL |
| n-Nitrosodiphenylamine | 428 | µg/L | Discharge Conc < TQL |
| Phenanthrene | 30.4 | µg/L | Discharge Conc < TQL |
| Pyrene | 607 | µg/L | Discharge Conc < TQL |
| 1,2,4-Trichlorobenzene | 2.12 | µg/L | Discharge Conc < TQL |
| | | | |
| | | | |

Attachment C:

Site Thermal Discharge Evaluation

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Facility:** | **Johnstown Wire Techs Johnstown Plant** | | | | | | | |
| **Permit Number:** | PA0217093 | | | | | | | **PMF** |
| **Stream Name:** | Conemaugh River | | | | | | | 0.30 |
| **Analyst/Engineer:** | Adam Olesnanik | | | | | | | |
| **Stream Q7-10 (cfs):** | 66.3 | | | | | | | |
| | **Facility Flows** | | | | | **Stream Flows** | | |
| | Intake (Stream) (MGD) | Intake (External) (MGD) | Consumptive Loss (MGD) | Discharge Flow (MGD) | | Upstream Stream Flow (cfs) | Adjusted Stream Flow (cfs) | Downstream Stream Flow (cfs) |
| Jan 1-31 | 0 | 1.525 | 0 | 1.525 | | 212.16 | 63.65 | 66.01 |
| Feb 1-29 | 0 | 1.525 | 0 | 1.525 | | 232.05 | 69.62 | 71.97 |
| Mar 1-31 | 0 | 1.525 | 0 | 1.525 | | 464.10 | 139.23 | 141.59 |
| Apr 1-15 | 0 | 1.525 | 0 | 1.525 | | 616.59 | 184.98 | 187.34 |
| Apr 16-30 | 0 | 1.525 | 0 | 1.525 | | 616.59 | 184.98 | 187.34 |
| May 1-15 | 0 | 1.525 | 0 | 1.525 | | 338.13 | 101.44 | 103.80 |
| May 16-30 | 0 | 1.525 | 0 | 1.525 | | 338.13 | 101.44 | 103.80 |
| Jun 1-15 | 0 | 1.525 | 0 | 1.525 | | 198.90 | 59.67 | 62.03 |
| Jun 16-30 | 0 | 1.525 | 0 | 1.525 | | 198.90 | 59.67 | 62.03 |
| Jul 1-31 | 0 | 1.525 | 0 | 1.525 | | 112.71 | 33.81 | 36.17 |
| Aug 1-15 | 0 | 1.525 | 0 | 1.525 | | 92.82 | 27.85 | 30.21 |
| Aug 16-31 | 0 | 1.525 | 0 | 1.525 | | 92.82 | 27.85 | 30.21 |
| Sep 1-15 | 0 | 1.525 | 0 | 1.525 | | 72.93 | 21.88 | 24.24 |
| Sep 16-30 | 0 | 1.525 | 0 | 1.525 | | 72.93 | 21.88 | 24.24 |
| Oct 1-15 | 0 | 1.525 | 0 | 1.525 | | 79.56 | 23.87 | 26.23 |
| Oct 16-31 | 0 | 1.525 | 0 | 1.525 | | 79.56 | 23.87 | 26.23 |
| Nov 1-15 | 0 | 1.525 | 0 | 1.525 | | 106.08 | 31.82 | 34.18 |
| Nov 16-30 | 0 | 1.525 | 0 | 1.525 | | 106.08 | 31.82 | 34.18 |
| Dec 1-31 | 0 | 1.525 | 0 | 1.525 | | 159.12 | 47.74 | 50.10 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Facility: | **Johnstown Wire Techs Johnstown Plant** | | | | | | |
| Permit Number: | PA0217093 | | | | | | |
| Stream: | Conemaugh River | | | | | | |
| | **WWF Criteria** | **CWF Criteria** | **TSF Criteria** | **316 Criteria** | | **Q7-10 Multipliers** | **Q7-10 Multipliers** |
| | (ºF) | (ºF) | (ºF) | (ºF) | | (Used in Analysis) | (Default - Info Only) |
| Jan 1-31 | 40 | 38 | 40 | 0 | | 3.2 | 3.2 |
| Feb 1-29 | 40 | 38 | 40 | 0 | | 3.5 | 3.5 |
| Mar 1-31 | 46 | 42 | 46 | 0 | | 7 | 7 |
| Apr 1-15 | 52 | 48 | 52 | 0 | | 9.3 | 9.3 |
| Apr 16-30 | 58 | 52 | 58 | 0 | | 9.3 | 9.3 |
| May 1-15 | 64 | 54 | 64 | 0 | | 5.1 | 5.1 |
| May 16-30 | 72 | 58 | 68 | 0 | | 5.1 | 5.1 |
| Jun 1-15 | 80 | 60 | 70 | 0 | | 3 | 3 |
| Jun 16-30 | 84 | 64 | 72 | 0 | | 3 | 3 |
| Jul 1-31 | 87 | 66 | 74 | 0 | | 1.7 | 1.7 |
| Aug 1-15 | 87 | 66 | 80 | 0 | | 1.4 | 1.4 |
| Aug 16-31 | 87 | 66 | 87 | 0 | | 1.4 | 1.4 |
| Sep 1-15 | 84 | 64 | 84 | 0 | | 1.1 | 1.1 |
| Sep 16-30 | 78 | 60 | 78 | 0 | | 1.1 | 1.1 |
| Oct 1-15 | 72 | 54 | 72 | 0 | | 1.2 | 1.2 |
| Oct 16-31 | 66 | 50 | 66 | 0 | | 1.2 | 1.2 |
| Nov 1-15 | 58 | 46 | 58 | 0 | | 1.6 | 1.6 |
| Nov 16-30 | 50 | 42 | 50 | 0 | | 1.6 | 1.6 |
| Dec 1-31 | 42 | 40 | 42 | 0 | | 2.4 | 2.4 |

NOTES:
WWF= Warm water fishes
CWF= Cold water fishes
TSF= Trout stocking

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Facility: | **Johnstown Wire Techs Johnstown Plant** | | | | | | |
| Permit Number: | PA0217093 | | | | | | **PMF** |
| Stream: | Conemaugh River | | | | | | 0.30 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | **WWF** | | | **WWF** | | **WWF** | |
| | Ambient Stream | Ambient Stream | Target Maximum | Daily | | Daily | |
| | Temperature (ºF) | Temperature (ºF) | Stream Temp.[1] | WLA[2] | | WLA[3] | at Discharge |
| | (Default) | (Site-specific data) | (ºF) | (Million BTUs/day) | | (ºF) | Flow (MGD) |
| Jan 1-31 | 35 | 0 | 40 | N/A -- Case 2 | | 110.0 | 1.525 |
| Feb 1-29 | 35 | 0 | 40 | N/A -- Case 2 | | 110.0 | 1.525 |
| Mar 1-31 | 40 | 0 | 46 | N/A -- Case 2 | | 110.0 | 1.525 |
| Apr 1-15 | 47 | 0 | 52 | N/A -- Case 2 | | 110.0 | 1.525 |
| Apr 16-30 | 53 | 0 | 58 | N/A -- Case 2 | | 110.0 | 1.525 |
| May 1-15 | 58 | 0 | 64 | N/A -- Case 2 | | 110.0 | 1.525 |
| May 16-30 | 62 | 0 | 72 | N/A -- Case 2 | | 110.0 | 1.525 |
| Jun 1-15 | 67 | 0 | 80 | N/A -- Case 2 | | 110.0 | 1.525 |
| Jun 16-30 | 71 | 0 | 84 | N/A -- Case 2 | | 110.0 | 1.525 |
| Jul 1-31 | 75 | 0 | 87 | N/A -- Case 2 | | 110.0 | 1.525 |
| Aug 1-15 | 74 | 0 | 87 | N/A -- Case 2 | | 110.0 | 1.525 |
| Aug 16-31 | 74 | 0 | 87 | N/A -- Case 2 | | 110.0 | 1.525 |
| Sep 1-15 | 71 | 0 | 84 | N/A -- Case 2 | | 110.0 | 1.525 |
| Sep 16-30 | 65 | 0 | 78 | N/A -- Case 2 | | 110.0 | 1.525 |
| Oct 1-15 | 60 | 0 | 72 | N/A -- Case 2 | | 110.0 | 1.525 |
| Oct 16-31 | 54 | 0 | 66 | N/A -- Case 2 | | 110.0 | 1.525 |
| Nov 1-15 | 48 | 0 | 58 | N/A -- Case 2 | | 110.0 | 1.525 |
| Nov 16-30 | 42 | 0 | 50 | N/A -- Case 2 | | 110.0 | 1.525 |
| Dec 1-31 | 37 | 0 | 42 | N/A -- Case 2 | | 110.0 | 1.525 |

[1] This is the maximum of the WWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for WWF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1ºF above ambient stream temperature is allocated.

[2] The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.

[3] The WLA expressed in ºF is valid only if the limit is tied to a daily discharge flow limit (may be used for Case 1 or Case 2). WLAs greater than 110ºF are displayed as 110ºF.

Attachment D:

IMP 613 Federal Effluent Limitation Guideline Calculations

Johnstown Wire Techs Inc - Johnstown Plant
NPDES Permit: PA0217093
Federal ELG Calcuations
IMP 613

Aluminize Line

Average Daily Production: 8,582.40 Tons

**ELG 40 CFR 420.92(a)(1) Iron and Steel Manufacturing Sulfuric Acid Pickling - Rod, Wire, and Coil**
**Aluminize Line**

| Pollutant | ELG - BPT Effluent Limitations (lbs/1,000 lb of Production) | | Mass-Based Effluent Limtis (lbs./day) | |
|---|---|---|---|---|
| | Max for any 1 day | Maxium for Monthly Average | Average Monthly | Max Daily |
| **TSS** | 0.0819 | 0.035 | 0.601 | 1.406 |
| **~~O&G*~~** | ~~0.035~~ | ~~0.0117~~ | ~~0.201~~ | ~~0.601~~ |
| **Lead** | 0.000526 | 0.000175 | 0.003 | 0.009 |
| **Zinc** | 0.000701 | 0.000234 | 0.004 | 0.012 |
| **pH** | Within Range of 6.0 to 9.0 | | Within Range of 6.0 to 9.0 | |

* the limitations for oil and grease shall be applicable when acid picking wastewaters are treated with cold rolling wastewaters (not applicable to this discharge)

**Sample Calculations**

Mass-Based Effluent Limit (lbs/day) = [ELG Max for any 1 day (lbs/1,000 lbs production)] * [Average Daily Production (1,000 lbs production)]

TSS Max Daily (lbs/day) = (0.0819 lbs/1,000 lbs production) * [((8,582.4 tons production/day) * (2,000 lbs/ton)) / (1,000 lbs production)]

TSS Max Daily (lbs/day) = 1.406 lbs/day

| ELG 40 CFR 420.92(b)(1) Iron and Steel Manufacturing Hydrochloric Acid Pickling - Rod, Wire, and Coil<br>Aluminize Line | | | | |
|---|---|---|---|---|
| Pollutant | ELG - BPT Effluent Limitations (lbs/1,000 lb of Production) | | Mass-Based Effluent Limtis (lbs./day) | |
| | Max for any 1 day | Maxium for Monthly Average | Average Monthly | Max Daily |
| TSS | 0.143 | 0.0613 | 1.052 | 2.455 |
| ~~O&G*~~ | ~~0.0613~~ | ~~0.0204~~ | ~~0.350~~ | ~~1.052~~ |
| Lead | 0.00092 | 0.000307 | 0.005 | 0.016 |
| Zinc | 0.00123 | 0.000409 | 0.007 | 0.021 |
| pH | Within Range of 6.0 to 9.0 | | Within Range of 6.0 to 9.0 | |

* the limitations for oil and grease shall be applicable when acid picking wastewaters are treated with cold rolling wastewaters (not applicable to this discharge)

| ELG 40 CFR 420.122(b)(1) Iron and Steel Manufacturing Galvanizing and Other Coatings - Wire Products and Fasteners<br>Aluminize Line | | | | |
|---|---|---|---|---|
| Pollutant | ELG - BPT Effluent Limitations (lbs/1,000 lb of Production) | | Mass-Based Effluent Limtis (lbs./day) | |
| | Max for any 1 day | Maxium for Monthly Average | Average Monthly | Max Daily |
| TSS | 0.701 | 0.3 | 5.149 | 12.033 |
| O&G | 0.3 | 0.1 | 1.716 | 5.149 |
| Lead | 0.00451 | 0.0015 | 0.026 | 0.077 |
| Zinc | 0.00601 | 0.002 | 0.034 | 0.103 |
| ~~Chromium (Hexavalent)*~~ | ~~0.0006~~ | ~~0.0002~~ | ~~0.003~~ | ~~0.010~~ |
| pH | Within Range of 6.0 to 9.0 | | Within Range of 6.0 to 9.0 | |

*the limitations for hexavalent chromium shall be applicable only to galvanizing operations which discharge wastewates from the chromate rinse step (not applicable to this discharge)

Bethanize Line

**ELG 40 CFR 433.13 (a) Metal Finishing Subcategory**
**Bethanize Line**

| Pollutant | ELG - BPT Effluent Limitations (mg/L) | | Mass-Bassed Credit (lbs/day) | |
|---|---|---|---|---|
| | Average Monthly | Daily Max | Average Monthly | Daily Max |
| Total Cadmium | 0.26 | 0.69 | - | - |
| Total Chromium | 1.71 | 2.77 | - | - |
| Total Copper | 2.07 | 3.38 | - | - |
| Total Lead | 0.43 | 0.69 | 1.65252096 | 2.65171968 |
| Total Nickel | 2.38 | 3.98 | - | - |
| Total Silver | 0.24 | 0.43 | - | - |
| Total Zinc | 1.48 | 2.61 | 5.68774656 | 10.03041792 |
| Total Cyanide | 0.65 | 1.20 | - | - |
| TTO | - | 2.13 | - | - |
| Oil and Grease | 26 | 52 | 99.919872 | 199.839744 |
| TSS | 31 | 60 | 119.135232 | 230.58432 |
| pH | within 6.0 to 9.0 | within 6.0 to 9.0 | - | - |

**Sample Calculations**

| | | | |
|---|---|---|---|
| Mass-Based Effluent Limit (lbs/day) = ELG Concentration * Average Contributing wastewate flow *mass unit conversion | Average Wastewater Flow | 320 | gpm |
| TSS Max Daily (lbs/day) = (31 mg/L) * (0.4608 MGD) * (8.34) | | 0.4608 | MGD |
| TSS Max Daily (lbs/day) = 119.13 lbs/day | | | |

| Cleaning House Operations | | | | |
|---|---|---|---|---|
| Average Daily Production: | | | 188,010.80 | Tons |

**ELG 40 CFR 420.92(b)(1) Iron and Steel Manufacturing Hydrochloric Acid Pickling - Rod, Wire, and Coil**

**Cleaning House Operations**

| Pollutant | ELG - BPT Effluent Limitations (lbs/1,000 lb of Production) | | Mass-Based Effluent Limtis (lbs./day) | |
|---|---|---|---|---|
| | Max for any 1 day | Maxium for Monthly Average | Average Monthly | Max Daily |
| **TSS** | 0.143 | 0.0613 | 23.050 | 53.771 |
| **~~O&G*~~** | ~~0.0613~~ | ~~0.0204~~ | ~~7.671~~ | ~~23.050~~ |
| **Lead** | 0.00092 | 0.000307 | 0.115 | 0.346 |
| **Zinc** | 0.00123 | 0.000409 | 0.154 | 0.463 |
| **pH** | Within Range of 6.0 to 9.0 | | Within Range of 6.0 to 9.0 | |

* the limitations for oil and grease shall be applicable when acid picking wastewaters are treated with cold rolling wastewaters (not applicable to this discharge)

**Sample Calculations**

Mass-Based Effluent Limit (lbs/day) = [ELG Max for any 1 day (lbs/1,000 lbs production)] * [Average Daily Production (1,000 lbs production)]

TSS Max Daily (lbs/day) = (0.143 lbs/1,000 lbs production) * [((188,010.8 tons production/day) * (2,000 lbs/ton)) / (1,000 lbs production)]

TSS Max Daily (lbs/day) = 53.771 lbs/day

| ELG 40 CFR 420.92(b)(4) Iron and Steel Manufacturing Hydrochloric Acid Pickling - Fume Scrubbers | | | | |
|---|---|---|---|---|
| Cleaning House Operations | | | | |
| Pollutant | ELG - BPT Effluent Limitations (Kg/day) | | Mass-Based Effluent Limtis (lbs./day) | |
| | Max for any 1 day | Maxium for Monthly Average | Average Monthly | Max Daily |
| TSS | 5.72 | 2.45 | 5.401 | 12.610 |
| ~~O&G*~~ | ~~2.45~~ | ~~0.819~~ | 1.806 | 5.401 |
| Lead | 0.368 | 0.0123 | 0.027 | 0.811 |
| Zinc | 0.0491 | 0.0164 | 0.036 | 0.108 |
| pH | Within Range of 6.0 to 9.0 | | Within Range of 6.0 to 9.0 | |

* the limitations for oil and grease shall be applicable when acid picking wastewaters are treated with cold rolling wastewaters (not applicable to this discharge)

**Sample Calculations**

Mass-Based Effluent Limit (lbs/day) = [ELG Max for any 1 day (Kg/Day] * (mass unit conversion)*number of scrubbers

TSS Max Daily (lbs/day) = (5.720 kg/day) * (2.2046 lbs/Kg) * (1 Scrubbers)

TSS Max Daily (lbs/day) = 25.2 lbs/day

| ELG 40 CFR 420.117(a) Iron and Steel Manufacturing Alkaline Cleaning - Batch Aluminize Line | | | | |
|---|---|---|---|---|
| Pollutant | ELG - BPT Effluent Limitations | | Mass-Based Effluent Limtis | |
| | Max for any 1 day | Maxium for Monthly Average | Average Monthly | Max Daily |
| TSS | 0.073 | 0.0313 | 11.769 | 27.450 |
| O&G | 0.0313 | 0.0104 | 3.911 | 11.769 |
| pH | Within Range of 6.0 to 9.0 | | Within Range of 6.0 to 9.0 | |

**ELG 40 CFR 433.13 (a) Metal Finishing Subcategory**
**Cleaning House Operations**

| Pollutant | ELG - BPT Effluent Limitations (mg/L) | | Mass-Bassed Credit (lbs/day) | |
|---|---|---|---|---|
| | Average Monthly | Daily Max | Average Monthly | Daily Max |
| Total Cadmium | 0.26 | 0.69 | - | - |
| Total Chromium | 1.71 | 2.77 | - | - |
| Total Copper | 2.07 | 3.38 | - | - |
| Total Lead | 0.43 | 0.69 | 0.5164128 | 0.8286624 |
| Total Nickel | 2.38 | 3.98 | - | - |
| Total Silver | 0.24 | 0.43 | - | - |
| Total Zinc | 1.48 | 2.61 | 1.7774208 | 3.1345056 |
| Total Cyanide | 0.65 | 1.20 | - | - |
| TTO | - | 2.13 | - | - |
| Oil and Grease | 26 | 52 | 31.22496 | 62.44992 |
| TSS | 31 | 60 | 37.22976 | 72.0576 |
| pH | within 6.0 to 9.0 | within 6.0 to 9.0 | - | - |

**Sample Calculations**

| | | |
|---|---|---|
| Mass-Based Effluent Limit (lbs/day) = ELG Concentration * Average Contributing wastewate flow *mass unit conversion | Average Wastewater Flow | 100 GPM |
| TSS Max Daily (lbs/day) = (31 mg/L) * (0.144 MGD) * (8.34) | | 0.144 MGD |
| TSS Max Daily (lbs/day) = 37.23 lbs/day | | |

Total ELG Limitations

**Total Mass Based Effluent Limits from all production lines**

| Pollutant | Mass-Based Effluent Limtis | |
|---|---|---|
| | Average Monthly | Max Daily |
| TSS | 203.388 | 412.366 |
| O&G | 136.772 | 279.209 |
| Lead | 2.346 | 4.740 |
| Zinc | 7.700 | 13.872 |
| pH | Within Range of 6.0 to 9.0 | |

**Total Concentration Based Effluent Limitations from all Production Lines**

| Pollutant | ELG - BPT Effluent Limitations (mg/L) | |
|---|---|---|
| | Average Monthly | Daily Max |
| Total Cadmium | 0.26 | 0.69 |
| Total Chromium | 1.71 | 2.77 |
| Total Copper | 2.07 | 3.38 |
| Total Lead | 0.43 | 0.69 |
| Total Nickel | 2.38 | 3.98 |
| Total Silver | 0.24 | 0.43 |
| Total Zinc | 1.48 | 2.61 |
| Total Cyanide | 0.65 | 1.20 |
| TTO | - | 2.13 |
| Oil and Grease | 26 | 52 |
| TSS | 31 | 60 |
| pH | within 6.0 to 9.0 | within 6.0 to 9.0 |