pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0005754**
Facility Type	**Industrial**	APS ID	**1057949**
Major / Minor	**Major**	Authorization ID	**1386980**

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

Applicant and Facility Information

Applicant Name	**Allegheny & Tsingshan Stainless, LLC**	Facility Name	**Midland Facility**
Applicant Address	100 River Road	Facility Address	952 Tenth Street
	Brackenridge, PA 15014-1537		Midland, PA 15059
Applicant Contact	Deborah Calderazzo	Facility Contact	Deborah Calderazzo
Applicant Phone	(724) 226-5947	Facility Phone	(724) 226-5947
Client ID	341390	Site ID	237292
SIC Code	3316	Municipality	Midland Borough
SIC Description	Cold-Rolled Steel Sheet, Strip, and Bars	County	Beaver
Date Application Received	June 22, 2006	EPA Waived?	No
Date Application Accepted	March 28, 2018	If No, Reason	Major Facility
Purpose of Application	Renewal of NPDES permit for the discharge of industrial wastewater from the specialty metals finishing facility.		

Summary of Review

The Department received an NPDES permit renewal and transfer application from Allegheny & Tsingshan Stainless, LLC ("A&T") on June 22, 2006 for coverage of their Midland Facility in Midland Borough of Allegheny County. The change of ownership results from A&T's purchase of only the Direct Roll, Anneal and Pickle (DRAP) Line and Wastewater Treatment Plant (WWTP) from Jewel Acquisition. Jewel Acquisition continues to own portions of the Midland Facility. No operations are conducted on the portion of the facility owned by Jewel Acquisition. The transfer of ownership is effective as of February 27, 2018. A&T submitted an updated application, including Modules 1, 3, 4-8, 12, 13, and 15, on October 22, 2018.

The Midland Facility is a specialty metals finishing facility with SIC Code 3316 (Cold-Rolled Steel Sheet, Strip, and Bars). The facility receives unfinished coils to process on the DRAP Line. The current NPDES permit was renewed on January 1, 2002 and expired on December 27, 2006. The NPDES permit was amended on July 1, 2004 to transfer ownership from J&L Specialty Steel, LLC to Jewel Acquisition, LLC. The Department issued a draft permit in April 2007, but the permit was never finalized. Water Quality Management (WQM) Permit No. 0474208 was issued on June 12, 1987. The permit was transferred on June 19, 2003 and June 17, 2004 and amended on March 7, 2007. WQM Permit 0474208 A-1/T-5 was most recently issued on April 4, 2023 to transfer ownership from Jewel Acquisition, LLC to Allegheny & Tsingshan Stainless, LLC.

The Midland Facility was officially cold idled in August of 2020. The facility's WWTP treatment units were drained and isolated from future discharge as of September 15, 2020. A&T may restart operations in the future; at the time of permit issuance there is no planned restart date. A&T has reported "no discharge" in the facility's DMRs for all outfalls from

Approve	Deny	Signatures	Date
X		Lauren Nolfi / Environmental Engineering Specialist	November 16, 2023
X		Michael E. Fifth, P.E. / Environmental Engineer Manager	November 17, 2023

October 1, 2020 to present. Mawson Infrastructure Group is currently leasing a portion of the Midland Facility for bitcoin mining. No water usage or discharges are associated with this operation.

Proposed future operations at A&T's Midland Facility consist of the DRAP Line, WWTP, and cooling water intake structure (CWIS). The DRAP Line consists of annealing, pickling operations, shot blasting and cold rolling operations. The portions of the Midland Facility operated by A&T are shown in A&T's Drainage Area Map in Attachment A. The proposed restart will not result in any industrial wastewater or stormwater discharges on the portions of the Midland Facility owned by Jewel Acquisition. Any new processes or lines not covered under this NPDES permit will require a new permit application. Since the previous permit was issued, the facility's Melt Shop was permanently shut down and the following outfalls were eliminated: IMP 101, IMP 304, and Outfall 005.

A&T's Midland Facility currently has four outfalls which discharge to the Ohio River, designated in 25 PA Code Chapter 93 as a Warm Water Fishery (WWF). Outfalls 001 and 003 will discharge river pumphouse backwash and raw water strainer backwash upon restart of the facility's CWIS. Outfall 004 will discharge treated wastewater from IMP 104, non-contact cooling water, boiler blowdown, backwash, steam condensate, stormwater, and softener regenerant, upon restart of the DRAP Line. Outfall 006 discharges stormwater runoff primarily from roof drains from the finishing department.

A&T's stormwater drainage area is shown in the Drainage Area Map in Attachment A. Stormwater impacted by industrial activities is discharged only through Outfalls 004 and 006. There is no stormwater contribution from industrial activities associated with A&T's operations to Outfalls 001 and 007. Outfall 007 has been removed from this permit.

Cooling Water Intake Structure:

The facility owns a CWIS on the Ohio River. A&T is capable of withdrawing up to 12.65 MGD of river water for use in its industrial processes. A&T previously supplied Midland Borough with water, so the pumps are oversized for the plant's purposes. Midland Borough Municipal Authority has not depended on A&T's intake since 2003, since the borough now has its own water intake. Additionally, A&T's Melt Shop is permanently shut down, thereby significantly reducing the plant's water intake. A&T reportedly plans to replace the oversized intake pumps with derated pumps, should the intake restart in the future. Intake flow rates are unknown at this time and are to be provided by A&T upon derated pump installation.

A Best Technology Available (BTA) determination will not be included in this permit because the design intake flow is not yet known. If the permittee wishes to start operation of the intake during this permit term the permittee must submit an NPDES permit amendment request at least 180 days prior to operation of the intake structure, and this permit must be amended with respect to CWA Section 316(b).

Public Participation

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

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	3.96
Latitude	40º 38' 15"	Longitude	-80º 28' 00"
Quad Name	1302	Quad Code	Midland
Wastewater Description:	Excess river water from pumphouse, raw water strainer backwash, stormwater from Midland Borough.		
Receiving Waters	Ohio River (WWF)	Stream Code	32317
NHD Com ID	134396162	RMI	3.42
Drainage Area	23,000 mi^2	Yield (cfs/mi^2)	0.2557
Q_{7-10} Flow (cfs)	5880	Q_{7-10} Basis	ORSANCO Pollution Control Standards
Elevation (ft)	665-666	Slope (ft/ft)	0.0002
Watershed No.	20-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Dioxin, Pathogens, Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status	Final	Name	Ohio River
Nearest Downstream Public Water Supply Intake	N/A – Ohio River cross PA state line 3 miles downstream from discharge		
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance:

Outfall 001 previously discharged non-contact cooling water (NCCW) from the Electric Arc Furnaces, Continuous Caster, Argon Oxygen Decarburization (AOD), and AOD Conveyer. NCCW discharges were eliminated when the Melt Shop was permanently shut down.

In the previous permit, this outfall included discharges from IMP 101 and stormwater contributions from the facility and from Midland Borough. IMP 101 has been eliminated along with discharges of NCCW from ultra-high power (UHP) furnaces #7 and #8. There is no longer any stormwater contribution from industrial activities associated with A&T to Outfall 001.

Other Comments: The USGS StreamStats Data for the drainage area is displayed in Attachment B.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	003	Design Flow (MGD)	1.52
Latitude	40º 37' 37"	Longitude	-80º 27' 25"
Quad Name	1302	Quad Code	Midland
Wastewater Description:	River pumphouse backwash and raw water strainer.		
Receiving Waters	Ohio River (WWF)	Stream Code	32317
NHD Com ID	134396162	RMI	4.34
Drainage Area	23,000 mi^2	Yield (cfs/mi^2)	0.2557
Q_{7-10} Flow (cfs)	5880	Q_{7-10} Basis	ORSANCO Pollution Control Standards
Elevation (ft)	666	Slope (ft/ft)	0.0002
Watershed No.	20-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Dioxin, Pathogens, Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status	Final	Name	Ohio River
Nearest Downstream Public Water Supply Intake	N/A – Ohio River cross PA state line 4 miles downstream from discharge		
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance:

Outfall 003 was removed during the previous permit's draft period, but A&T has requested for Outfall 003 to be included in this permit.

Other Comments: The USGS StreamStats Data for the drainage area is displayed in Attachment B.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	004	Design Flow (MGD)	4.84
Latitude	40º 37' 31"	Longitude	-80º 27' 07"
Quad Name	1302	Quad Code	Midland
Wastewater Description:	Treated wastewater from IMP 104, non-contact cooling water, boiler blowdown, backwash, steam condensate, stormwater, and softener regenerant.		
Receiving Waters	Ohio River (WWF)	Stream Code	32317
NHD Com ID	134396161	RMI	4.69
Drainage Area	23,000 mi^2	Yield (cfs/mi^2)	0.2557
Q_{7-10} Flow (cfs)	5880	Q_{7-10} Basis	ORSANCO Pollution Control Standards
Elevation (ft)	664	Slope (ft/ft)	0.0002
Watershed No.	20-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Dioxin, Pathogens, Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status	Final	Name	Ohio River
Nearest Downstream Public Water Supply Intake	N/A – Ohio River cross PA state line 4.3 miles downstream from discharge		
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance:

Outfall 004 previously discharged process wastewater from IMPs 204 and 304.

IMP 204 previously discharged untreated cooling tower blowdown from the DRAP line contact cooling water system. There have been no discharges from this outfall since the October 1996 inception of the DRAP line. Since the sources of this outfall are treated at the wastewater treatment plant, this outfall will be deleted from the permit.

IMP 304 previously discharged untreated discharges of furnace quench contact cooling water from the #9 furnace quench scale pit overflow. The #9 line furnace is no longer operated. The outfall will therefore be deleted from the permit.

Other Comments:

Stormwater drainage is shown in A&T's Drainage Area Map in Attachment A.

The USGS StreamStats Data for the drainage area is displayed in Attachment B.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	006	Design Flow (MGD)	0
Latitude	40º 37' 40"	Longitude	-80º 27' 33"
Quad Name	1302	Quad Code	Midland
Wastewater Description:	Stormwater		
Receiving Waters	Ohio River (WWF)	Stream Code	32317
NHD Com ID	134396162	RMI	4.22
Drainage Area	23,000 mi^2	Yield (cfs/mi^2)	0.2557
Q_{7-10} Flow (cfs)	5880	Q_{7-10} Basis	ORSANCO Pollution Control Standards
Elevation (ft)	666	Slope (ft/ft)	0.0002
Watershed No.	20-D	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	Dioxin, Pathogens, Polychlorinated Biphenyls (PCBs)		
Source(s) of Impairment	Source Unknown		
TMDL Status	Final	Name	Ohio River
Nearest Downstream Public Water Supply Intake	N/A – Ohio River crosses PA state line 3.85 miles downstream from discharge		
PWS Waters		Flow at Intake (cfs)	
PWS RMI		Distance from Outfall (mi)	

Changes Since Last Permit Issuance:

A portion of the sewer system and drainage area served by Outfall 006 is located on property no longer owned by A&T.

Other Comments:

Stormwater drainage is shown in A&T's Drainage Area Map in Attachment A.

The USGS StreamStats Data for the drainage area is displayed in Attachment B.

Compliance History	
Summary of DMRs:	Monitoring data is not available for the past three years. eDMR monitoring data is available from 1/1/2016 – 9/30/2020. The Midland Facility was officially cold idled in 2020. No discharge has been reported for all outfalls in eDMRs from 10/1/2020 to present.
Summary of Inspections:	A&T was issued a violation on April 11, 2018 for a violation of total chromium effluent limits in Part A of the NPDES Permit for monitoring periods of September 2017 through March 2018. A letter of explanation was submitted with the January 2018 eDMR, indicating that the exceedance was attributed to flow rate fluctuations during start-up after the operation had been idle for approximately one year. The violation was resolved on May 9, 2018. The Department's most recent inspection was conducted on April 26, 2023 by Timothy Smolar as a compliance evaluation. No violations were noted. The client has no open violations. The most recent inspection report, from the Department's February 1, 2022 compliance evaluation, indicated that IWWTP treatment units were drained and isolated from future discharge as of September 15, 2020 and that there are no intentions to restart operations in the near future.

Development of Effluent Limitations

Outfall No.	001	**Design Flow (MGD)**	0.5
Latitude	40º 38' 15"	**Longitude**	-80º 28' 00"

Wastewater Description: Excess river water from pumphouse, raw water strainer backwash, stormwater from Midland Borough.

Outfall 001 will discharge excess river water from the pumphouse and raw water strainer backwash upon restart of the facility's cooling water intake structure (CWIS). The CWIS will resume river water intake should the Direct Roll, Anneal and Pickle (DRAP) Line restart. At the time of permit issuance there is no planned restart date for the DRAP Line nor the CWIS.

Outfall 001 previously discharged non-contact cooling water (NCCW) from the Electric Arc Furnaces, Continuous Caster, AOD, and AOD Conveyer. NCCW discharges were eliminated when the Melt Shop was permanently shut down.

In the previous permit, this outfall included of discharges from IMP 101 and stormwater contributions from the facility and from Midland Borough. IMP 101 has been eliminated along with discharges of non-contact cooling water from UHP furnaces #8. There is no longer any stormwater contribution from industrial activities associated with A&T to Outfall 001.

Technology-Based Limitations

Outfall 001 effluent is comprised of raw river water, which are not subject to Federal Effluent Limitation Guidelines (ELGs). There is no longer any stormwater contribution from industrial activities associated with A&T to Outfall 001. Outfall 001 is therefore no longer subject to the minimum monitoring requirements in Appendix B of the PAG-03 General Stormwater Permit.

Regulatory Effluent Standards and Monitoring Requirements

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

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

Temperature limits are no longer applicable at Outfall 001 as the outfall no longer discharges NCCW.

Effluent standards for oil and grease are imposed on oil-bearing industrial wastes by 25 Pa. Code §§ 95.2(2). Oil and grease limits are no longer applicable at Outfall 001 since the effluent is comprised only of raw river water.

Water Quality-Based Effluent Limitations

Outfall 001 effluent is comprised of pumphouse water and raw water strainer backwash and are non-process discharges, which are not subject to a formal water quality analysis. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Anti-Backsliding

The effluent limitations and monitoring requirements in Table 1 are from the previous permit, issued on December 27, 2001. Previous limits can be used pursuant to EPA's anti-backsliding regulation, 40 CFR 122.44(l).

Table 1: Existing Effluent Limitations – Outfall 001

Parameter	Average Monthly	Maximum Daily	IMAX	Units	Monitoring Frequency	Sampling Type
Flow	Monitor & Report		-	MGD	1/week	estimate
Temperature	-	110	-	°F	1/week	I-S
Oil and Grease	15	-	30	mg/L	1/week	Grab
Total Residual Chlorine	0.5	-	1.17	mg/L	2/month	Grab
pH	Not less than 6.0 nor greater than 9.0			S.U.	1/week	Grab

Temperature limits will be removed at Outfall 001 since the outfall no longer discharges NCCW. Oil and grease and total residual chlorine limits will be removed at Outfall 001 since the effluent is comprised only of raw river water and only raw river water will be used for backwashing.

Proposed Effluent Limitations for Outfall 001

Effluent limitations and monitoring requirements applicable at Outfall 001 are the most stringent of TBELs, WQBELs, and regulatory effluent standards and monitoring requirements, as summarized below in Table 2.

Since the Outfall 001's pipe discharge is not always accessible, Outfall 001 may be sampled at Outfall 001 or at the River Water Pumphouse discharge point.

Table 2: Proposed Effluent Limits and Monitoring Requirements – Outfall 001

Parameter	Average Monthly	Maximum Daily	IMAX	Units	Monitoring Frequency	Sampling Type
Flow	Monitor & Report		-	MGD	Daily while discharging	Measured
Total Suspended Solids	-	100	-	mg/L	Daily while discharging	Grab
pH	Not less than 6.0 nor greater than 9.0			S.U.	Daily while discharging	Grab

Development of Effluent Limitations

Outfall No.	003	**Design Flow (MGD)**	0.1
Latitude	40º 37' 37"	**Longitude**	-80º 27' 25"
Wastewater Description:	River pumphouse backwash and raw water strainer.		

Outfall 003 will discharge river pumphouse backwash and raw water strainer backwash upon restart of the facility's CWIS. The CWIS will resume river water intake should the DRAP Line restart. At the time of permit issuance there is no planned restart date for the DRAP Line nor the CWIS. This outfall was removed during the previous permit's draft period, but A&T has requested for Outfall 003 to be included in this permit.

Technology-Based Limitations

Outfall 003 effluent is comprised of pumphouse backwash water and raw water strainer backwash, which are not subject to Federal Effluent Limitation Guidelines (ELGs).

Regulatory Effluent Standards and Monitoring Requirements

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

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

Water Quality-Based Effluent Limitations

Outfall 003 effluent is comprised of pumphouse backwash water and raw water strainer backwash water and are non-process discharges, which are not subject to a formal water quality analysis. Accordingly, water quality-based effluent limitations based on water quality analyses are not proposed.

Anti-Backsliding

This outfall was removed during the draft period of the previous permit, issued in 2001. The permittee requested this outfall be included in this permit.

The draft permit issued in 2007 contained weekly flow monitoring requirements and bimonthly effluent limitations for total residual chlorine for Outfall 003, as shown below in Table 3.

Table 3: Previous Draft Permit Effluent Limitations – Outfall 003

Parameter	Average Monthly	Maximum Daily	IMAX	Units	Monitoring Frequency	Sampling Type
Flow	Monitor & Report		-	MGD	1/week	Estimate
Total Residual Chlorine	0.5	-	1.17	$^{mg}/_{L}$	2/month	Grab

Total residual chlorine limits will be removed at Outfall 003 since the effluent is comprised only of raw river water and only raw river water will be used for backwashing.

Proposed Effluent Limitations for Outfall 003

Effluent limitations and monitoring requirements applicable at Outfall 003 are the most stringent of TBELs, WQBELs, and regulatory effluent standards and monitoring requirements, as summarized below in Table 4.

Since the Outfall 003's pipe discharge is not safely accessible, Outfall 003 may be sampled at Outfall 003 or at the River Water Pumphouse discharge point.

Table 4: Proposed Effluent Limits and Monitoring Requirements – Outfall 003						
Parameter	**Average Monthly**	**Maximum Daily**	**IMAX**	**Units**	**Monitoring Frequency**	**Sampling Type**
Flow	Monitor & Report		-	MGD	Daily while discharging	Measured
Total Suspended Solids	-	100	-	mg/L	Daily while discharging	Grab
pH	Not less than 6.0 nor greater than 9.0			S.U.	Daily while discharging	Grab

Development of Effluent Limitations

Outfall No.	004	**Design Flow (MGD)**	4.4
Latitude	40º 37' 31"	**Longitude**	-80º 27' 07"
Wastewater Description:	Treated wastewater from IMP 104, non-contact cooling water, boiler blowdown, backwash, steam condensate, stormwater, and softener regenerant.		

Outfall 004 consists of treated wastewater from IMP 104, non-contact cooling water (NCCW) from the DRAP Line, boiler blowdown, water softener backwash, steam condensate, demineralizer regeneration water and miscellaneous finishing operations wastewater. Stormwater discharged to Outfall 004 consists primarily of roof drains from the DRAP building. A portion of the sewer system and drainage area that is served by Outfall 004 is located on property no longer owned by A&T. A&T's Drainage Area Map in Attachment A shows the stormwater drainage area.

Technology-Based Limitations

Federal Effluent Limitation Guidelines (ELGs)

The process wastewaters related to 40 CFR 420.104 (Iron and Steel Manufacturing Subpart J – Cold Forming Subcategory) and 40 CFR 420.94 (Iron and Steel Manufacturing Subpart I – Acid Pickling Subcategory) that discharge via Outfall 004 are regulated and monitoring at IMP 104.

EPA has not promulgated ELGs for the discharge of NCCW. In accordance with the recommendations in Chapter 6 of the Permit Writers' Manual, self-monitoring requirements for this type of discharge are: flow, temperature, and pH.

Regulatory Effluent Standards and Monitoring Requirements

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

Oil-bearing wastewater discharges are subject to effluent standards for oil and grease from 25 Pa. Code § 95.2(2).

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

Temperature limits will be imposed if thermal WQBELs are not applicable at Outfall 004, per the Department's "*Implementation Guidance for Temperature Criteria*" and ORSANCO's Pollution Control Standards. 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.

A&T did not provide chemical additive data for IMP 104 or Outfall 004, but the applicant has previously indicated that chlorine compounds are used at the facility. Therefore, TRC limits are imposed pursuant to 25 Pa. Code § 92a.48(b)(2).

Table 5: Regulatory Effluent Standards and Monitoring Requirements – Outfall 004

Parameter	Average Monthly	Maximum Daily	IMAX	Units
Flow	Monitor & Report		-	MGD
Oil and Grease	15	-	30	$^{mg}/_{L}$
Temperature	-	-	110	°F
Total Residual Chlorine	0.5	-	1.25	$^{mg}/_{L}$
pH	Not less than 6.0 nor greater than 9.0			S.U.

Stormwater outfalls are subject to the monitoring requirements in Appendix B of the PAG-03 General Stormwater Permit as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3316 and the corresponding appendix that would apply to the facility is Appendix B of the PAG-03. Appendix B reporting requirements are listed in Table 6 below.

Table 6: PAG-03 Appendix B Monitoring Requirements					
Parameters	**Average Monthly (mg/L)**	**Maximum Daily (mg/L)**	**Benchmark Values (mg/L)**	**Monitoring Requirements**	
				Monitoring Frequency	**Sample Type**
Total Suspended Solids	XXX	Monitor & Report	100	1/6 Months	Grab
Oil and Grease	XXX	Monitor & Report	30	1/6 Months	Grab
Nitrogen, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Phosphorus, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Aluminum, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Copper, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Iron, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Lead, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Zinc, total	XXX	Monitor & Report	XXX	1/6 Months	Grab

Water Quality-Based Effluent Limitations (WQBELs)

Toxic Pollutants Water Quality Analysis

The discharges from Outfall 004 are non-contact cooling water and non-process discharges, therefore a toxic pollutant water quality analysis was not conducted for the discharge from Outfall 004. WQBELs for wastewater monitored at IMP 104 are evaluated at IMP 104.

Total Residual Chlorine

To determine if WQBELs are required for discharges containing total residual chlorine (TRC), a discharge evaluation is performed using a DEP program called TRC_CALC created with Microsoft Excel for Windows. TRC_CALC calculates TRC Waste Load Allocations (WLAs) through the application of a mass balance model which considers TRC losses due to stream and discharge chlorine demands and first-order chlorine decay. Input values for the program include flow rates and chlorine demands for the receiving stream and the discharge, the number of samples taken per month, coefficients of TRC variability, partial mix factors, and an optional factor of safety. The mass balance model calculates WLAs for acute and chronic criteria that are then converted to long term averages using calculated multipliers. The multipliers are functions of the number of samples taken per month and the TRC variability coefficients (normally kept at default values unless site specific information is available). The most stringent limitation between the acute and chronic long-term averages is converted to an average monthly limit for comparison to the BAT average monthly limit of 0.5 mg/l from 25 Pa. Code § 92a.48(b)(2). The more stringent of these average monthly TRC limitations is imposed in the permit.

The stream flow and discharge flow entered in the TRC_CALC spreadsheet are 5,880 cfs and 4.4 MGD, respectively. A PMF of 0.157 is input for the acute criteria based on the TMS analysis of Outfall 004 and a PMF of 0.2 is input for the chronic criteria. The results of the analysis included in Attachment D indicate that no WQBELs are required for TRC.

Temperature Evaluation

Outfall 004 discharges heated, contact and non-contact cooling wastewaters. Water discharged from these various processes is drawn from the Ohio River, used in industrial processes, and then discharged back into the Ohio River. Some of the water is used in contact processes which require treatment prior to discharge. Other processes are non-contact and do not require treatment. The Department used the Thermal Discharge Limit Calculation Spreadsheet to evaluate the thermal impact of this withdrawal and subsequent discharge on the Ohio River. The spreadsheet is designed to calculate the appropriate thermal discharge limits for a facility discharging effluent above ambient temperature, assuming complete-mix between the discharge flow and the receiving stream flow. The design stream flow for temperature analysis is based on the $Q_{7\text{-}10}$ flow of the receiving stream, adjusted for each monthly or semimonthly time period.

Based upon maximum pump withdrawal rates, included in a previous plant flow chart, A&T is capable of withdrawing up to 12.65 MGD of river water for use in its industrial processes. A&T previously supplied Midland Borough with water, so the pumps are oversized for the plant's purposes. Midland Borough Municipal Authority has not depended on A&T's intake

since 2003, since the borough has its own water intake. Additionally, A&T's Melt Shop is permanently shut down, thereby significantly reducing the plant's water intake. A&T reportedly plans to replace the oversized intake pumps with derated pumps, should the intake restart in the future. Intake flow rates are unknown at this time and are to be provided by A&T upon derated pump installation.

Under the most conservative scenario the total projected discharge volume from all site processes and outfalls (as provided in the NPDES permit application) is 5 MGD. Based upon average withdrawal and discharge estimates, the consumptive water use is assumed to be approximately 0 MGD. The Department did not find the claim of zero consumptive use to be credible and may reevaluate upon intake restart and new flow rate information. The results of the thermal analysis are included in Attachment C of this report.

A proposed temperature limitation of 110°F is imposed at Outfall 004, as shown below in Table 8. Bimonthly temperature monitoring was previously imposed in the permit. The DEP Technical Guidance for the Development and Specification of Effluent Limitations (October 1997) recommends daily monitoring of flow, pH and temperature for non-contact discharges with flows exceeding 100,000 GPD. Since Outfall 004 discharges with an average flow of 300,000 GPD, the outfall will be subject to the daily monitoring requirements shown below in Table 8.

Anti-Backsliding

The effluent limitations and monitoring requirements in Table 7 below are from the current permit, issued on December 27, 2001. Nitrate-nitrite monitoring was removed from the draft permit issued in 2007, based on water quality monitoring. Nitrite-nitrite is not considered to be a pollutant of concern; monitoring will be removed from the permit. Based on concentrations of iron reported in A&T's DMRs from 2016 – 2020, iron is also not considered a pollutant of concern. Effluent limits for iron are removed from the permit and replaced with monitoring to be consistent with Appendix B requirements of the PAG-03 Permit.

A&T did not provide chemical additive data for IMP 104 or Outfall 004. The previous permit included effluent limitations for total residual chlorine, as evaluated using the Department's TRC program, since the applicant indicated chlorine compounds are used at the facility. Effluent limitations for TRC, in accordance with the regulations in the Pennsylvania Code Title 25, Chapter 92a.48 (b), will remain in effect at Outfall 004 to ensure the continued proper application of the chemical.

Table 7: Existing Effluent Limitations – Outfall 004

Parameter	Average Monthly	Maximum Daily	IMAX	Units	Monitoring Frequency	Sampling Type
Flow	Monitor & Report		-	MGD	1/week	Measured
Temperature	-	-	110	°F	2/month	I-S
Oil and Grease	15	-	30	$^{mg}/_{L}$	1/week	Grab
Total Residual Chlorine	0.5	-	1.17	$^{mg}/_{L}$	2/month	Grab
Iron, total	4	-	7	$^{mg}/_{L}$	1/week	Grab
Nitrate/ Nitrite as N	Monitor & Report		-	$^{mg}/_{L}$	1/quarter	Grab
pH	Not less than 6.0 nor greater than 9.0			S.U.	1/week	Grab

Proposed Effluent Limitations for Outfall 004

Effluent limitations and monitoring requirements applicable at Outfall 004 are the most stringent of TBELs, WQBELs, and regulatory effluent standards and monitoring requirements, as summarized below in Table 8. The applicable limits and monitoring requirements provided below are based on those in Tables 5-7 of this Fact Sheet.

Table 8: Proposed Effluent Limits – Outfall 004**						
Parameter	**Average Monthly (mg/L)**	**Maximum Daily (mg/L)**	**Instantaneous Maximum (mg/L)**	**Benchmark Values (mg/L)**	**Monitoring Frequency**	**Sample Type**
Flow (MGD)	Monitor & Report		-	-	daily	Measured
Temperature (°F)	-	110	-	-	daily	I-S
Oil and Grease	15	30	-	-	1/ week	Grab
Total Residual Chlorine	0.5	-	1.17	-	2/ month	Grab
Total Suspended Solids	-	Monitor & Report	-	100	1/6 months	Grab
Nitrogen, total	-	Monitor & Report	-	-	1/6 months	Calculation*
Phosphorus, total	-	Monitor & Report	-	-	1/6 months	Grab
Aluminum, total	-	Monitor & Report	-	-	1/6 months	Grab
Copper, total	-	Monitor & Report	-	-	1/6 months	Grab
Iron, total	-	Monitor & Report	-	-	1/6 months	Grab
Lead, total	-	Monitor & Report	-	-	1/6 months	Grab
Zinc, total	-	Monitor & Report	-	-	1/6 months	Grab
pH (S.U.)	Not less than 6.0 nor greater than 9.0			-	daily	Grab

*****Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO2+NO3-N), where TKN and NO2+NO3-N are measured in the same sample.

Development of Effluent Limitations

Outfall No. 104 **Design Flow (MGD)** 1.1
Latitude 40° 37′ 31″ **Longitude** -80° 27′ 07″
Wastewater Description: Contact water and waste pickle liquor from the DRAP Line, Cold Rolling wastewater from the DRAP Line, and blowdown from four (4) fume scrubbers.

IMP 104 discharges wastewater from the Direct Roll Anneal and Pickle (DRAP) Line. Processes contributing to the IMP 104 discharge include contact water and waste pickle liquor from the DRAP Line, Cold Rolling wastewater from the DRAP Line, and blowdown from the (4) four fume scrubbers.

Technology-Based Limitations

Federal Effluent Limitation Guidelines (ELGs)

Discharges from IMP 104 are regulated under the Iron and Steel Manufacturing Point Source Category. Applicable ELGs are the New Source Performance Standards (NSPS) and Best Available Technology (BAT) limits published in 40 CFR 420 Subparts J and I. NSPS ELGs are based upon best available demonstrated control technology for the applicable industry. NSPS for cold rolling operations which include recirculation of rolling solutions at multiple mill sands are applicable to the DRAP Line operations. BAT treatment technologies are based upon model, end-of-pipe treatment. BAT for continuous combination acid pickling of strip, sheet and plate apply to those operations in which strip, sheet or plate products are continuously immersed in solutions of more than one acid to chemically remove scale and oxides, and those rinsing steps associated with such immersions. BAT for fume scrubber blowdown apply to those pollution control devices used to remove and clean fumes originating in pickling operations.

The proposed effluent limits detailed in the following tables were developed based on A&T production rates in conjunction with the mass effluent limitation factors specified in 40 CFR 420. Mass-based effluent limitations for cold rolling recirculation mills are shown in Table 9A. Mass-based effluent limitations for combination acid pickling are shown in Table 9B. For fume scrubbing, effluent limitations are specified in kilograms per day for each installed scrubber. The effluent limits listed in Table 9C have been converted to pounds per day to maintain consistency with the other effluent limitations.

Table 9A: Mass Limit Calculations – IMP 104
Iron and Steel – Cold Forming*

Parameter	Effluent Limitation Guidelines (lbs./Klbs.)		Production Rate (tons/day)	Production Rate (Klbs./day)	Mass-Based Effluent Limits (lbs./day)	
	Average Monthly	Maximum Daily			Average Monthly	Maximum Daily
Total Suspended Solids	0.00125	0.00250	1106	2212	2.77	5.53
Oil and Grease	0.000417	0.00104			0.922	2.30
Chromium	0.0000167	0.0000418			0.0369	0.0925
Nickel	0.0000125	0.0000376			0.0277	0.0832
Naphthalene	-	0.0000042			-	0.00929
Tetrachloroethylene	-	0.0000063			-	0.0139
pH	6.0 to 9.0 S.U.				Within the range of 6.0 to 9.0	

*** Cold Rolling Mills** Direct Roll Anneal and Pickle (DRAP) Line – 1106 $^{tons}/_{day}$
Recirculation – multiple stands NSPS – 40 CFR 420 Subpart 104(a)(2)

Table 9B: Mass Limit Calculations – IMP 104 Combination Acid Pickling*						
Parameter	**Effluent Limitation Guidelines (lbs./Klbs.)**		**Production Rate (tons/day)**	**Production Rate (Klbs./day)**	**Mass-Based Effluent Limits (lbs./day)**	
	Average Monthly	**Maximum Daily**			**Average Monthly**	**Maximum Daily**
Total Suspended Solids	0.0213	0.0496	1169	2338	49.8	116
Oil and Grease	0.00710	0.0213			16.6	49.8
Chromium	0.000284	0.000710			0.664	1.66
Nickel	0.000213	0.000638			0.498	1.49
pH	6.0 to 9.0 S.U.				Within the range of 6.0 to 9.0	

*** Strip, Sheet and Plate** – Direct Roll Anneal and Pickle (DRAP) Line (pickling section) – 1169 $^{tons}/_{day}$

Continuous BAT – 40 CFR 420 Subpart I, 94(c)(3)

Table 9C: Mass Limit Calculations – IMP 104 Fume Scrubber Blowdown*						
Parameter	**Effluent Limitation Guidelines (lbs./Klbs.)**		**Number of Fume Scrubbers**	**Pounds per Kilogram**	**Mass-Based Effluent Limits (lbs./day)**	
	Average Monthly	**Maximum Daily**			**Average Monthly**	**Maximum Daily**
Total Suspended Solids	2.45	5.72	4	2.2046	21.6	50.4
Oil and Grease	0.819	2.45			7.22	21.6
Chromium	0.0327	0.0819			0.288	0.722
Nickel	0.0245	0.0735			0.216	0.648
pH	6.0 to 9.0 S.U.				Within the range of 6.0 to 9.0	

*** Fume Scrubbers** – For Acid Pickling and Pre-Pickling Operations

BAT – 40 CFR 420 Subpart I, 94(c)(6)

Co-mingled Effluents – IMP 104

The various wastewater sources contributing to IMP 104 are co-mingled and treated by the same treatment system. Limits for IMP 104 consist of the sum of limits calculated for each process.

Development of Concentration Limits – IMP 104

DEP will impose concentration limits to supplement the mass limits, under the authority of 40 CFR § 122.45(f)(2) and pursuant to a guidance document titled, "Production Basis for NPDES Permits" developed with input from both DEP and EPA that recommends the imposition of concentration limits in addition to mass limits when a maximum production rate rather than a long-term average production rate is used to establish mass limits (for production-based ELGs). In accordance with the draft guidance document:

> "…the option of including concentration based effluent limits should be evaluated by the permit writer for use in addition to the mass limits pursuant to the Best Professional Judgment (BPJ) authority in Section 402(a)(1) of the Clean Water Act. This option is also discussed in the U.S. EPA NPDES Permit Writers Manual. This option includes the addition of both monthly average and daily maximum concentration limits from the appropriate subcategory tables in the development document for the specific subcategory and pollutants involved into the permits as effluent limits (not mass × flow at the facility.) The main reason for this approach is to assure proper operation and maintenance of the treatment facility during periods of low production. The major advantage of this approach is simplicity, and it in no way restricts production levels at the facility, since effluent concentrations from the treatment plant remain fairly constant over wide ranges of production levels. This approach is particularly useful at facilities where production is either moderately or highly variable and/or multiple production lines with a centralized treatment

facility are involved. It is also useful at new facilities where production records do not exist and mass limits are based solely on production.

"The use of concentration limits also assures compliance with the unit production figures in the ELG, especially during low production periods when mass limits alone can be achieved without treatment in some cases. This approach provides concentration limits that will not change over time and also represent what BAT for the particular production line involved can achieve in a well-operated treatment facility. This approach is preferable to calculating a concentration limit using the current flow at the facility and the mass limits from the ELG, which often yields concentration limits far less stringent than what BAT can achieve. The use of existing waste flow at a facility also leads to a moving target since waste flows are constantly changing due to treatment times, breakdowns, and facility modifications. If there are multiple subcategories involved, whichever subcategory has the majority of the flow to the treatment plant is used as the basis for deriving the concentration limits."

Mass limits were calculated using A&T's provided production data from 2012-2015. A&T's production slowed down in 2015 and was idled in 2016. When production restarts, it may differ from that in 2012-2015. The Department imposed both mass effluent limitations and concentration limits to ensure adequate treatment under any production scenario. The use of concentration limits assures compliance with the unit production figures in the ELG, especially during low production periods when mass limits alone can be achieved without treatment in some cases. Should production increase significantly in the future, A&T may apply to amend the permit.

For IMP 104, concentration limits are available in the Iron and Steel Development Document, Volume VI, Page 7, included in Attachment F. The concentration limits are developed from the best practicable control technology currently available (BPT) effluent limitations, treatment model flows and effluent quality data for the cold rolling subdivision. Those concentration limits are proposed as effluent limits and included in Table 10.

Table 10: Technology Effluent Limits – IMP 104

Parameter	Mass Limits ($^{lbs.}/_{day}$)		Concentration Limits ($^{mg}/_{L}$)*	
	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily
Flow (MGD)	Monitor & Report		-	-
Total Suspended Solids	74.17	172	30	60
Oil & Grease	24.74	73.7	10	25
Chromium	0.989	2.47	0.4	1.0
Nickel	0.742	2.22	0.3	0.9
Naphthalene	-	0.00929	-	0.1
Tetrachloroethylene	-	0.0139	-	0.15
pH (S.U.)	-	-	Between 6.0 and 9.0	

*NOTE: Concentration limits are from the Iron and Steel Development Document, Vol. VI, Page 7

Water Quality-Based Limitations

ORSANCO Pollution Control Standards

The Ohio River Valley Water Sanitation Commission (ORSANCO)—an interstate commission established by interstate compact—sets water quality standards (Pollution Control Standards or "ORSANCO's Standards") that apply to the Ohio River, a surface water of the Commonwealth, and the receiving water for the SPMS's discharges. DEP implements ORSANCO's Standards pursuant to 25 Pa. Code § 93.2(b), which states:

When an interstate or international agency under an interstate compact or international agreement establishes water quality standards regulations applicable to surface waters of this Commonwealth, including wetlands, more stringent than those in this title, the more stringent standards apply.

Since A&T's discharge is to the main stem of the Ohio River, ORSANCO criteria are applied during the Toxics Management Analysis below.

Toxics Management Analysis

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

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

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

2. Perform a Toxics Screening Analysis to identify toxic pollutants of concern. All toxic pollutants, as reported in the permit application or on DMRs, are modeled by the TMS to determine the parameters of concern. [This includes pollutants reported as "Not Detectable" or as "<MDL" where the method detection limit for the analytical method used by the applicant is greater than the most stringent water quality criterion].

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

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

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

A partial mix factor of 0.2 is used for the chronic fish criteria (CRC), threshold human health (THH) and cancer risk level (CRL) analyses in the TMS. DEP uses partial mix factors (PMFs) in the TMS to represent the fractional portion of the receiving stream that mixes with a discharge. A PMF of 0.2 provides the permittee with 20% of the receiving stream's Q7-10 flow for mixing and dilution. The PMF was manually input because the TMS, as a single discharge model, allocates high percentages of stream flow to individual discharges, which often results in those discharges being modeled with most or all of a stream's assimilative capacity. This would represent a significant dilution allowance on a large waterway like the Ohio River and leave little or no assimilative capacity for other dischargers to the same receiving stream.

The Q7-10 flow of the Ohio River is 5,880 cfs, which is the Q7-10 for the portion of the Ohio River downstream of the Montgomery Lock and Dam as identified in ORSANCO's 2019 Pollution Control Standards.

Discharges from IMP 104 are evaluated based on concentrations reported in the application update; data from those sources are used as inputs into the TMS. A summary of TMS Inputs is contained in Tables 11 and 12 below.

Table 11: TMS Design Inputs

Parameter	Value
Design Flow (MGD)	1.1
Hardness (mg/L)	2900
pH (S.U.)	8.9
Partial Mix Factors (PMFs)	
AFC	calc.
CFC	0.2
THH	0.2
CRL	0.2
Complete Mix Times	
Q_{7-10} (min)	calc.
Q_h (min)	calc.

Table 12: TMS Stream Inputs

Parameter	Value
Stream Code	32317
RMI	4.69
Elevation	664
Drainage Area (mi^2)	23,000
Slope (ft/ft)	0.0002
PWS Withdrawal (MGD)	-
Apply Fish Criteria	Yes
Low Flow Yield (cfs/mi^2)	0.256
Stream Flow (cfs)	5880
Tributary Flow (cfs)	N/A
Width (ft)	1190
Stream Hardness (mg/L)	100
Stream pH (S.U.)	7

Based on the recommendations of the TMS, shown in Attachment G, WQBELs are to be imposed for the parameter hexachlorobutadiene. The recommended effluent limits from TMS are shown below in Table 13. The maximum reported

concentration for hexachlorobutadiene was reported as "non-detect" using a quantification limit (QL) that exceeds the Department's Target QL. Once the facility is operational, A&T may collect samples for the parameter hexachlorobutadiene using the Department's Target QL of 0.5 µg/L. If the samples indicate that hexachlorobutadiene is not a pollutant of concern, A&T may apply to amend the permit to remove those effluent limits from the permit.

Total Dissolved Solids (TDS)

Integral to the implementation of 25 Pa. Code § 95.10 is the principle that existing, authorized mass loadings of TDS are exempt from any treatment requirements under these provisions. Existing mass loadings of TDS up to and including the maximum daily discharge loading for any existing discharge, provided that the loading was authorized prior to August 21, 2010 are exempt. Discharge loadings of TDS authorized by the Department are typically exempt from the treatment requirements of Chapter 95.10 until the net TDS loading is increased, an existing discharge proposes a hydraulic expansion or a change in the waste stream. If there are existing mass or production-based TDS effluent limits, then these are used as the basis for the existing mass loading. The facility is not new or expanding waste loading of TDS, therefore, the facility is exempt from 25 Pa. Code § 95.10 treatment requirements.

Table 13: IMP 104 Water Quality Based Effluent Limits

Parameter	Monthly Average (µg/L)	Daily Maximum (µg/L)
Hexachlorobutadiene	0.01	0.016

Ohio River TMDL for PCBs and Chlordane

DEP has a final approved TMDL for the Ohio River dated April 9, 2001. The TMDL addresses fish consumption use impairments caused by PCBs and chlordane. PCBs and chlordane are not expected to be present in A&T's effluent, so A&T is unaffected by the TMDL.

Anti-Backsliding

The effluent limitations and monitoring requirements in Table 14 below are from the previous permit, issued on December 27, 2001. Nitrite-nitrite is not considered to be a pollutant of concern at IMP 104 and will be monitored only at Outfall 004.

Table 14: Existing Effluent Limits – IMP 104

Parameter	Mass Limits ($^{lbs.}/_{day}$)		Concentration Limits ($^{mg}/_{L}$)			Monitoring Frequency	Sampling Type
	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily	Instantaneous Maximum*		
Flow (MGD)	Monitor & Report		-	-	-	Continuous	Measured
Oil & Grease	140	420	10	-	30	1/week	Grab
Total Suspended Solids	420	980	30	60	75*	1/week	Composite
Nitrate-Nitrite as N	-	-	Monitor & Report			2/month	Composite
Chromium, total	5.5	14	0.4	1.0	1.2*	1/week	Composite
Nickel	4.0	13	0.3	0.9	1.1*	1/week	Composite
Naphthalene	-	0.019	-	0.1	-	1/week	Composite
Tetrachloroethylene	-	0.028	-	0.15	-	1/week	Grab
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 limitation. However if grab samples are collected by the permittee, the results must be reported.

Proposed Effluent Limits for IMP 104

Effluent limits applicable at IMP 104 are the more stringent of TBELs, WQBELs, regulatory effluent standards, and monitoring requirements, as summarized in Table 15. The applicable limits and monitoring requirements provided below are based on those in Tables 9A – 14 of this Fact Sheet.

Monitoring frequencies and sample types are imposed in accordance with the recommendations for process wastewater discharges from Chapter 6, Table 6-4 of DEP's *Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits*. Based on that guidance, flow must be measured continuously (metered); pH will require daily grab samples; oil and grease will require 1/week grab samples; volatile pollutants will require 1/week, 4-grabs/24-hours composite sampling and all of the remaining parameters will require 1/week 24-hour composite sampling.

Table 15: Proposed Effluent Limits – IMP 104

Parameter	Mass Limits ($^{lbs.}/_{day}$)		Concentration Limits ($^{mg}/_{L}$)			Monitoring Frequency	Sampling Type
	Average Monthly	Maximum Daily	Average Monthly	Maximum Daily	Instantaneous Maximum*		
Flow (MGD)	Monitor & Report		-	-	-	Continuous	Measured
Oil & Grease	140	420	10	-	30*	1/week	Grab
Total Suspended Solids	420	980	30	60	75*	1/week	Composite
Chromium, total	5.5	14	0.4	1.0	1.2*	1/week	Composite
Nickel	4.0	13	0.3	0.9	1.1*	1/week	Composite
Naphthalene	-	0.019	-	0.1	-	1/week	Composite
Tetrachloroethylene	-	0.0139	-	0.15	-	1/week	Composite
Hexachlorobutadiene	-	-	0.01	0.016	-	1/week	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 limitation. However if grab samples are collected by the permittee, the results must be reported.

Development of Effluent Limitations

Outfall No.	006	**Design Flow (MGD)**	0
Latitude	40º 37' 40"	**Longitude**	-80º 27' 33"
Wastewater Description:	Stormwater		

Outfall 006 (236,597 ft^2) discharges stormwater runoff primarily from roof drains from the finishing department. A portion of the sewer system and drainage area served by Outfall 006 is located on property that is not owned by A&T. A&T's Drainage Area Map in Attachment A shows the stormwater drainage area. Analytical results that were submitted with the updated NPDES permit application in 2018 did not indicate pollutant concentrations requiring effluent limits.

Technology-Based Effluent Limitations (TBELs)

The Stormwater Outfalls will be subjected to the monitoring requirements in Appendix B of the PAG-03 General Stormwater Permit as a minimum requirement because the outfall receives stormwater. The SIC code for the site is 3316 and the corresponding appendix that would apply to the facility is Appendix B of the PAG-03. Appendix B reporting requirements are in Table 16 below.

Table 16: PAG-03 Appendix B Monitoring Requirements

Parameters	Average Monthly (mg/L)	Maximum Daily (mg/L)	Benchmark Values (mg/L)	Monitoring Requirements	
				Monitoring Frequency	Sample Type
Total Suspended Solids	XXX	Monitor & Report	100	1/6 Months	Grab
Oil and Grease	XXX	Monitor & Report	30	1/6 Months	Grab
Nitrogen, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Phosphorus, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Aluminum, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Copper, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Iron, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Lead, total	XXX	Monitor & Report	XXX	1/6 Months	Grab
Zinc, total	XXX	Monitor & Report	XXX	1/6 Months	Grab

Water Quality-Based Effluent Limitations

Water quality analyses are typically performed under low-flow (Q_{7-10}) conditions. Stormwater discharges occur at variable rates and frequencies but not however during Q_{7-10} conditions. Since the discharges from Outfalls 006 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

The stormwater discharges from the A&T Midland Facility are located within the Ohio River Watershed for which the Department has developed a TMDL. The TMDL was finalized on April 9, 2001 to address discharges of PCB, Organics and Chlordane within the Ohio River Watershed. The facility does not discharge PCBs or Chlordane, therefore, the Ohio River TMDL does not pertain to the A&T Midland Facility.

Anti-Backsliding

This outfall was removed during the draft period of the previous permit, issued in 2001. A&T has since requested Outfall 006 be included in the permit. The draft permit issued in 2007 contained quarterly monitoring requirements for oil and grease, iron, and zinc for Outfall 006, as shown below in Table 17.

Table 17: Existing Effluent Limitations – Outfall 006					
Parameter	**Average Monthly**	**Maximum Daily**	**Units**	**Monitoring Frequency**	**Sampling Type**
Oil & Grease	-	Monitor & Report	$^{mg}/_{L}$	1/quarter	Grab
Iron, total	-	Monitor & Report	$^{mg}/_{L}$	1/quarter	Grab
Zinc, total	-	Monitor & Report	$^{mg}/_{L}$	1/quarter	Grab

Since Outfall 006 was removed from the 2001 permit, no recent DMR discharge is available. Stormwater sampling data provided in the NPDES application did not indicate any pollutants of concern for Outfall 006.

Proposed Effluent Monitoring and Limitations for Outfall 006

Outfall 006 will be subject to semi-annual monitoring requirements in Appendix B of the PAG-03 General Stormwater Permit. The proposed monitoring requirements at Outfall 006 are summarized in Table 18.

Table 18: Proposed Effluent Monitoring – Outfall 006					
Parameter	**Average Monthly (mg/L)**	**Maximum Daily (mg/L)**	**Benchmark Values (mg/L)**	**Monitoring Frequency**	**Sample Type**
Total Suspended Solids	-	Monitor & Report	100	1/6 months	Grab
Oil and Grease	-	Monitor & Report	30	1/6 months	Grab
Nitrogen, total	-	Monitor & Report	-	1/6 months	Calculation*
Phosphorus, total	-	Monitor & Report	-	1/6 months	Grab
Aluminum, total	-	Monitor & Report	-	1/6 months	Grab
Copper, total	-	Monitor & Report	-	1/6 months	Grab
Iron, total	-	Monitor & Report	-	1/6 months	Grab
Lead, total	-	Monitor & Report	-	1/6 months	Grab
Zinc, total	-	Monitor & Report	-	1/6 months	Grab

*****Total Nitrogen is the sum of Total Kjeldahl-N (TKN) plus Nitrite-Nitrate as N (NO2+NO3-N), where TKN and NO2+NO3-N are measured in the same sample.

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)).

Allegheny & Tsingshan Stainless Midland Facility (A&T) is an "existing facility" as defined in 40 CFR § 125.92(k). As an existing facility, A&T 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.

The following modified cooling water intake structure requirements will be included in Part C of the Draft permit:

If the permittee intends to start operating the CWIS during this permit term, the permittee must submit a permit amendment request and this permit must be amended to include a Best Technology Available (BTA) determination for the CWIS, at least 180 days prior to the operation of CWIS.

The permittee may not operate the CWIS until the permit amendment is finalized by DEP.

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see 6)
☒	Toxics Management Spreadsheet (see Attachment **G**)
☒	TRC Model Spreadsheet (see Attachment **D**)
☒	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: Drainage Area Map

Attachment B: Streamstats Report

Attachment C: Thermal Discharge Limit Calculation for Outfall 004

Attachment D: TRC Modeling Results for Outfall 004

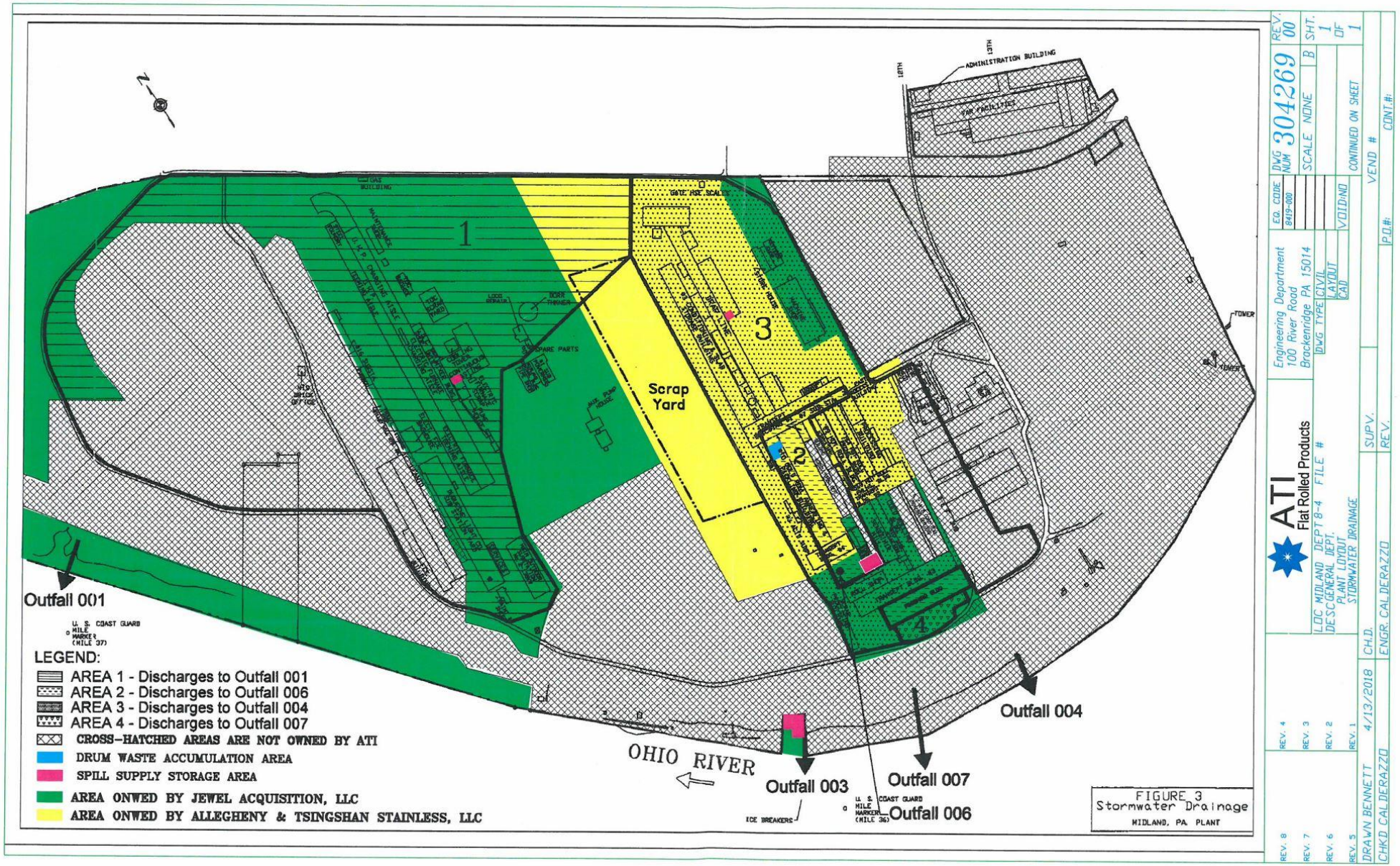
Attachment E: Effluent Limitation Guidelines

Attachment F: Development Documents for Effluent Limitation Guidelines

Attachment G: Toxics Management Spreadsheet Model Output for IMP 104

ATTACHMENT A:

Drainage Area Map


Outfall 001
Outfall 003
Outfall 004
Outfall 006
Outfall 007
OHIO RIVER
Scrap Yard
ADMINISTRATION BUILDING
LEGEND:
AREA 1 - Discharges to Outfall 001
AREA 2 - Discharges to Outfall 006
AREA 3 - Discharges to Outfall 004
AREA 4 - Discharges to Outfall 007
CROSS-HATCHED AREAS ARE NOT OWNED BY ATI
DRUM WASTE ACCUMULATION AREA
SPILL SUPPLY STORAGE AREA
AREA ONWED BY JEWEL ACQUISITION, LLC
AREA ONWED BY ALLEGHENY & TSINGSHAN STAINLESS, LLC
FIGURE 3
Stormwater Drainage
MIDLAND, PA. PLANT
ATI
Flat Rolled Products
Engineering Department
100 River Road
Brackenridge PA 15014
LOC MIDLAND DEPT 8-4 FILE #
DESC GENERAL DEPT.
PLANT LOYOUT
STORMWATER DRAINAGE
DRAWN BENNETT 4/13/2018
CHK'D CALDERAZZO
ENGR. CALDERAZZO

ATTACHMENT B:

StreamStats Report

StreamStats Report

Region ID: PA
Workspace ID: PA20220324172728485000
Clicked Point (Latitude, Longitude): 40.62332, -80.45234
Time: 2022-03-24 13:28:02 -0400

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	23000	square miles
ELEV	Mean Basin Elevation	1589	feet
PRECIP	Mean Annual Precipitation	44	inches

Low-Flow Statistics Parameters [48.7 Percent (11200 square miles) Low Flow Region 3]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	23000	square miles	2.33	1720
ELEV	Mean Basin Elevation	1589	feet	898	2700
PRECIP	Mean Annual Precipitation	44	inches	38.7	47.9

Low-Flow Statistics Parameters [51.0 Percent (11700 square miles) Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	23000	square miles	2.26	1400
ELEV	Mean Basin Elevation	1589	feet	1050	2580

Low-Flow Statistics Disclaimers [48.7 Percent (11200 square miles) Low Flow Region 3]

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

Low-Flow Statistics Flow Report [48.7 Percent (11200 square miles) Low Flow Region 3]

Statistic	Value	Unit
7 Day 2 Year Low Flow	3040	ft^3/s
30 Day 2 Year Low Flow	3810	ft^3/s
7 Day 10 Year Low Flow	2110	ft^3/s
30 Day 10 Year Low Flow	2480	ft^3/s
90 Day 10 Year Low Flow	3310	ft^3/s

Low-Flow Statistics Disclaimers [51.0 Percent (11700 square miles) Low Flow Region 4]

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

Low-Flow Statistics Flow Report [51.0 Percent (11700 square miles) Low Flow Region 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	3310	ft^3/s
30 Day 2 Year Low Flow	4060	ft^3/s
7 Day 10 Year Low Flow	2310	ft^3/s
30 Day 10 Year Low Flow	2380	ft^3/s
90 Day 10 Year Low Flow	3180	ft^3/s

Low-Flow Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
7 Day 2 Year Low Flow	3170	ft^3/s
30 Day 2 Year Low Flow	3930	ft^3/s
7 Day 10 Year Low Flow	2210	ft^3/s
30 Day 10 Year Low Flow	2420	ft^3/s
90 Day 10 Year Low Flow	3230	ft^3/s

Low-Flow Statistics Citations

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

Application Version: 4.7.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

ATTACHMENT C:

Thermal Discharge Limit Calculation for Outfall 004

Flow Data for Thermal Discharge Analysis

Facility: A&T Midland
Permit Number: PA0005754
Stream Name: Ohio River
Analyst/Engineer: Lauren Nolfi
Stream Q7-10 (cfs): 5880

	Facility Flows[1]				Stream Flows	
	Stream (Intake) (MGD)	External (Intake) (MGD)	Consumptive (Loss) (MGD)	Discharge (MGD)	Adj. Q7-10 Stream Flow (cfs)	Downstream[2] Stream Flow (cfs)
Jan 1-31	5	0	0	5	18816.0	18816.0
Feb 1-29	5	0	0	5	20580.0	20580.0
Mar 1-31	5	0	0	5	41160.0	41160.0
Apr 1-15	5	0	0	5	54684.0	54684.0
Apr 16-30	5	0	0	5	54684.0	54684.0
May 1-15	5	0	0	5	29988.0	29988.0
May 16-30	5	0	0	5	29988.0	29988.0
Jun 1-15	5	0	0	5	17640.0	17640.0
Jun 16-30	5	0	0	5	17640.0	17640.0
Jul 1-31	5	0	0	5	9996.0	9996.0
Aug 1-15	5	0	0	5	8232.0	8232.0
Aug 16-31	5	0	0	5	8232.0	8232.0
Sep 1-15	5	0	0	5	6468.0	6468.0
Sep 16-30	5	0	0	5	6468.0	6468.0
Oct 1-15	5	0	0	5	7056.0	7056.0
Oct 16-31	5	0	0	5	7056.0	7056.0
Nov 1-15	5	0	0	5	9408.0	9408.0
Nov 16-30	5	0	0	5	9408.0	9408.0
Dec 1-31	5	0	0	5	14112.0	14112.0

[1] Facility flows are not required (and will not affect the permit limits) if all intake flow is from the receiving stream (Case 1), consumptive losses are small, and permit limits will be expressed as Million BTUs/day.
[2] Downstream Stream Flow includes the discharge flow.

Please forward all comments to Tom Starosta at 717-787-4317, tstarosta@state.pa.us.
Version 1.0 -- 08/01/2004 Reference: Implementation Guidance for Temperature Criteria, DEP-ID: 391-2000-017
NOTE: The user can only edit fields that are blue.
NOTE: MGD x 1.547 = cfs.

Thermal Discharge Recommended Permit Limits — Warm Water Fishes (WWF) Stream

Facility: **A&T Midland**
Permit Number: PA0005754
Stream: Ohio River

	WWF Ambient Stream Temperature (ºF) (Default)	Ambient Stream Temperature (ºF) (Site-specific data)	Target Maximum Stream Temp.[1] (ºF)	WWF Daily WLA[2] (Million BTUs/day)	WWF Daily WLA[3] (ºF)	at Discharge Flow (MGD)
Jan 1-31	35	0	40	507,091	110.0	5
Feb 1-29	35	0	40	554,631	110.0	5
Mar 1-31	40	0	46	1,331,114	110.0	5
Apr 1-15	47	0	52	1,473,734	110.0	5
Apr 16-30	53	0	58	1,473,734	110.0	5
May 1-15	58	0	64	969,812	110.0	5
May 16-30	62	0	72	1,616,353	110.0	5
Jun 1-15	67	0	80	1,236,035	110.0	5
Jun 16-30	71	0	84	1,236,035	110.0	5
Jul 1-31	75	0	87	646,541	110.0	5
Aug 1-15	74	0	87	576,816	110.0	5
Aug 16-31	74	0	87	576,816	110.0	5
Sep 1-15	71	0	84	453,213	110.0	5
Sep 16-30	65	0	78	453,213	110.0	5
Oct 1-15	60	0	72	456,382	110.0	5
Oct 16-31	54	0	66	456,382	110.0	5
Nov 1-15	48	0	58	507,091	110.0	5
Nov 16-30	42	0	50	405,673	110.0	5
Dec 1-31	37	0	42	380,318	110.0	5

[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.

Thermal Discharge Limit Calc v1.0_004 — 9/13/2023

ATTACHMENT D:

TRC Modeling Results for Outfall 004

TRC_CALC

TRC EVALUATION

Input appropriate values in A3:A9 and D3:D9

5880	= Q stream (cfs)	0.5	= CV Daily
4.4	= Q discharge (MGD)	0.5	= CV Hourly
4	= no. samples	0.157	= AFC_Partial Mix Factor
0.3	= Chlorine Demand of Stream	0.2	= CFC_Partial Mix Factor
0	= Chlorine Demand of Discharge	15	= AFC_Criteria Compliance Time (min)
0.5	= BAT/BPJ Value	720	= CFC_Criteria Compliance Time (min)
0	= % Factor of Safety (FOS)	0	=Decay Coefficient (K)

Source	Reference	AFC Calculations	Reference	CFC Calculations
TRC	1.3.2.iii	WLA afc = 43.283	1.3.2.iii	WLA cfc = 53.742
PENTOXSD TRG	5.1a	LTAMULT afc = 0.373	5.1c	LTAMULT cfc = 0.581
PENTOXSD TRG	5.1b	LTA_afc= 16.128	5.1d	LTA_cfc = 31.243

Source		Effluent Limit Calculations	
PENTOXSD TRG	5.1f	AML MULT = 1.720	
PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.500	BAT/BPJ
		INST MAX LIMIT (mg/l) = 1.170	

WLA afc	(.019/e(-k*AFC_tc)) + [(AFC_Yc*Qs*.019/Qd*e(-k*AFC_tc))...
	...+ Xd + (AFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT afc	EXP((0.5*LN(cvh^2+1))-2.326*LN(cvh^2+1)^0.5)
LTA_afc	wla_afc*LTAMULT_afc
WLA_cfc	(.011/e(-k*CFC_tc) + [(CFC_Yc*Qs*.011/Qd*e(-k*CFC_tc))...
	...+ Xd + (CFC_Yc*Qs*Xs/Qd)]*(1-FOS/100)
LTAMULT_cfc	EXP((0.5*LN(cvd^2/no_samples+1))-2.326*LN(cvd^2/no_samples+1)^0.5)
LTA_cfc	wla_cfc*LTAMULT_cfc
AML MULT	EXP(2.326*LN((cvd^2/no_samples+1)^0.5)-0.5*LN(cvd^2/no_samples+1))
AVG MON LIMIT	MIN(BAT_BPJ,MIN(LTA_afc,LTA_cfc)*AML_MULT)
INST MAX LIMIT	1.5*((av_mon_limit/AML_MULT)/LTAMULT_afc)

ATTACHMENT E:

Effluent Limitation Guidelines

IMP 104 – Applicable Effluent Limitation Guidelines

Title 40: Protection of Environment

PART 420—IRON AND STEEL MANUFACTURING POINT SOURCE CATEGORY

Subpart J – Cold Forming Subcategory

§ 420.100 Applicability; description of the cold forming subcategory.

(a) The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works from cold rolling and cold working pipe and tube operations in which unheated steel is passed through rolls or otherwise processed to reduce its thickness, to produce a smooth surface, or to develop controlled mechanical properties in the steel.

(b) The limitations and standards set out below for cold worked pipe and tube operations shall be applicable only where cold worked pipe and tube wastewaters are discharged at steel plant sites. No limitations are applicable or allowable where these wastewaters are hauled off-site for disposal or are otherwise not discharged at steel plant sites. The limitations and standards set out below for cold worked pipe and tube operations shall be applicable only to the blowdown of soluble oil or water solutions used in cold worked pipe and tube forming operations. Limitations for other wastewater sources from these operations must be established on a site-specific basis.

§ 420.101 Specialized definitions.

(a) The term *recirculation* means those cold rolling operations which include recirculation of rolling solutions at all mill stands.

(b) The term *combination* means those cold rolling operations which include recirculation of rolling solutions at one or more mill stands, and once-through use of rolling solutions at the remaining stand or stands.

(c) The term *direct application* means those cold rolling operations which include once-through use of rolling solutions at all mill stands.

(d) The term *single stand* means those recirculation or direct application cold rolling mills which include only one stand of work rolls.

(e) The term *multiple stands* means those recirculation or direct application cold rolling mills which include more than one stand of work rolls.

(f) The term *cold worked pipe and tube* means those cold forming operations that process unheated pipe and tube products using either water or oil solutions for cooling and lubrication.

§ 420.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

IMP 104 – Applicable Effluent Limitation Guidelines

§ 420.102 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) ***Cold rolling mills*** —

(1) ***Recirculation—single stand.***

Subpart J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.00125	0.000626
O&G	0.000522	0.000209
Chromium[1]	0.0000209	0.0000084
Lead	0.0000094	0.0000031
Nickel[1]	0.0000188	0.0000063
Zinc	0.0000063	0.0000021
Naphthalene	0.0000021	
Tetrachloroethylene	0.0000031	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

(2) ***Recirculation—multiple stands.***

Subpart J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.00626	0.00313
O&G	0.00261	0.00104
Chromium[1]	0.000104	0.0000418
Lead	0.0000469	0.0000156
Nickel[1]	0.0000939	0.0000313
Zinc	0.0000313	0.0000104
Naphthalene	0.0000104	
Tetrachloroethylene	0.0000156	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(3) ***Combination.***

Subpart J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0751	0.0376
O&G	0.0313	0.0125
Chromium[1]	0.00125	0.000501
Lead	0.000563	0.000188
Nickel[1]	0.00113	0.000376
Zinc	0.000376	0.000125
Naphthalene	0.000125	
Tetrachloroethylene	0.000188	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are cotreated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

(4) ***Direct application—single stand.***

Subpart J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0225	0.0113
O&G	0.00939	0.00376
Chromium[1]	0.000376	0.000150
Lead	0.000169	0.0000563
Nickel[1]	0.000338	0.000113
Zinc	0.000113	0.0000376
Naphthalene	0.0000376	
Tetrachloroethylene	0.0000563	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(5) ***Direct application—multiple stands.***

Subpart J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.100	0.0501
O&G	0.0417	0.0167
Chromium[1]	0.00167	0.000668
Lead	0.000751	0.000250
Nickel[1]	0.00150	0.000501
Zinc	0.000501	0.000167
Naphthalene	0.000167	
Tetrachloroethylene	0.000250	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

(b) ***Cold worked pipe and tube*** —
(1) ***Using water.***

Subpart J

Pollutant of pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.00125	0.000626
O&G	0.000522	0.000209
Chromium[1]	0.0000209	0.0000084
Lead	0.0000094	0.0000031
Nickel[1]	0.0000188	0.0000063
Zinc	0.0000063	0.0000021
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold forming wastewaters are treated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(2) ***Using oil solutions.***

Subpart J

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.00125	0.000626
O&G	0.000522	0.000209
Chromium[1]	0.0000209	0.0000084
Lead	0.0000094	0.0000031
Nickel[1]	0.0000188	0.0000063
Zinc	0.0000063	0.0000021
Naphthalene	0.0000021	
Tetrachloroethylene	0.0000031	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold forming wastewaters are treated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

§ 420.103 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) ***Cold rolling mills*** —
(1) ***Recirculation—single stand.***

Subpart J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium[1]	0.0000209	0.0000084
Lead	0.0000094	0.0000031
Nickel[1]	0.0000188	0.0000063
Zinc	0.0000063	0.0000021
Naphthalene	0.0000021	
Tetrachloroethylene	0.0000031	

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.

IMP 104 – Applicable Effluent Limitation Guidelines

(2) ***Recirculation—multiple stands.***

Subpart J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium[1]	0.000104	0.0000418
Lead	0.0000469	0.0000156
Nickel[1]	0.0000939	0.0000313
Zinc	0.0000313	0.0000104
Naphthalene	0.0000104	
Tetrachloroethylene	0.0000156	

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.

(3) ***Combination.***

Subpart J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium[1]	0.00125	0.000501
Lead	0.000563	0.000188
Nickel[1]	0.00113	0.000376
Zinc	0.000376	0.000125
Naphthalene	0.000125	
Tetrachloroethylene	0.000188	

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are cotreated with descaling or combination acid pickling wastewaters.

(4) ***Direct application—single stand.***

Subpart J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium[1]	0.000376	0.000150
Lead	0.000169	0.0000563
Nickel[1]	0.000338	0.000113
Zinc	0.000113	0.0000376
Naphthalene	0.0000376	
Tetrachloroethylene	0.0000563	

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.

IMP 104 – Applicable Effluent Limitation Guidelines

(5) ***Direct application—multiple stands.***

Subpart J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium[1]	0.00167	0.000668
Lead	0.000751	0.000250
Nickel[1]	0.00150	0.000501
Zinc	0.000501	0.000167
Naphthalene	0.000167	
Tetrachloroethylene	0.000250	

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.

(b) ***Cold worked pipe and tube*** —

(1) ***Using water.***

Subpart J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium[1]	0.0000209	0.0000084
Lead	0.0000094	0.0000031
Nickel[1]	0.0000188	0.0000063
Zinc	0.0000063	0.0000021

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold forming wastewaters are treated with descaling or combination acid pickling wastewaters.

(2) ***Using oil solutions.***

Subpart J

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium[1]	0.0000209	0.0000084
Lead	0.0000094	0.0000031
Nickel[1]	0.0000188	0.0000063
Zinc	0.0000063	0.0000021
Naphthalene	0.0000021	
Tetrachloroethylene	0.0000031	

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold forming wastewaters are treated with descaling or combination acid pickling wastewaters.

IMP 104 – Applicable Effluent Limitation Guidelines

§ 420.104 New source performance standards (NSPS).

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(a) ***Cold rolling mills*** —

(1) ***Recirculation—single stand.***

Subpart J

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.00125	0.000626
O&G	0.000522	0.000209
Chromium[1]	0.0000209	0.0000084
Lead	0.0000094	0.0000031
Nickel[1]	0.0000188	0.0000063
Zinc	0.0000063	0.0000021
Naphthalene	0.0000021	
Tetrachloroethylene	0.0000031	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are cotreated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

(2) ***Recirculation—multiple stands.***

Subpart J

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.00250	0.00125
O&G	0.00104	0.000417
Chromium[1]	0.0000418	0.0000167
Lead	0.0000188	0.0000063
Nickel[1]	0.0000376	0.0000125
Zinc	0.0000125	0.0000042
Naphthalene	0.0000042	
Tetrachloroethylene	0.0000063	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(3) ***Combination.***

Subpart J

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0326	0.0163
O&G	0.0136	0.00543
Chromium[1]	0.000543	0.000217
Lead	0.000244	0.0000814
Nickel[1]	0.000488	0.000163
Zinc	0.000163	0.0000542
Naphthalene	0.0000542	
Tetrachloroethylene	0.0000813	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastwaters are treated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

(4) ***Direct application—single stand.***

Subpart J

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.00626	0.00313
O&G	0.00261	0.00104
Chromium[1]	0.000104	0.0000418
Lead	0.0000469	0.0000156
Nickel[1]	0.0000939	0.0000313
Zinc	0.0000313	0.0000104
Naphthalene	0.0000104	
Tetrachloro-ethylene	0.0000156	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling watewaters.
[2] Within the range of 6.0 to 9.0.

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(5) ***Direct application—multiple stands.***

Subpart J

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0726	0.0363
O&G	0.0302	0.0121
Chromium[1]	0.00121	0.000484
Lead	0.000545	0.000182
Nickel[1]	0.00109	0.000363
Zinc	0.000363	0.000121
Naphthalene	0.000121	
Tetrachloro-ethylene	0.000182	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling watewaters.
[2] Within the range of 6.0 to 9.0.

(b) ***Cold worked pipe and tube mills*** —
(1) ***Using water.***

Subpart J

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.00125	0.000626
O&G	0.000522	0.000209
Chromium[1]	0.0000209	0.0000084
Lead	0.0000094	0.0000031
Nickel[1]	0.0000188	0.0000063
Zinc	0.0000063	0.0000021
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold forming wastewaters are cotreated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

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(2) ***Using oil solutions.***

Subpart J

Pollutant or pollutant property	New Source Performance Standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	kg/kkg (pounds per 1,000 lb) of product	
TSS	0.00125	0.000626
O&G	0.000522	0.000209
Chromium[1]	0.0000209	0.0000084
Lead	0.0000094	0.0000031
Nickel[1]	0.0000188	0.0000063
Zinc	0.0000063	0.0000021
Naphthalene	0.0000021	
Tetrachloroethylene	0.0000031	
pH	([2])	([2])

[1] The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold forming wastewaters are cotreated with descaling or combination acid pickling wastewaters.
[2] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

Title 40: Protection of Environment

PART 420—IRON AND STEEL MANUFACTURING POINT SOURCE CATEGORY

Subpart I – Acid Pickling Subcategory

§ 420.90 Applicability; description of the acid pickling subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from sulfuric acid, hydrochloric acid, or combination acid pickling operations.

§ 420.91 Specialized definitions.

(a) The term *sulfuric acid pickling* means those operations in which steel products are immersed in sulfuric acid solutions to chemically remove oxides and scale, and those rinsing operations associated with such immersions.

(b) The term *hydrochloric acid pickling* means those operations in which steel products are immersed in hydrochloric acid solutions to chemically remove oxides and scale, and those rinsing operations associated with such immersions.

(c) The term *combination acid pickling* means those operations in which steel products are immersed in solutions of more than one acid to chemically remove scale and oxides, and those rinsing steps associated with such immersions.

(d) The term *fume scrubber* means those pollution control devices used to remove and clean fumes originating in pickling operations.

(e) The term *batch* means those pickling operations which process steel products such as coiled wire, rods, and tubes in discrete batches or bundles.

(f) The term *continuous* means those pickling operations which process steel products other than in discrete batches or bundles.

(g) The term *acid recovery* means those sulfuric acid pickling operations that include processes for recovering the unreacted acid from spent pickling acid solutions.

(h) The term *acid regeneration* means those hydrochloric acid pickling operations that include processes for regenerating acid from spent pickling acid solutions.

(i) The term *neutralization* means those acid pickling operations that do not include acid recovery or acid regeneration processes.

(j) The term *spent acid solution* (or spent pickle liquor) means those solutions of steel pickling acids which have been used in the pickling process and are discharged or removed therefrom.

(k) The term *rod, wire and coil* means those acid pickling operations that pickle rod, wire or coiled rod and wire products.

(l) The term *bar, billet and bloom* means those acid pickling operations that pickle bar, billet or bloom products.

(m) The term *strip, sheet and plate* means those acid pickling operations that pickle strip, sheet or plate products.

(n) The term *pipe, tube and other* means those acid pickling operations that pickle pipes, tubes or any steel product other than those included in paragraphs (k), (l) and (m) of this section.

IMP 104 – Applicable Effluent Limitation Guidelines

§ 420.92 Effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available (BPT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

(a) ***Sulfuric acid pickling (spent acid solutions and rinse waters)*** —

(1) ***Rod, wire and coil.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0818	0.0350
O&G[1]	0.0350	0.0117
Lead	0.000526	0.000175
Zinc	0.000701	0.000234
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(2) ***Bar, billet and bloom.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0263	0.0113
O&G[1]	0.0113	0.00375
Lead	0.000169	0.0000563
Zinc	0.000225	0.0000751
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(3) ***Strip, sheet and plate.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0526	0.0225
O&G[1]	0.0225	0.00751
Lead	0.000338	0.000113
Zinc	0.000451	0.000150
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(4) ***Pipe, tube and other products.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.146	0.0626
O&G[1]	0.0626	0.0209
Lead	0.000939	0.000313
Zinc	0.00125	0.000417
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(5) ***Fume scrubbers.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kilograms per day	
TSS	5.72	2.45
O&G[1]	2.45	0.819
Lead	0.0368	0.0123
Zinc	0.0491	0.0164
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

The above limitations shall be applicable to each fume scrubber associated with a sulfuric acid pickling operation.

(b) ***Hydrochloric acid pickling (spent acid solutions and rinse waters)*** —

(1) ***Rod, wire and coil.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.143	0.0613
O&G[1]	0.0613	0.0204
Lead	0.000920	0.000307
Zinc	0.00123	0.000409
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(2) ***Strip, sheet and plate.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0818	0.0350
O&G[1]	0.0350	0.0117
Lead	0.000526	0.000175
Zinc	0.000701	0.000234
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(3) ***Pipe, tube and other products.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.298	0.128
O&G[1]	0.128	0.0426
Lead	0.00192	0.000638
Zinc	0.00255	0.000851
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(4) ***Fume scrubbers.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kilograms per day	
TSS	5.72	2.45
O&G[1]	2.45	0.819
Lead	0.0368	0.0123
Zinc	0.0491	0.0164
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

The above limitations shall be applicable to each fume scrubber associated with a hydrochloric acid pickling operation.

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(5) ***Acid regeneration (absorber vent scrubber).***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kilograms per day	
TSS	38.2	16.3
O&G[1]	16.3	5.45
Lead	0.245	0.0819
Zinc	0.327	0.109
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

The above limitations shall be applicable to the absorber vent scrubber wastewater associated with hydrochloric acid regeneration plants.

(c) ***Combination acid pickling (spent acid solution and rinse waters)*** —

(1) ***Rod, Wire, and Coil.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.149	0.0638
O&G[1]	0.0638	0.0213
Chromium	0.00213	0.000852
Nickel	0.00192	0.000638
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(2) ***Bar, billet, and bloom.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0672	0.0288
O&G[1]	0.0288	0.00960
Chromium	0.000960	0.000384
Nickel	0.000864	0.000288
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

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(3) ***Strip, sheet, and plate—continuous.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.438	0.188
O&G[1]	0.188	0.0626
Chromium	0.00626	0.00250
Nickel	0.00563	0.00188
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(4) ***Strip, sheet and plate—batch.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.134	0.0576
O&G[1]	0.0576	0.0192
Chromium	0.00192	0.000768
Nickel	0.00173	0.000576
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(5) ***Pipe, tube, and other products.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.225	0.0964
O&G[1]	0.0964	0.0322
Chromium	0.00322	0.00129
Nickel	0.00289	0.000964
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(6) ***Fume scrubbers.***

Subpart I

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kilograms per day	
TSS	5.72	2.45
O&G[1]	2.45	0.819
Chromium	0.0819	0.0327
Nickel	0.0735	0.0245
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.
The above limitations shall be applicable to each fume scrubber associated with a combination acid pickling operation.

§ 420.93 Effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT).

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) ***Sulfuric acid pickling (spent acid solutions and rinse waters)*** —
(1) ***Rod, wire and coil.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
Lead	0.000526	0.000175
Zinc	0.000701	0.000234

(2) ***Bar, billet and bloom.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
Lead	0.000169	0.0000563
Zinc	0.000225	0.0000751

(3) ***Strip, sheet and plate.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
Lead	0.000338	0.000113
Zinc	0.000451	0.000150

IMP 104 – Applicable Effluent Limitation Guidelines

(4) ***Pipe, tube and other products.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
Lead	0.000939	0.000313
Zinc	0.00125	0.000417

(5) ***Fume scrubbers.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kilograms per day	
Lead	0.0368	0.0123
Zinc	0.0491	0.0164

The above limitations shall be applicable to each fume scrubber associated with a sulfuric acid pickling operation.

(b) ***Hydrochloric acid pickling (spent acid solutions and rinse waters)*** —

(1) ***Rod, wire and coil.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
Lead	0.000920	0.000307
Zinc	0.00123	0.000409

(2) ***Strip, sheet and plate.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
Lead	0.000526	0.000175
Zinc	0.000701	0.000234

(3) ***Pipe, tube and other products.***

Subpart I

Pollutant or pollutant property	BAT effuent limitations	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
Lead	0.00192	0.000638
Zinc	0.00255	0.000851

IMP 104 – Applicable Effluent Limitation Guidelines

(4) ***Fume scrubbers.***

Subpart I

Pollutant or pollutant property	BAT effuent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kilograms per day	
Lead	0.0368	0.0123
Zinc	0.0491	0.0164

The above limitations shall be applicable to each fume scrubber associated with a hydrochloric acid pickling operation.

(5) ***Acid regeneration (absorber vent scrubber).***

Subpart I

Pollutant or pollutant property	BAT effuent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kilograms per day	
Lead	0.245	0.0819
Zinc	0.327	0.109

The above limitations shall be applicable to the absorber vent scrubber wastewater associated with hydrochloric acid regeneration plants.

(c) ***Combination acid pickling (spent acid solution and rinse waters)*** —

(1) ***Rod, wire, and coil.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium	0.00213	0.000852
Nickel	0.00192	0.000638

(2) ***Bar, billet, and bloom.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium	0.000960	0.000384
Nickel	0.000864	0.000288

(3) ***Strip, sheet, and plate—continuous.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium	0.00626	0.00250
Nickel	0.00563	0.00188

IMP 104 – Applicable Effluent Limitation Guidelines

(4) ***Strip, sheet, and plate—batch.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium	0.00192	0.000768
Nickel	0.00173	0.000576

(5) ***Pipe, tube, and other products.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
Chromium	0.00322	0.00129
Nickel	0.00289	0.000964

(6) ***Fume scrubbers.***

Subpart I

Pollutant or pollutant property	BAT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kilograms per day	
Chromium	0.0819	0.0327
Nickel	0.0735	0.0245

The above limitations shall be applicable to each fume scrubber associated with a combination acid pickling operation.

§ 420.94 New source performance standards (NSPS).

The discharge of wastewater pollutants from any new source subject to this subpart shall not exceed the standards set forth below.

(a) ***Sulfuric acid pickling (spent acid solutions and rinse waters)*** —
(1) ***Rod, wire, and coil.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0146	0.00626
O&G*	0.00626	0.00209
Lead	0.0000939	0.0000313
Zinc	0.000125	0.0000417
pH	([1])	([1])

*The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[1] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(2) ***Bar, billet, and bloom.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	kg/kkg (pounds per 1,000 lb) of product	
TSS	0.00876	0.00376
O&G*	0.00376	0.00125
Lead	0.0000563	0.0000188
Zinc	0.0000751	0.0000250
pH	([1])	([1])

*The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[1] Within the range of 6.0 to 9.0.

(3) ***Strip, sheet, and plate.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0117	0.00501
O&G[1]	0.00501	0.00167
Lead	0.0000751	0.0000250
Zinc	0.000100	0.0000334
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(4) ***Pipe, tube and other products.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0204	0.00876
O&G[1]	0.00876	0.00292
Lead	0.000131	0.0000438
Zinc	0.000175	0.0000584
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(5) ***Fume scrubbers.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kilograms per day	
TSS	5.72	2.45
O&G[1]	2.45	0.819
Lead	0.0368	0.0123
Zinc	0.0491	0.0164
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

The above limitations shall be applicable to each fume scrubber associated with a sulfuric acid pickling operation.

(b) ***Hydrochloric acid pickling (spent acid solutions and rinse waters)*** —

(1) ***Rod, wire, and coil.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0175	0.00751
O&G[1]	0.00751	0.00250
Lead	0.000113	0.0000376
Zinc	0.000150	0.0000501
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(2) ***Strip, sheet, and plate.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0117	0.00501
O&G[1]	0.00501	0.00167
Lead	0.0000751	0.0000250
Zinc	0.000100	0.0000334
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[1] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(3) ***Pipe, tube, and other products.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0321	0.0138
O&G[1]	0.0138	0.00459
Lead	0.000206	0.0000688
Zinc	0.000275	0.0000918
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(4) ***Fume scrubbers.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kilograms per day	
TSS	5.72	2.45
O&G[1]	2.45	0.819
Lead	0.0368	0.0123
Zinc	0.0491	0.0164
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

The above limitations shall be applicable to each fume scrubber associated with a hydrochloric acid pickling operation.

(c) ***Combination acid pickling (spent acid solutions and rinse waters)*** —

(1) ***Rod, wire, and coil.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0204	0.00876
O&G[1]	0.00876	0.00292
Chromium	0.000292	0.000117
Nickel	0.000263	0.0000876
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(2) ***Bar, billet, and bloom.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0117	0.00501
O&G[1]	0.00501	0.00167
Chromium	0.000167	0.0000667
Nickel	0.000150	0.0000501
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(3) ***Strip, sheet and plate—continuous.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0496	0.0213
O&G[1]	0.0213	0.00710
Chromium	0.000710	0.000284
Nickel	0.000638	0.000213
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(4) ***Strip, sheet, and plate—batch.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0175	0.00751
O&G[1]	0.00751	0.00250
Chromium	0.000250	0.000100
Nickel	0.000225	0.0000751
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

IMP 104 – Applicable Effluent Limitation Guidelines

(5) ***Pipe, tube, and other products.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kg/kkg (pounds per 1,000 lb) of product	
TSS	0.0292	0.0125
O&G[1]	0.0125	0.00418
Chromium	0.000418	0.000167
Nickel	0.000376	0.000125
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.

(6) ***Fume scrubbers.***

Subpart I

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	**Average of daily values for 30 consecutive days**
	Kilograms per day	
TSS	5.72	2.45
O&G[1]	2.45	0.819
Chromium	0.0819	0.0327
Nickel	0.0735	0.0245
pH	([2])	([2])

[1] The limitations for oil and grease shall be applicable when acid pickling wastewaters are treated with cold rolling wastewaters.
[2] Within the range of 6.0 to 9.0.
The above limitations shall be applicable to each fume scrubber associated with a combination acid pickling operation.

ATTACHMENT F:

Development Documents for Effluent Limitations Guidelines

From: Development Document for Effluent Limitations Guidelines and Standards for the Iron and Steel Manufacturing Point Source Category, Vol. VI, Page 7;
U.S. Environmental Protection Agency - May 1982

TABLE II-1

BPT/BCT EFFLUENT LIMITATIONS GUIDELINES
COLD FORMING SUBCATEGORY - COLD ROLLING

			Effluent Limitations (kg/kkg)				
		Concentration (mg/l) All Cold Rolling	Recirculation			Direct Application	
			Single Stand	Multi Stand	Combination	Single Stand	Multi Stand
Discharge Flow (gal/ton)			5	25	300	90	400
TSS	Avg	30	0.000626	0.00313	0.0375	0.0113	0.0501
	Max	60	0.00125	0.00626	0.0751	0.0225	0.100
O & G	Avg	10	0.000209	0.00104	0.0125	0.00375	0.0167
	Max	25	0.000522	0.00261	0.0313	0.00939	0.0417
Chromium(1)	Avg	0.4	0.0000083	0.0000417	0.000501	0.000150	0.000668
	Max	1.0	0.0000209	0.000104	0.00125	0.000375	0.00167
Lead	Avg	0.15	0.0000031	0.0000156	0.000188	0.0000563	0.000250
	Max	0.45	0.0000094	0.0000469	0.000563	0.000169	0.000751
Nickel(1)	Avg	0.3	0.0000063	0.0000313	0.000375	0.000113	0.000501
	Max	0.9	0.0000188	0.0000939	0.00113	0.000338	0.00150
Zinc	Avg	0.1	0.0000021	0.0000104	0.000125	0.0000375	0.000167
	Max	0.3	0.0000063	0.0000313	0.000375	0.000113	0.000501
Naphthalene	Avg	-	-	-	-	-	-
	Max	0.1	0.0000021	0.0000104	0.000125	0.0000375	0.000167
Tetrachloro-ethylene	Avg	-	-	-	-	-	-
	Max	0.15	0.0000031	0.0000156	0.000188	0.0000563	0.000250

Note: pH is also regulated at BPT and is limited to 6.0 to 9.0 standard units for all cold rolling operations.

(1) The limitations for chromium and nickel shall be applicable in lieu of those for lead and zinc when cold rolling wastewaters are treated with descaling or combination acid pickling wastewaters.

ATTACHMENT G:

Toxics Management Spreadsheet Model Output for IMP 104

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Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **A&T Midland** NPDES Permit No.: **PA0005754** Outfall No.: **104**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Contact water and waste pickle liquor from**

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
1.1	2900	8.9		0.2	0.2	0.2		

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Strea m CV	Fate Coeff	FOS	Criteri a Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		6000									
	Chloride (PWS)	mg/L											
	Bromide	mg/L		0.4									
	Sulfate (PWS)	mg/L		2500									
	Fluoride (PWS)	mg/L		8.3									
Group 2	Total Aluminum	µg/L		100									
	Total Antimony	µg/L	<	5									
	Total Arsenic	µg/L		6									
	Total Barium	µg/L		20									
	Total Beryllium	µg/L	<	1									
	Total Boron	µg/L		200									
	Total Cadmium	µg/L	<	1									
	Total Chromium (III)	µg/L		120									
	Hexavalent Chromium	µg/L		10									
	Total Cobalt	µg/L		6									
	Total Copper	µg/L		40									
	Free Cyanide	µg/L	<	5									
	Total Cyanide	µg/L	<	5									
	Dissolved Iron	µg/L		70									
	Total Iron	µg/L		700									
	Total Lead	µg/L		3									
	Total Manganese	µg/L		400									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		160									
	Total Phenols (Phenolics) (PWS)	µg/L	<	50									
	Total Selenium	µg/L	<	3									
	Total Silver	µg/L		1									
	Total Thallium	µg/L	<	1									
	Total Zinc	µg/L		10									
	Total Molybdenum	µg/L		1300									
	Acrolein	µg/L	<	3									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	3									
	Benzene	µg/L	<	3									
	Bromoform	µg/L	<	3									

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

	2,6-Dinitrotoluene	µg/L	<	1										
	Di-n-Octyl Phthalate	µg/L	<	1										
	1,2-Diphenylhydrazine	µg/L	<	1										
	Fluoranthene	µg/L	<	1										
	Fluorene	µg/L	<	1										
	Hexachlorobenzene	µg/L	<	1										
	Hexachlorobutadiene	µg/L	<	1										
	Hexachlorocyclopentadiene	µg/L	<	1										
	Hexachloroethane	µg/L	<	1										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	1										
	Isophorone	µg/L	<	1										
	Naphthalene	µg/L	<	1										
	Nitrobenzene	µg/L	<	1										
	n-Nitrosodimethylamine	µg/L	<	1										
	n-Nitrosodi-n-Propylamine	µg/L	<	1										
	n-Nitrosodiphenylamine	µg/L	<	1										
	Phenanthrene	µg/L	<	1										
	Pyrene	µg/L	<	1										
	1,2,4-Trichlorobenzene	µg/L	<	1										
Group 6	Aldrin	µg/L	<											
	alpha-BHC	µg/L	<											
	beta-BHC	µg/L	<											
	gamma-BHC	µg/L	<											
	delta BHC	µg/L	<											
	Chlordane	µg/L	<											
	4,4-DDT	µg/L	<											
	4,4-DDE	µg/L	<											
	4,4-DDD	µg/L	<											
	Dieldrin	µg/L	<											
	alpha-Endosulfan	µg/L	<											
	beta-Endosulfan	µg/L	<											
	Endosulfan Sulfate	µg/L	<											
	Endrin	µg/L	<											
	Endrin Aldehyde	µg/L	<											
	Heptachlor	µg/L	<											
	Heptachlor Epoxide	µg/L	<											
	PCB-1016	µg/L	<											
	PCB-1221	µg/L	<											
	PCB-1232	µg/L	<											
	PCB-1242	µg/L	<											
	PCB-1248	µg/L	<											
	PCB-1254	µg/L	<											
	PCB-1260	µg/L	<											
	PCBs, Total	µg/L	<											
	Toxaphene	µg/L	<											
	2,3,7,8-TCDD	ng/L	<											
Group 7	Gross Alpha	pCi/L												
	Total Beta	pCi/L	<											
	Radium 226/228	pCi/L	<											
	Total Strontium	µg/L	<											
	Total Uranium	µg/L	<											
	Osmotic Pressure	mOs/kg												

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Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

A&T Midland, NPDES Permit No. PA0005754, Outfall 104

Instructions | Discharge | Stream

Receiving Surface Water Name: **Ohio River** No. Reaches to Model: 1

- ○ Statewide Criteria
- ○ Great Lakes Criteria
- ◉ ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	032317	4.69	664	23000	0.0002		Yes
End of Reach 1	032317	3.69	665	23001	0.0002		Yes

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

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	4.69	0.2557	5880			1190	37					100	7		
End of Reach 1	3.69	0.2557	5880.5			1182	26					100	7		

Q_h

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	4.69														
End of Reach 1	3.69														

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Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

A&T Midland, NPDES Permit No. PA0005754, Outfall 104

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.157 Analysis Hardness (mg/l): 105.16 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	
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	407,310	
Total Antimony	0	0		0	1,100	1,100	597,388	
Total Arsenic	0	0		0	340	340	184,647	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	11,404,687	
Total Boron	0	0		0	8,100	8,100	4,398,951	
Total Cadmium	0	0		0	2.115	2.25	1,219	Chem Translator of 0.942 applied
Total Chromium (III)	0	0		0	593.712	1,879	1,020,359	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	8,849	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	51,593	
Total Copper	0	0		0	14.091	14.7	7,971	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	11,948	
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	68.212	87.0	47,270	Chem Translator of 0.784 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	894	Chem Translator of 0.85 applied
Total Nickel	0	0		0	488.580	490	265,870	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	3.507	4.13	2,241	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	35,300	
Total Zinc	0	0		0	122.280	125	67,902	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	1,629	

Acrylonitrile	0	0		0	650	650	353,002	
Benzene	0	0		0	640	640	347,571	
Bromoform	0	0		0	1,800	1,800	977,545	
Carbon Tetrachloride	0	0		0	2,800	2,800	1,520,625	
Chlorobenzene	0	0		0	1,200	1,200	651,696	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	9,775,446	
Chloroform	0	0		0	1,900	1,900	1,031,853	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	8,146,205	
1,1-Dichloroethylene	0	0		0	7,500	7,500	4,073,103	
1,2-Dichloropropane	0	0		0	11,000	11,000	5,973,884	
1,3-Dichloropropylene	0	0		0	310	310	168,355	
Ethylbenzene	0	0		0	2,900	2,900	1,574,933	
Methyl Bromide	0	0		0	550	550	298,694	
Methyl Chloride	0	0		0	28,000	28,000	15,206,250	
Methylene Chloride	0	0		0	12,000	12,000	6,516,964	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	543,080	
Tetrachloroethylene	0	0		0	700	700	380,156	
Toluene	0	0		0	1,700	1,700	923,237	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	3,692,946	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	1,629,241	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	1,846,473	
Trichloroethylene	0	0		0	2,300	2,300	1,249,085	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	304,125	
2,4-Dichlorophenol	0	0		0	1,700	1,700	923,237	
2,4-Dimethylphenol	0	0		0	660	660	358,433	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	43,446	
2,4-Dinitrophenol	0	0		0	660	660	358,433	
2-Nitrophenol	0	0		0	8,000	8,000	4,344,643	
4-Nitrophenol	0	0		0	2,300	2,300	1,249,085	
p-Chloro-m-Cresol	0	0		0	160	160	86,893	
Pentachlorophenol	0	0		0	8.730	8.73	4,741	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	249,817	
Acenaphthene	0	0		0	83	83.0	45,076	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	162,924	
Benzo(a)Anthracene	0	0		0	0.5	0.5	272	
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	16,292,410	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	2,443,862	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	146,632	
Butyl Benzyl Phthalate	0	0		0	140	140	76,031	

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	445,326	
1,3-Dichlorobenzene	0	0		0	350	350	190,078	
1,4-Dichlorobenzene	0	0		0	730	730	396,449	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	2,172,321	
Dimethyl Phthalate	0	0		0	2,500	2,500	1,357,701	
Di-n-Butyl Phthalate	0	0		0	110	110	59,739	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	868,929	
2,6-Dinitrotoluene	0	0		0	990	990	537,650	
1,2-Diphenylhydrazine	0	0		0	15	15.0	8,146	
Fluoranthene	0	0		0	200	200	108,616	
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	5,431	
Hexachlorocyclopentadiene	0	0		0	5	5.0	2,715	
Hexachloroethane	0	0		0	60	60.0	32,585	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	5,430,803	
Naphthalene	0	0		0	140	140	76,031	
Nitrobenzene	0	0		0	4,000	4,000	2,172,321	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	9,232,366	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	162,924	
Phenanthrene	0	0		0	5	5.0	2,715	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	70,600	

☑ ***CFC*** CCT (min): ###### PMF: 0.200 Analysis Hardness (mg/l): 104.05 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	
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	152,256	
Total Arsenic	0	0		0	150	150	103,811	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	2,837,502	
Total Boron	0	0		0	1,600	1,600	1,107,318	
Total Cadmium	0	0		0	0.253	0.28	193	Chem Translator of 0.907 applied
Total Chromium (III)	0	0		0	76.561	89.0	61,612	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	7,194	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	13,149	
Total Copper	0	0		0	9.264	9.65	6,679	Chem Translator of 0.96 applied

Free Cyanide	0	0		0	5.2	5.2	3,599	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	5,184,552	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.628	3.35	2,316	Chem Translator of 0.785 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	627	Chem Translator of 0.85 applied
Total Nickel	0	0		0	53.781	53.9	37,333	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	3,453	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	8,997	
Total Zinc	0	0		0	122.176	124	85,756	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	2,076	
Acrylonitrile	0	0		0	130	130	89,970	
Benzene	0	0		0	130	130	89,970	
Bromoform	0	0		0	370	370	256,067	
Carbon Tetrachloride	0	0		0	560	560	387,561	
Chlorobenzene	0	0		0	240	240	166,098	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	2,422,258	
Chloroform	0	0		0	390	390	269,909	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	2,145,428	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,038,110	
1,2-Dichloropropane	0	0		0	2,200	2,200	1,522,562	
1,3-Dichloropropylene	0	0		0	61	61.0	42,216	
Ethylbenzene	0	0		0	580	580	401,403	
Methyl Bromide	0	0		0	110	110	76,128	
Methyl Chloride	0	0		0	5,500	5,500	3,806,405	
Methylene Chloride	0	0		0	2,400	2,400	1,660,977	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	145,335	
Tetrachloroethylene	0	0		0	140	140	96,890	
Toluene	0	0		0	330	330	228,384	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	968,903	
1,1,1-Trichloroethane	0	0		0	610	610	422,165	
1,1,2-Trichloroethane	0	0		0	680	680	470,610	
Trichloroethylene	0	0		0	450	450	311,433	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	76,128	
2,4-Dichlorophenol	0	0		0	340	340	235,305	
2,4-Dimethylphenol	0	0		0	130	130	89,970	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	11,073	
2,4-Dinitrophenol	0	0		0	130	130	89,970	
2-Nitrophenol	0	0		0	1,600	1,600	1,107,318	
4-Nitrophenol	0	0		0	470	470	325,275	

p-Chloro-m-Cresol	0	0		0	500	500	346,037	
Pentachlorophenol	0	0		0	6.698	6.7	4,635	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	62,979	
Acenaphthene	0	0		0	17	17.0	11,765	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	40,832	
Benzo(a)Anthracene	0	0		0	0.1	0.1	69.2	
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	4,152,442	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	629,787	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	37,372	
Butyl Benzyl Phthalate	0	0		0	35	35.0	24,223	
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	110,732	
1,3-Dichlorobenzene	0	0		0	69	69.0	47,753	
1,4-Dichlorobenzene	0	0		0	150	150	103,811	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	553,659	
Dimethyl Phthalate	0	0		0	500	500	346,037	
Di-n-Butyl Phthalate	0	0		0	21	21.0	14,534	
2,4-Dinitrotoluene	0	0		0	320	320	221,464	
2,6-Dinitrotoluene	0	0		0	200	200	138,415	
1,2-Diphenylhydrazine	0	0		0	3	3.0	2,076	
Fluoranthene	0	0		0	40	40.0	27,683	
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	1,384	
Hexachlorocyclopentadiene	0	0		0	1	1.0	692	
Hexachloroethane	0	0		0	12	12.0	8,305	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	1,453,355	
Naphthalene	0	0		0	43	43.0	29,759	
Nitrobenzene	0	0		0	810	810	560,580	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	2,353,050	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	40,832	
Phenanthrene	0	0		0	1	1.0	692	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	17,994	

☑ ***THH*** CCT (min): ###### PMF: 0.200 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	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Fluoride (PWS)	0	0		0	1,000	1,000	692,074	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	3,876	
Total Arsenic	0	0		0	10	10.0	6,921	
Total Barium	0	0		0	1,000	1,000	692,074	
Total Boron	0	0		0	3,100	3,100	2,145,428	
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	1,300	1,300	899,696	
Free Cyanide	0	0		0	4	4.0	2,768	
Dissolved Iron	0	0		0	300	300	207,622	
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	692,074	
Total Mercury	0	0		0	0.012	0.012	8.3	
Total Nickel	0	0		0	610	610	422,165	
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	166	
Total Zinc	0	0		0	7,400	7,400	5,121,345	
Acrolein	0	0		0	3	3.0	2,076	
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	69,207	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	3,945	
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	22,838	
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	47,061	

Methyl Bromide	0	0		0	47	47.0	32,527	
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	39,448	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	69,207	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	6,920,736	
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	20,762	
2,4-Dichlorophenol	0	0		0	10	10.0	6,921	
2,4-Dimethylphenol	0	0		0	100	100.0	69,207	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	1,384	
2,4-Dinitrophenol	0	0		0	10	10.0	6,921	
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	2,768,295	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	48,445	
Anthracene	0	0		0	300	300	207,622	
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	138,415	
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	69.2	
2-Chloronaphthalene	0	0		0	800	800	553,659	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	420	420	290,671	
1,3-Dichlorobenzene	0	0		0	7	7.0	4,845	
1,4-Dichlorobenzene	0	0		0	63	63.0	43,601	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	415,244	
Dimethyl Phthalate	0	0		0	2,000	2,000	1,384,147	
Di-n-Butyl Phthalate	0	0		0	20	20.0	13,841	
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	13,841	
Fluorene	0	0		0	50	50.0	34,604	
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	2,768	
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	23,531	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	6,921	
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	13,841	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	48.4	

☑ ***CRL*** CCT (min): ###### PMF: 0.200 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	
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	
Free Cyanide	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	50	50.0	86,059	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	0.051	0.051	87.8	
Benzene	0	0		0	0.58	0.58	998	
Bromoform	0	0		0	4.3	4.3	7,401	
Carbon Tetrachloride	0	0		0	0.4	0.4	688	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.4	0.4	688	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	N/A	N/A	N/A	
Dichlorobromomethane	0	0		0	0.55	0.55	947	
1,2-Dichloroethane	0	0		0	0.38	0.38	654	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.5	0.5	861	
1,3-Dichloropropylene	0	0		0	0.27	0.27	465	
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	4.6	4.6	7,917	
1,1,2,2-Tetrachloroethane	0	0		0	0.17	0.17	293	
Tetrachloroethylene	0	0		0	0.69	0.69	1,188	
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	947	
Trichloroethylene	0	0		0	0.6	0.6	1,033	
Vinyl Chloride	0	0		0	0.02	0.02	34.4	
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	51.6	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.4	1.4	2,410	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.000086	0.00009	0.15	
Benzo(a)Anthracene	0	0		0	0.001	0.001	1.72	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.17	

3,4-Benzofluoranthene	0	0		0	0.001	0.001	1.72	
Benzo(k)Fluoranthene	0	0		0	0.0038	0.004	6.54	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	51.6	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	551	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.0038	0.004	6.54	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.17	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.021	0.021	36.1	
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	86.1	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	86.1	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	51.6	
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	0.14	
Hexachlorobutadiene	0	0		0	0.01	0.01	17.2	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	172	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	1.72	
Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.00069	0.0007	1.19	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	8.61	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	5,680	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Hexachlorobutadiene	0.00009	0.0001	0.01	0.016	0.025	µg/L	0.01	CRL	Discharge Conc ≥ 50% WQBEL (RP)

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Fluoride (PWS)	692	mg/L	Discharge Conc ≤ 10% WQBEL
Total Aluminum	261,069	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	3,876	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	6,921	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	692,074	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	1,107,318	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	193	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	61,612	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	5,672	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	13,149	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	5,109	µg/L	Discharge Conc ≤ 10% WQBEL
Free Cyanide	2,768	µg/L	Discharge Conc ≤ 25% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	207,622	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	5,184,552	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	2,316	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	692,074	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.012	µg/L	Discharge Conc < TQL
Total Nickel	37,333	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	3,453	µg/L	Discharge Conc < TQL
Total Silver	1,436	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	166	µg/L	Discharge Conc < TQL
Total Zinc	43,522	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	1,044	µg/L	Discharge Conc ≤ 25% WQBEL
Acrylonitrile	87.8	µg/L	Discharge Conc < TQL
Benzene	998	µg/L	Discharge Conc ≤ 25% WQBEL
Bromoform	7,401	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	688	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorobenzene	69,207	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	688	µg/L	Discharge Conc ≤ 25% WQBEL

Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	2,422,258	µg/L	Discharge Conc < TQL
Chloroform	3,945	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	947	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	654	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethylene	22,838	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-Dichloropropane	861	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichloropropylene	465	µg/L	Discharge Conc ≤ 25% WQBEL
Ethylbenzene	47,061	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	32,527	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	3,806,405	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	7,917	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	293	µg/L	Discharge Conc ≤ 25% WQBEL
Tetrachloroethylene	1,188	µg/L	Discharge Conc ≤ 25% WQBEL
Toluene	39,448	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	69,207	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	422,165	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2-Trichloroethane	947	µg/L	Discharge Conc ≤ 25% WQBEL
Trichloroethylene	1,033	µg/L	Discharge Conc ≤ 25% WQBEL
Vinyl Chloride	34.4	µg/L	Discharge Conc ≤ 25% WQBEL
2-Chlorophenol	20,762	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	6,921	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	69,207	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	1,384	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	6,921	µg/L	Discharge Conc < TQL
2-Nitrophenol	1,107,318	µg/L	Discharge Conc < TQL
4-Nitrophenol	325,275	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	55,695	µg/L	Discharge Conc < TQL
Pentachlorophenol	51.6	µg/L	Discharge Conc < TQL
Phenol	2,768,295	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	2,410	µg/L	Discharge Conc < TQL
Acenaphthene	11,765	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	207,622	µg/L	Discharge Conc < TQL
Benzidine	0.15	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	1.72	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.17	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	1.72	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	6.54	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	51.6	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	138,415	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	551	µg/L	Discharge Conc < TQL

4-Bromophenyl Phenyl Ether	37,372	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	69.2	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	553,659	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	6.54	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.17	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	110,732	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	4,845	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	43,601	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	36.1	µg/L	Discharge Conc < TQL
Diethyl Phthalate	415,244	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	346,037	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	13,841	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	86.1	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	86.1	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	51.6	µg/L	Discharge Conc < TQL
Fluoranthene	13,841	µg/L	Discharge Conc < TQL
Fluorene	34,604	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.00008	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	692	µg/L	Discharge Conc < TQL
Hexachloroethane	172	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	1.72	µg/L	Discharge Conc < TQL
Isophorone	23,531	µg/L	Discharge Conc < TQL
Naphthalene	29,759	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	6,921	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	1.19	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	8.61	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	5,680	µg/L	Discharge Conc < TQL
Phenanthrene	692	µg/L	Discharge Conc < TQL
Pyrene	13,841	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	48.4	µg/L	Discharge Conc ≤ 25% WQBEL