

Application Type Renewal
Facility Type Industrial
Major / Minor Minor

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

Application No. PA0004081
APS ID 857072
Authorization ID 1070323

Applicant and Facility Information

Applicant Name	<u>CP Industries Holdings, Inc.</u>	Facility Name	<u>Christy Park Works</u>
Applicant Address	<u>2214 Walnut Street</u> <u>Mckeesport, PA 15132-7054</u>	Facility Address	<u>2214 Walnut Street</u> <u>Mckeesport, PA 15132-7054</u>
Applicant Contact	<u>Brian Hatala</u>	Facility Contact	<u>Brian Hatala</u>
Applicant Phone	<u>412-664-6622</u>	Facility Phone	<u>412-664-6622</u>
Client ID	<u>263715</u>	Site ID	<u>252609</u>
SIC Code	<u>3499</u>	Municipality	<u>McKeesport City</u>
SIC Description	<u>Manufacturing - Fabricated Metal Products, Not Elsewhere Classified</u>	County	<u>Allegheny</u>
Date Application Received	<u>March 23, 2015</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>September 28, 2015</u>	If No, Reason	<u>N/A</u>
Purpose of Application	<u>Renewal of NPDES Permit</u>		

Summary of Review

Background

The Pennsylvania Department of Environmental Protection (Department) received an NPDES permit renewal application for the CP Industries Holdings, Inc. facility in McKeesport of Allegheny County on March 23, 2015. There were subsequent updates to the application, with the most recent documents received on March 15, 2016. The current permit was issued on March 16, 2010 and became effective April 1, 2010 through March 31, 2015. The permit was administratively extended although the renewal application was received late. The current permit requires a renewal application be submitted to the Department no later than 180 days prior to expiration.

Facility Description

The facility manufactures and assembles carbon steel seamless pressure vessels (standard industrial classification (SIC) Code 3499 – Fabricated Metals Products). A secondary SIC code is 3443 Fabricated Plate Work. The manufacturing is performed by either drop or rotary spin forging. The facility does not apply any coatings to the pipes other than paint after final testing. The vessels are independent mobile (DOT) compressed gas pressure vessels ranging 10.75” to 24” diameter and from 36” to 40 feet in length. Cooling water and makeup water are recycled and have no connection to the outfalls. Only hydrostatic test water and cylinder ultrasonic quality test water is discharged.

The facility’s testing wastewaters were previously determined to be subject to the 40 CFR Part 420 Effluent Limitation Guideline (ELG) for Iron and Steel Manufacturing Point Source Category, specifically Subpart G Hot Forming for pipe and tube mills. Since there have been no significant changes to the facility’s operations, the ELG applicability will remain in effect. The source of the test wastewater is public service water that is processed through the testing machines. There is no treatment or usage of chemical additives for the testing wastewater. The water accumulates in a sump which overflows into a drain that then

Approve	Deny	Signatures	Date
X		<i>Nicole H. Benoit</i> Nicole H. Benoit, P.E. / Environmental Engineering Specialist	April 16, 2020
X		<i>Michael E. Fifth</i> Michael E. Fifth, P.E. / Environmental Engineer Manager	April 30, 2020

Summary of Review

discharges to Outfall 009. The floors are sloped to prevent any spills from entering into the sump and instead entering into the recycle system.

In addition to the NPDES permit, the facility has an air permit from the Allegheny County Health Department and a hazardous waste RCRA permit issued by the Department.

Outfall Description

The facility has a total of seven outfalls that all discharge to the Youghiogheny River. Outfall 005 and Outfall 008 have been permanently sealed since the current permit was issued. The process water contribution to Outfall 007 has been rerouted to Outfall 009. Therefore, Outfall 009 is the only outfall that discharges process water. During production, the current average flow is 0.0018 MGD and the maximum flow is 0.0061 MGD. The process water discharge is 8 hours per day, 5 days per week. Outfall 009 discharges stormwater as well. The remaining six outfalls (001, 002, 003, 004, 006, 007) discharge stormwater only.

Additional Considerations

At this point of discharge, the Youghiogheny is designated as a Warm Water Fishery (WWF) in Pa Code Chapter 93.9v. The facility is neither increasing pollutant concentration nor loading, and the stream segment is not classified as High Quality or Exceptional Value. Therefore, an antidegradation analysis was not performed. The facility's source water is public water and not from a cooling water intake structure so 316(b) regulations do not apply. The hydrostatic testing water is not heated, and so thermal impacts were not evaluated. No Whole Effluent Toxicity (WET) tests have been performed at the site as none have been required.

Correspondences

CP Industries Holdings had sent in a Notice of Intent (NOI) for a PAG-03 General Permit for Industrial Stormwater and a PAG-10 General Permit for Hydrostatic test water. In accordance with 25 Pa. Code § 92a.54(e)(7), the Department requested that an individual NPDES permit application be submitted and that the PAG-03 and PAG-10 permits not be acted upon in order to consolidate to one NPDES permit. The facility submitted updated information on March 23, 2015 noting that over time they had been able to significantly reduce discharges using various programs documented in the submittal. The individual wastewater application was received on January 5, 2016, and complete sampling results were received by March 15, 2016. The permittee was contacted in March 2020 with clarifying questions and updated production rates and quickly provided that information.

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.

Conclusion

It is recommended that a draft permit be issued for public comment for renewal of NPDES permit PA0004081.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>009</u>	Design Flow (MGD)	<u>0.0061</u>
Latitude	<u>40° 20' 08"</u>	Longitude	<u>-79° 51' 20"</u>
Quad Name	<u>McKeesport</u>	Quad Code	<u>1607</u>
Wastewater Description: <u>Hydrostatic test waters, cylinder ultrasonic test machine waters and stormwater</u>			
Receiving Waters	<u>Youghiogheny River (WWF)</u>	Stream Code	<u>37456</u>
NHD Com ID	<u>69911877</u>	RMI	<u>1.6838</u>
Drainage Area	<u>1760 sq. mi.</u>	Yield (cfs/mi ²)	<u>0.2898</u>
Q ₇₋₁₀ Flow (cfs)	<u>510</u>	Q ₇₋₁₀ Basis	<u>U. S. Army Corps of Engineers</u>
Elevation (ft)	<u>718.7</u>	Slope (ft/ft)	<u>0.0001</u>
Watershed No.	<u>19-D</u>	Chapter 93 Class.	<u>WWF</u>
Existing Use	<u>WWF</u>	Existing Use Qualifier	<u>N/A</u>
Exceptions to Use	<u>None</u>	Exceptions to Criteria	<u>None</u>
Assessment Status	<u>Not Assessed</u>		
Cause(s) of Impairment	<u>N/A</u>		
Source(s) of Impairment	<u>N/A</u>		
TMDL Status	<u>No TMDL</u>	Name	<u>N/A</u>
Background/Ambient Data		Data Source	
pH (SU)	<u>7.0</u>	Default	
Temperature (°F)	<u>Ambient</u>	Default	
Hardness (mg/L)	<u>100</u>	Default	
Other:	<u>N/A</u>	N/A	
Nearest Downstream Public Water Supply Intake	<u>West County Municipality Authority - McKeesport</u>		
PWS Waters	<u>Yes</u>	Flow at Intake (cfs)	<u>18.57</u>
PWS RMI	<u>1.3638</u>	Distance from Outfall (mi)	<u>0.32</u>

Changes Since Last Permit Issuance: All process water is directed to Outfall 009. Outfall 007 closed.

Public Water Supply: There is a PWS intake less than 0.5 miles downstream. An analysis of the discharge's pollutants of concern are expected to have a negligible impact on the receiving water body and constitute an extremely small flow in relation to the flow of the Youghiogheny River. This is supported by the PENTOX modeling that recommended no WQBELs or monitoring, including for those marked as PWS protective criteria (e.g., TDS). The facility is required to implement BMPs to ensure effluent limits and benchmark values are not exceeded in the stormwater discharges. Part A of the permit requires notification to downstream users in the event of an unanticipated noncompliance or potential pollution reporting.

III.C.4.(a) Immediate Reporting - The permittee shall immediately report any incident causing or threatening pollution in accordance with the requirements of 25 Pa. Code §§ 91.33 and 92a.41(b).

(ii) If reasonably possible to do so, the permittee shall immediately notify downstream users of the waters of the Commonwealth to which the substance was discharged. Such notice shall include the location and nature of the danger.

No further protection for the PWS is warranted.

Discharge, Receiving Waters and Water Supply Information			
Wastewater Description:	<u>Stormwater</u>		
Receiving Waters	<u>Youghiogheny River (WWF)</u>		
Design Flow (MGD)	<u>Variable</u>		
Outfall No.	<u>001</u>	Latitude	<u>40° 19' 57"</u> Longitude <u>-79° 51' 07"</u>
Outfall No.	<u>002</u>	Latitude	<u>40° 19' 58"</u> Longitude <u>-79° 51' 08"</u>
Outfall No.	<u>003</u>	Latitude	<u>40° 19' 59"</u> Longitude <u>-79° 51' 11"</u>
Outfall No.	<u>004</u>	Latitude	<u>40° 20' 02"</u> Longitude <u>-79° 51' 14"</u>
Outfall No.	<u>006</u>	Latitude	<u>40° 20' 04"</u> Longitude <u>-79° 51' 16"</u>
Outfall No.	<u>007</u>	Latitude	<u>40° 20' 05"</u> Longitude <u>-79° 51' 17"</u>

Changes Since Last Permit Issuance:

The non-stormwater portion of Outfall 007 has been redirected to Outfall 009. Outfall 007 now only discharges stormwater. Outfalls 005 and 008 are permanently closed.

Compliance History	
Summary of DMRs:	A review of the DMRs submitted from 2014 through present resulted in only one violation. Outfall 009 had an oil and grease concentration of 14 mg/L in June 2018 which was greater than the instantaneous maximum permit limit of 10 mg/L.
Summary of Inspections:	<p>The most recent inspection of the facility was conducted on December 20, 2019. No violations were identified. The following recommendations were made:</p> <ol style="list-style-type: none"> 1. The PPC Plan needs reviewed annually and date/signature should be recorded in the plan. <ul style="list-style-type: none"> • This is addressed in the Part C conditions of the NPDES permit regarding the PPC requirements. 2. The on-site lab needs to be registered with the state and the facility should ensure they are using a DEP approved pH meter or contracts this out <ul style="list-style-type: none"> • This is addressed in the Part A conditions of the NPDES permit with respect to Quality/Assurance/Control. 3. The facility should ensure the contract laboratory is meeting required hold times for sampling <ul style="list-style-type: none"> • This is addressed in the Part A conditions of the NPDES permit with respect to Test Procedures (Methods).

Application:

In the application, the facility noted that there have been minor spills of oil waste or minor hydraulic leaks. Oil absorbent sleeves and loose absorbent have been used to control and mitigate impacts. Leaks are found quickly and repaired. Only one isolated event caused an exceedance of oil and grease in the NPDES required sampling, which was reported to the Department. Stormwater outfalls are inspected monthly. The need for routine maintenance is evaluated at that time.

The Module 1 data notes elevated concentrations of oil and grease at Outfall 004 and 006, and elevated concentrations of zinc at Outfalls 001, 002, 004, 006, 007 and 009 for sampling of stormwater. See the discussion in the Stormwater Limitations section below.

Compliance History

DMR Data for Outfall 009 (from February 1, 2019 to January 31, 2020)

* Note – the facility marked No Discharge on the DMR

Parameter	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19*	AUG-19*	JUL-19	JUN-19	MAY-19	APR-19	MAR-19	FEB-19
Flow (MGD) Average Monthly <i>Monitor and Report</i>	0.0032	0.0015	0.0009	0.0006			0.0002	0.0024	0.0009	0.0011	0.0032	0.0047
Flow (MGD) Daily Maximum <i>Monitor and Report</i>	0.0035	0.003	0.0011	0.0007			0.0003	0.0024	0.0011	0.0011	0.0035	0.0055
pH (S.U.) Minimum <i>Limit – 6.0</i>	7.86	8.14	7.4	7.78			7.88	6.89	7.71	7.98	7.94	7.85
pH (S.U.) Maximum <i>Limit – 9.0</i>	7.94	8.14	7.42	7.84			7.89	6.95	7.77	8.16	8.13	7.9
TSS (lbs/day) Average Monthly <i>Limit – 4.7</i>	0.4574	0.1852	0.1344	0.0655			0.0238	0.3704	0.0999	0.1344	0.4574	0.6524
TSS (lbs/day) Daily Maximum <i>Limit – 12.6</i>	0.5445	0.3704	0.1344	0.0655			0.0238	0.3704	0.1344	0.1344	0.5445	0.7603
TSS (mg/L) Average Monthly <i>Limit – 15</i>	5	2.5	5	5			5	5	5	5	5	5
TSS (mg/L) Instantaneous Maximum <i>Limit – 40</i>	5	5	5	5			5	5	5	5	5	5
Oil and Grease (lbs/day) Daily Maximum <i>Limit – 3.2</i>	0.371	0.371	0.1346	0.0656			0.0238	0.4311	0.1683	0.1346	0.3710	0.5454
Oil and Grease (mg/L) Instantaneous Maximum <i>Limit – 10</i>	5	5	5	5			5	5.81	5	5	5	5

Development of Effluent Limitations

Outfall No. 009
Latitude 40° 20' 8.00"
Design Flow (MGD) 0.0061
Longitude -79° 51' 20.00"
Wastewater Description: Hydrostatic test waters, cylinder UT quality test machine waters and stormwater

Technology-Based Limitations

Section 304(b) of the Federal Clean Water Act (CWA) requires technology limits to be considered. Section 301(b)(1) of the CWA requires compliance with best practicable control technology (BPT) by July 1, 1977. Section 301(b)(2)(E) of the CWA requires compliance with best conventional pollutant control technology (BCT) by March 31, 1989. Section 301(b)(2)(C) of the CWA requires compliance with best available technology (BAT) by March 31, 1989.

The facility’s testing wastewaters were previously determined to be subject to the 40 CFR Part 420 Effluent Limitation Guideline (ELG) for Iron and Steel Manufacturing Point Source Category, specifically Subpart G Hot Forming for pipe and tube mills. Since there have been no significant changes to the facility’s operations, the ELG applicability will remain in effect.

Per §420.73, the Agency (EPA) determined the “[Best Practicable Control Technology (BPT)] level of treatment provides adequate control, the Agency is not promulgating more stringent [Best Available Technology Economically Achievable (BAT)] limitations.” The Best Conventional Technology (BCT) level of treatment is also the same as the BAT level. The BAT limit in §420.72 that represents the operations at the facility is (d) Pipe and tube mills, carbon and specialty. The BPT limits from that section are:

Pollutant or pollutant property	Table 1. §420.72(d) 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	0.212	0.0795
O&G	0.0530	
pH	6.0 to 9.0	6.0 to 9.0

The average annual production during the past five years was 5,660,000 pounds of steel pressure vessels per an update received on April 15, 2020 from the permittee. Year 2016 was the maximum annual production of 7,956,000 pounds, and year 2019 was the least production of 3,270,000 pounds, resulting in a wide range of production rates. In accordance with §420.04(b), the production for use in the ELG calculation shall be based on a reasonable measure of actual production such as the production during the high month of the previous year or the monthly average for the highest of the previous 5 years. According to the permittee’s update on April 15th, the anticipated average annual production is expected to remain at the 2019 level for at least the next five years based on business projections of the market. This is a notable reduction from the average annual production of 4,200 tons per year (8,400,000 pounds per year) from 2004 through 2008.

For the ELG calculation, the maximum monthly production of 592,000 pounds in February 2019 is converted to 21.14 thousand pounds per day during that month. The ELG mass effluent limitations are then calculated multiplying the daily production rate by the applicable pollutant factor from the ELG. Based on this, the following mass limits will apply:

Pollutant or pollutant property	Table 2. Calculated BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
TSS (lbs/day)	4.482	1.681
O&G (lbs/day)	1.121	
pH (S.U.)	6.0 to 9.0	6.0 to 9.0

A review of the DMR data for the past year shows that the permittee is expected to meet these mass loading limitations.

The fact sheet for the current NPDES permit notes that in addition to mass effluent limitations, the Department imposed concentration based effluent limits from the BPT/BCT treatment model flows and effluent quality contained in Table II-1 of the Iron and Steel Manufacturing Hot Forming Subcategory Development Document.

A review of the "Development Document for Effluent Limitations Guidelines, New Source Performance Standards and Pretreatment Standards for the Iron and Steel Manufacturing Point Source Category" May, 1982 showed that a concentration of 15 mg/L average and 40 mg/L maximum for TSS and a 10 mg/L maximum for oil and grease remains valid. These limits are BPT/BCT (Table II-1). Table II-3 for BAT notes "BAT limitations have not been promulgated" and therefore defaults to BPT/BCT. (Tables in Attachment C). In accordance with anti-backsliding, the concentration limits will remain in effect.

A review of the DMRs showed one exceedance of oil and grease of 14 mg/L. This maximum of 13.8 mg/L was provided in the renewal application Results Analysis Tables. Because of the potential to exceed the effluent limit, the sampling frequency of the parameters will remain at 2/month. This will help to ensure best management practices remain sufficient to control the discharge of pollutants.

The stormwater portion of this Outfall follows the same approach as noted in the Stormwater section below. Oil and grease and TSS are covered by the ELG so no further limit development will be applied. Zinc will not be monitored as it is not elevated at this location based on sampling to date.

Water Quality-Based Limitations

Section 302(a) of the CWA allows establishment of water quality effluent limits. Section 303(a)(1) of the CWA allows states to adopt water quality standards. Section 303(d) of the CWQ requires states to designate water uses (e.g., Chapter 93 of PA Code). Section 303(c) of the CWA requires states to develop water quality criteria (e.g., Chapters 16 and 93 of PA Code).

PENTOXSD Version 2.0d for Windows is a single discharge, mass-balance water quality modeling program that includes consideration for mixing, first-order decay and other factors to determine recommended WQBELs for toxic substances and several non-toxic substances. Required input data including stream code, river mile index, elevation, drainage area, discharge name, NPDES permit number and discharge flow rate are entered into PENTOXSD to establish site-specific discharge conditions. Other data such as low flow yield, reach dimensions, and partial mix factors may also be entered to further characterize the discharge and receiving water. Pollutants are then selected for analysis based on those present or likely to be present in a discharge at levels that may cause, have the reasonable potential to cause, or contribute to excursions above state water quality standards (i.e., a reasonable potential analysis). Discharge concentrations for the selected pollutants are chosen to represent the "worst case" quality of the discharge (i.e., maximum reported discharge concentrations). PENTOXSD then evaluates each pollutant by computing a Waste Load Allocation for each applicable criterion, determining a recommended maximum WQBEL, and comparing that recommended WQBEL with the input discharge concentration to determine which is more stringent. Based on this evaluation, PENTOXSD recommends average monthly and maximum daily WQBELs (see Attachment A).

The information described above, including the maximum reported discharge concentrations, the most stringent water quality criteria, the pollutant-of-concern (reasonable potential) determinations, the calculated WQBELs, and the WQBEL/monitoring recommendations are collected on a spreadsheet titled "Toxics Screening Analysis" (see Attachment B). Pollutants are candidates for modeling if the maximum reported effluent concentration exceeds or is equal to the most stringent Chapter 93 water quality criterion for a parameter with a sample size of less than 10 or the average monthly effluent concentration as determined by the TOXCONC spreadsheet exceeds or is equal to the most stringent Chapter 93 water quality criterion for a parameter with a sample size of greater than or equal to 10.

If the "Toxics Screening Analysis" spreadsheet marks pollutants with concentrations higher than the minimum WQBEL criterion for modeling, those pollutant levels and receiving stream information are to be entered into the Department's PENTOXSD model. The model performs a mass balance calculation of the pollutant and discharge flow rate with the Q7-10 flow rate of the stream to determine if the pollutant will exceed water quality limits for human health or aquatic life protection. Pennsylvania defines Q7-10 flow in the Pa Code § 96.1 as "The actual or estimated lowest 7 consecutive-day average flow that occurs once in 10 years for a stream with unregulated flow, or the estimated flow for a stream with regulated flow." The model results in the most stringent WQBEL limits for the particular receiving stream.

For Outfall 009, none of the pollutants had a sample size of greater than 3, and so the maximum concentration was entered into the Toxics Screening Analysis spreadsheet. The facility does not have any site-specific criterion for any pollutant

applied in the past, nor requested in the latest permit renewal application. The outfall flow used for modeling is the maximum design flow of 0.0061 MGD (average flow is 0.0018 MGD). Since a PWS is in the vicinity of the discharge, the PWS intake rate was entered into PENTOX inputs. The results of the PENTOX modeling were then entered into Toxics Screening Analysis for determination of limits and monitoring.

Where the maximum reported concentration exceeds 50% of the WQBEL a reasonable potential has been demonstrated to exceed the water quality criterion and an effluent limitation will be established. For non-conservative pollutants, monitoring will be applied if the maximum reported concentration is greater than 25% of the WQBEL. For conservative pollutants, monitoring will be applied if the maximum reported concentration is greater than 10% of the WQBEL. Conservative and non-conservative pollutants are defined in Pa Code §96.1.

The results of the Toxics Screening Analysis determined that no water quality limits nor monitoring are recommended for the process water discharge.

Anti-Backsliding

Section 402(o) of the CWA states “...a permit may not be renewed, reissued, or modified ... subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.”

A summary of the current permit limits for Outfalls 007 and 009 are as follows:

Parameter	Effluent Limitations					Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)			Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Monthly Average	Daily Maximum	Instant. Maximum		
Flow (MGD)	Monitor and Report	XXX	XXX	XXX	XXX	2 / month	Measured
Total Suspended Solids	4.7	12.6	15	XXX	40	2 / month	Grab
Oil and Grease	XXX	3.2	XXX	XXX	10	2 / month	Grab
pH	Not less than 6.0 nor greater than 9.0 standard units					2 / month	Grab

- See Part C.8 – The total combined pollutant mass discharged from Outfalls 007 and 009 for TSS and oil and grease cannot exceed the average monthly and daily maximum mass effluent limitations
- See Part C.9 – Shall monitor and record monthly production data for Outfall 007 and 009 separately in order to determine appropriate production rate associated with each outfall for use in calculating mass effluent limitations for each outfall. This data shall be submitted with the next NPDES permit renewal application.

Since the process water contribution to Outfall 007 has been eliminated, the technology-based limits will apply to Outfall 009 only. Part C.8 and C.9 in the current permit are no longer applicable. The current technology-based limits are from the ELG and do not relate to stormwater, so there are no current limits at Outfall 007 subject to antibacksliding. Outfall 007 is stormwater only.

The past load effluent limitations for TSS of 4.7 lbs/day monthly average and 12.6 lbs/day daily maximum and oil and grease of 3.2 lbs/day daily maximum were greater than the new limits calculated based on the production reduction. The proposed ELG limits reflect changes in production to maintain the level of protection.

Summary

The more stringent of the Technology-Based Limitations and Water Quality-Based Limitations in accordance with anti-backsliding will be the effluent limitations established for Outfall 009. See Section “Proposed Effluent Limitations and Monitoring Requirements”.

Development of Effluent Limitations

Outfall No.	<u>001</u>	Latitude	<u>40° 19' 57"</u>	Longitude	<u>-79° 51' 07"</u>
Outfall No.	<u>002</u>	Latitude	<u>40° 19' 58"</u>	Longitude	<u>-79° 51' 08"</u>
Outfall No.	<u>003</u>	Latitude	<u>40° 19' 59"</u>	Longitude	<u>-79° 51' 11"</u>
Outfall No.	<u>004</u>	Latitude	<u>40° 20' 02"</u>	Longitude	<u>-79° 51' 14"</u>
Outfall No.	<u>006</u>	Latitude	<u>40° 20' 04"</u>	Longitude	<u>-79° 51' 16"</u>
Outfall No.	<u>007</u>	Latitude	<u>40° 20' 05"</u>	Longitude	<u>-79° 51' 17"</u>
Outfall No.	<u>009</u>	Latitude	<u>40° 20' 8"</u>	Longitude	<u>-79° 51' 20"</u>

Wastewater Description: Stormwater

Technology-Based Limitations

PAG-03 General Permit – Monitor and Report

The Department’s guidance recommends the use of Best Professional Judgment (BPJ) to consider application of technology-based effluent limitations on stormwater. Section 304(b)(2)(B), 304(b)(4)(B), and 402(a)(1) of the CWA allows establishment of effluent limitations on a case-by-case basis (BPJ). Effluent limitations and monitoring requirements for industrial stormwater discharges may be important for ensuring that Best Management Practices (BMPs) are adequately implemented. A consideration should be made to the applicable appendix of the PAG-03 General Permit as a minimum, as appropriate. Additional limits, benchmarks and monitoring requirements may be added as justified.

Based on CPI Industries Holding’s SIC Code of 3499, the facility would be classified under Appendix U – Fabricated Metal Products of the PAG-03 General Permit for Stormwater Associated with Industrial Activity if the facility were eligible for this permit coverage. The appendix classification is per Table 1 of the NOI Instructions (3850-PM-BCW0083a). Based on a further review of this grouping of SIC codes, the operations at the facility are more reflective of Appendix B – Primary Metals, which includes SIC Codes 3312-3317 Steel Works, Blast Furnaces, and Rolling and Finishing Mills. Since this facility performs hot rolling of carbon steel to produce pressure vessels, the pollutants of concern fall under this category more closely. Stormwater quality control techniques can be achieved via BMPs and do not require significant capital that would be cost prohibitive. Any facility that qualifies for the PAG-03 General Permit for Stormwater Associated with Industrial Activity is required to implement the permit’s BMPs where applicable.

The PAG-03 Appendix B monitoring requirements are shown in Table 3.

Table 3. PAG-03 Appendix B – Primary Metals

Discharge Parameter	Units	Sample Type	Measurement Frequency	Benchmark Values
Total Suspended Solids	mg/L	Grab	1/6 months	100
Total Aluminum	mg/L	Grab	1/6 months	---
Total Zinc	mg/L	Grab	1/6 months	---
Total Copper	mg/L	Grab	1/6 months	---
Total Iron	mg/L	Grab	1/6 months	---
Total Lead	mg/L	Grab	1/6 months	---

The facility’s SWPPP states “CP Industries Holdings, Inc., manufactures Carbon Steel seamless pressure vessels from seamless steel pipe using various hot forming processes such as drop or rotary spin forging.” The facility does not apply coatings or other finishes to the carbon steel outside of painting. Therefore, copper, lead and aluminum are not expected to be present at this facility. Iron is a pollutant of concern based on the storage of scrap metallurgical samples outside Bldg. 34. TSS, zinc and oil and grease are present at the facility based on sampling results. As such, at a minimum, monitoring of TSS, zinc, oil and grease and iron are proposed in the renewed permit.

A review of the site-specific BMPs in Appendix B are not necessarily applicable to the operating at this hot forming only facility. Therefore, just those BMPs in Part C II of the General Permit (applicable to all permittees) will be applied to Part C of this renewed permit.

Zinc, Total – Monitor and Report

The facility collected stormwater samples using both grab and flow-weighted composite methods. The maximum of the two concentrations for each pollutant will be considered as sampling was only conducted for one event.

The concentration of zinc at Outfalls 001 and 002 were elevated as shown in Table 4.

Table 4. Renewal Sampling for Zinc in Stormwater

Outfall	Zinc (mg/L)
001	3.38
002	3.30
003	0.079
004	0.546
006	0.647
007	0.504

The permittee noted that a galvanized sheet metal paint booth had been installed outdoors but was moved indoors in May 2016. The galvanized coating on the sheet metal may have contributed to the elevated zinc. Monitoring of zinc will be more frequent at 1/quarter rather than 1/ 6 months as noted above to better determine the zinc concentration in the stormwater run-off. Through BMPs such as the relocation of galvanized materials, as appropriate, it is expected that the facility can lower the zinc concentration.

Oil and Grease – Best Professional Judgment (BPJ)

The concentration of oil and grease at Outfalls 004 and 006 were elevated in the renewal sampling as shown in Table 5. The maximum concentration of oil and grease from the DMR review at Outfall 009 was elevated and resulted in an NPDES violation (*).

Table 5. Renewal Sampling for Oil and Grease in Stormwater

Outfall	Oil and Grease (mg/L)
001	<5.00
002	<5.00
003	<5.00
004	15.3
006	108.0
007	<5.00
009	13.8*

The Outfall 004 grab sample result of 15.3 mg/L and 108.0 mg/L are nearly equal to the 15.0 mg/L and 107.0 mg/L flow-weighted composite sample results, respectively, further validating that elevated oil and grease was discharged in the stormwater only outfalls. It is believed that BMPs can be implemented to reduce the oil and grease concentration. A limit will be placed on Outfall 006. The source of the elevated oil and grease at Outfall 006 was an oil leak from a machine. The oil migrated to a catch basin that tied into one of the downspouts and into the stormwater conveyance. This was discovered and repaired in March 2020. The downspout is now connected directly to the stormwater conveyance piping and the catch basin has been cemented closed. The catch basin is indoors and will not have an impact on other drainages. Outfall 004 and 006 sampling will be at a frequency of 1/quarter. The other outfalls with <5.0 mg/L results will be 1/ 6 months.

A benchmark will be applied to the other outfalls, except for Outfall 009 which has an oil and grease limit already per the ELG. The PAG-03 permit benchmark value for oil and grease where it is monitored under an appendix is 30 mg/L at a measurement frequency of 1/6 months. Per Pa Code § 95.2. Effluent standards for industrial wastes:

- (2) Oil-bearing wastewaters, except those subject to paragraph (3), must comply with the following:
 - (i) At no time cause a film or sheen upon or discoloration of the waters of this Commonwealth or adjoining shoreline.

(ii) At no time contain more than 15 milligrams of oil per liter as a daily average value nor more than 30 milligrams of oil per liter at any time, or whatever lesser amount the Department may specify for a given discharge or type of discharge as being necessary for the proper protection of the public interest or to meet any requirements based upon the State Act or the Federal Act, as defined in § 92.1 (relating to definitions).

Regarding the effluent limitation, for Outfall 006, the six BPJ factors will be evaluated. (1) The age of the facility and equipment is addressed in the PAG-03 BPJ section above. (2) The process employed is believed to be BMPs in accordance with those developed in the PAG-03 permit relating to oil and grease management. (3) BMPs will be placed in the permit from the PAG-03 Part C Section II. BMPs Applicable to All Permittees, particularly B. Pollution Prevention and Exposure Minimization, C. Good Housekeeping, and E. Spill Prevention and Responses. These BMPs include preventing runoff of polluted stormwater and diverting run-on, containing or diverting potential leaks and spills, proper material storage, clean up with dry methods and nearby spill kits, indoor activities and storage or use of drip pans and adsorbents, spill/overflow protection, closing dumpsters, eliminating floor drain connections to storm sewers, routine cleaning and maintenance and employee training. In addition to these BMPs, an oil/water separator may further protect a receiving water from oil and grease discharge (though it should not be used strictly as treatment of polluted stormwater). A Part C condition will be added to the permit for requirements of proper oil/water separator selection/design and operation and maintenance in the event the permittee determines it will be a necessary BMP for the facility. The conditions will be those of Appendix L.V.C of the PAG-03 permit, as applicable, which addresses oil/water separator design in Section 2 and Operation and Maintenance in Section 3. (4) The implementation of any or all of these BMPs is expected to have minimal to no impact on any of the manufacturing or recycle treatment system process. The cost of implementing the BMPs, including installation of an oil/water separator is not cost prohibitive as these BMPs were determined to be achievable under the PAG-03 permit and apply to all facility in an industrial category. Implementation will not put the permittee at a competitively economic disadvantage. (6) A non-water quality environmental impact may be reduced loading to the soil as a result of these BMPs.

Based on this evaluation of both regulated levels and BPJ factors, it is reasonable to implement an oil and grease limit that will protect the receiving water. As noted above, a wastewater discharge under § 95.2 may not contain more than 15 mg/L as a *daily average* (emphasis added) value nor more than 30 mg/L of oil at any time. Due to the variable nature of stormwater, the limit will be applied 1/quarter. It is therefore reasonable to apply 10 mg/L as a daily average value at a frequency of once per quarter. The sample type will be a grab.

Water Quality-Based Limitations

The water quality analysis for storm water outfalls differs from the water quality analysis for other point source discharges because storm water discharges have a variable flow rate and—unless they are flow-controlled using valves or detention ponds—generally do not discharge at Q₇₋₁₀ design conditions (stream flow is augmented above Q₇₋₁₀ flow by the same rainfall that caused the storm water discharge). Based on DEP guidance, effluent limits may be warranted when pollutant concentrations in storm water are significant, which may be quantified as "100 times the most stringent Chapter 93 criterion" or greater than "100 mg/L (or a lessor amount for large industrial areas that drain to small streams)."

Oil and Grease – Effluent Limitation and Concentration Goal

The permittee reported an oil and grease concentration of 108 mg/L at Outfall 006 which is significantly elevated and expected to have negative impacts on the receiving water body. It is appropriate to apply a 15 mg/L daily average value, or 30 mg/L instantaneous maximum value in accordance with § 95.2. Meeting this limitation is achievable with the same BMPs as noted in the Technology-Based Effluent Limitation BPJ development section above. Since stormwater is variable and monthly sampling is not always achievable, it is appropriate to apply a lower concentration of 10 mg/L as a daily maximum with sampling once per quarter. For the stormwater outfalls other than Outfall 006, 10 mg/L will be the benchmark value applied as a concentration goal. Like the PAG-03 General Permit, a Part C condition will be added to require a Corrective Action Plan if the benchmark is exceeded in two consecutive monitoring periods. The benchmark value is not an effluent limitation and exceedance of the benchmark will not constitute a permit violation of an effluent limitation exceedance. If repeated exceedances occur though, the Department may exercise its option to amend the permit to implement an effluent limitation.

Zinc - Concentration Goal

The Chapter 93 criterion for dissolved zinc is listed in Table 5 of § 93.8c. The criterion for continuous concentration is hardness dependent, and for the Youghiogheny River the total hardness is assumed to be 100 mg/L. Using this concentration, the dissolved zinc concentration would be 120 µg/L at criterion. The total zinc is calculated based on the

conversion factor, which is 0.986 for chronic, on-going concentrations. Using the dissolved zinc criterion divided by the conversion factor, as defined in the footnotes to Table 5, the total zinc concentration is equal to the dissolved zinc concentration at criterion. With this, the applicable criterion for total zinc is 0.12 mg/L. 100 times this amount is 12 mg/L. The maximum value reported by the permittee is 3.38 mg/L, or 28%. At this level, no limits are warranted at any of the outfalls. In accordance with "SOP – Establishing WQBELs and Permit Conditions for Toxic Pollutants in NPDES Permits" monitoring should be established when the maximum reported concentration is between 10-50% of the WQBEL. The outfalls with a concentration above 1.2 mg/L is 001 and 002. At those outfalls, it is appropriate to monitor zinc at a frequency of 1/quarter as a grab sample.

The three most common sources of zinc at industrial facilities as determined by Washington State is galvanized metal surfaces, motor oil and hydraulic fluid and tire dust. Additional galvanized items can include roof gutters, ducts/HVAC, storm sewer pipe, and chain link fence. If CP Industries Holdings finds that galvanized metal is the source of zinc, the materials may be replaced, painted or coated. If motor oil, hydraulic fluid or tire dust is found to be the main source, these activities may be moved indoors or under a cover to eliminate stormwater exposure. Neither galvanized material changes or moving activities indoors requires significant engineering evaluation. Painting galvanized materials is easily achieved through a contractor or in-house work and review of the paint MSDS upon consultation with a retail paint supplier. After painting, the permittee should inspect the material once per year and perform touch-up work as needed.

Moving activities indoors may result in changes or rearrangement of other processes but is expected to have a minimal impact. The cost for moving indoors or under cover is minimal. Painting is expected to be a smaller cost than replacement. Neither are expected to be cost-prohibitive for a manufacturing facility though.

With the implementation of these BMPs, it is expected that the zinc concentration can be less than 10% of the water quality criterion. Therefore, a benchmark value of 1.0 mg/L of zinc will be included in the renewed permit as a level to indicate appropriate BMP use and minimization of zinc and galvanized material exposure to stormwater. Like the PAG-03 General Permit, a Part C condition will be added to require a Corrective Action Plan if the benchmark is exceeded in two consecutive monitoring periods. The benchmark value is not an effluent limitation and exceedance of the benchmark will not constitute a permit violation of an effluent limitation exceedance. If repeated exceedances occur though, the Department may exercise its option to amend the permit and implement an effluent limitation.

Anti-Backsliding

Outfall 006 has the following limits:

- TSS monitor and report 1/month as a grab
- See Part C.7 – Required a Storm Water Pollution Prevention Plan (SWPPP) for Outfalls 006 and 008 be submitted to the Department for review no later than twelve months after permit effective date and required that the plan describe measures to implemented to meet a discharge goal below 100 mg/L for TSS and/or eliminate or reduce the pollutants in the discharge. If after a minimum of twelve sampling results (one year) following implementation of the SWPPP the permittee was able to submit an NPDES permit amendment application if they were able to demonstrate the stormwater runoff became uncontaminated.

The facility updated the plan on June 1, 2010. The facility did not elect to submit a permit amendment application, nor did the facility demonstrate the stormwater is uncontaminated in the renewal application. The goal will therefore continue to apply.

Outfalls 001, 002, 003, 004 and 005 are permitted to discharge uncontaminated storm water runoff and uncontaminated groundwater from areas in and around the facility. There are currently no specific effluent limitations on the outfalls.

Summary

The more stringent of the Technology-Based Limitations and Water Quality-Based Limitations in accordance with anti-backsliding will be the effluent limitations established for Outfalls 001, 002, 003, 004, 006 and 007. See Section "Proposed Effluent Limitations and Monitoring Requirements".

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001) and/or BPJ.

Outfalls 001 and 002, Effective Period: Permit Effective Date through Permit Expiration Date

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Monthly Average	Daily Maximum	Instant. Maximum		
Flow (MGD)	XXX	Report	XXX	XXX	XXX	XXX	1 / quarter	Estimated
Oil and Grease ⁽¹⁾	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab
Zinc, Total ⁽¹⁾	XXX	XXX	XXX	XXX	Report	XXX	1 / quarter	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab
Iron, Total	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab

Compliance Sampling Location: End of Outfall Pipe

Note 1: See Part C III.F.6 of the Permit for the benchmark values and corrective action plan requirements.

Outfalls 003, 004, and 007, Effective Period: Permit Effective Date through Permit Expiration Date

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Monthly Average	Daily Maximum	Instant. Maximum		
Flow (MGD)	XXX	Report	XXX	XXX	XXX	XXX	1 / 6 months	Estimated
Oil and Grease ⁽¹⁾	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab
Zinc, Total ⁽¹⁾	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab
Iron, Total	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab

Compliance Sampling Location: End of Outfall Pipe

Note 1: See Part C III.F.6 of the Permit for the benchmark values and corrective action plan requirements.

Outfall 006, Effective Period: Permit Effective Date through Permit Expiration Date

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Monthly Average	Daily Maximum	Instant. Maximum		
Flow (MGD)	XXX	Report	XXX	XXX	XXX	XXX	1 / quarter	Estimated
Oil and Grease	XXX	XXX	XXX	XXX	10.0	XXX	1 / quarter	Grab
Zinc, Total ⁽¹⁾	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab
Iron, Total	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab

Compliance Sampling Location: End of Outfall Pipe

Note 1: See Part C III.F.6 of the Permit for the benchmark values and corrective action plan requirements.

Outfall 009, Effective Period: Permit Effective Date through Permit Expiration Date

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Instant. Minimum	Monthly Average	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	2/month	Measured
pH (S.U.)	XXX	XXX	6.0	XXX	XXXX	9.0	2/month	Grab
Total Suspended Solids	1.7	4.5	XXX	15.0	XXX	40.0	2/month	Grab
Oil and Grease ⁽¹⁾	XXX	1.1	XXX	XXX	XXX	10.0	2/month	Grab
Zinc, Total ^(2, 3)	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab
Iron, Total ⁽²⁾	XXX	XXX	XXX	XXX	Report	XXX	1 / 6 months	Grab

Compliance Sampling Location: End of Outfall Pipe

Note 1: One sample per quarter to be collected during a precipitation event

Note 2: To be collected during a precipitation event

Note 3: See Part C III.F.6 of the Permit for the benchmark values and corrective action plan requirements.

Tools and References Used to Develop Permit	
<input type="checkbox"/>	WQM for Windows Model (see Attachment)
<input checked="" type="checkbox"/>	PENTOXSD for Windows Model (see Attachment A)
<input type="checkbox"/>	TRC Model Spreadsheet (see Attachment)
<input type="checkbox"/>	Temperature Model Spreadsheet (see Attachment)
<input checked="" type="checkbox"/>	Toxics Screening Analysis Spreadsheet (see Attachment B)
<input type="checkbox"/>	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
<input checked="" type="checkbox"/>	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
<input type="checkbox"/>	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
<input type="checkbox"/>	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
<input type="checkbox"/>	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
<input type="checkbox"/>	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
<input type="checkbox"/>	Pennsylvania CSO Policy, 385-2000-011, 9/08.
<input type="checkbox"/>	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
<input type="checkbox"/>	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
<input type="checkbox"/>	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
<input type="checkbox"/>	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
<input type="checkbox"/>	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
<input checked="" type="checkbox"/>	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
<input type="checkbox"/>	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
<input type="checkbox"/>	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
<input type="checkbox"/>	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
<input type="checkbox"/>	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
<input type="checkbox"/>	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Design Stream Flows, 391-2000-023, 9/98.
<input type="checkbox"/>	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.
<input type="checkbox"/>	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
<input type="checkbox"/>	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
<input checked="" type="checkbox"/>	SOP: BPNPSM-PMT-001, BCW-PMT-032, BCW-PMT-037
<input checked="" type="checkbox"/>	Other: Development Document for Effluent Limitations Guidelines, New Source Performance Standards and Pretreatment Standards for the Iron and Steel Manufacturing Point Source Category <i>May, 1982</i> (see Attachment C)
<input checked="" type="checkbox"/>	Other: Suggested Practices to Reduce Zinc Concentrations in Industrial Stormwater Discharges, June 2008 (Publication Number 08-10-025). Prepared by: Steven Golding, Washington State Department of Ecology, Environmental Assessment Program for Water Quality Program (see Attachment D)

Attachment A

PENTOXSD Modeling Results

PENTOXSD Analysis Results

Recommended Effluent Limitations

<u>SWP Basin</u>	<u>Stream Code:</u>	<u>Stream Name:</u>	
19D	37456	YOUGHIOGHENY RIVER	

RMI	Name	Permit Number	Disc Flow (mgd)
1.68	Outfall 009	PA0004081	0.0061

Parameter	Effluent Limit (µg/L)	Governing Criterion	Max. Daily Limit (µg/L)	Most Stringent	
				WQBEL (µg/L)	WQBEL Criterion
ANTIMONY	20	INPUT	31.203	258433	THH
CADMIUM	5	INPUT	7.801	9108.655	AFC
LEAD	5	INPUT	7.801	146826.5	CFC
PHENOL	250	INPUT	390.04	9.6912E+08	THH
SELENIUM	20	INPUT	31.203	230243.2	CFC
SILVER	5	INPUT	7.801	16159.4	AFC
THALLIUM	10	INPUT	15.602	11075.7	THH
TOTAL DISSOLVED SOLIDS (PWS)	505000	INPUT	787881.2	NA	NA

PENTOXSD

Modeling Input Data

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
37456	1.68	718.70	1760.00	0.00010	12.00	<input checked="" type="checkbox"/>

Stream Data

LFY	Trib Flow (cfs)	Stream Flow (cfs)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Rch Velocity (fps)	Rch Trav Time (days)	Tributary		Stream		Analysis		
								Hard (mg/L)	pH	Hard (mg/L)	pH	Hard (mg/L)	pH	
Q7-10	0.2898	0	510	0	425	9	0	0	100	7	0	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard (mg/L)	Disc pH
Outfall 009	PA0004081	0	0	0.0061	0	0	0	0	0	100	7

Parameter Data

Parameter Name	Disc Conc (µg/L)	Trib Conc (µg/L)	Disc Daily CV	Disc Hourly CV	Stream Conc (µg/L)	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc (µg/L)
ANTIMONY	20	0	0.5	0.5	0	0	0	0	1	0
CADMIUM	5	0	0.5	0.5	0	0	0	0	1	0
LEAD	5	0	0.5	0.5	0	0	0	0	1	0
PHENOL	250	0	0.5	0.5	0	0	0	0	1	0
SELENIUM	20	0	0.5	0.5	0	0	0	0	1	0
SILVER	5	0	0.5	0.5	0	0	0	0	1	0
THALLIUM	10	0	0.5	0.5	0	0	0	0	1	0
TOTAL DISSOLVED SOLIDS (PWS)	505000	0	0.5	0.5	0	0	0	0	1	0

Stream Code	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope	PWS With (mgd)	Apply FC
37456	1.36	718.60	1765.00	0.00010	0.00	<input checked="" type="checkbox"/>

Stream Data

LFY	Trib Flow (cfs)	Stream Flow (cfs)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Rch Velocity (fps)	Rch Trav Time (days)	Tributary		Stream		Analysis		
								Hard (mg/L)	pH	Hard (mg/L)	pH	Hard (mg/L)	pH	
Q7-10	0.2898	0	510	0	425	9	0	0	100	7	0	0	0	0
Qh		0	0	0	0	0	0	0	100	7	0	0	0	0

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	AFC PMF	CFC PMF	THH PMF	CRL PMF	Disc Hard (mg/L)	Disc pH
		0	0	0	0	0	0	0	0	100	7

Parameter Data

Parameter Name	Disc Conc (µg/L)	Trib Conc (µg/L)	Disc Daily CV	Disc Hourly CV	Steam Conc (µg/L)	Stream CV	Fate Coef	FOS	Crit Mod	Max Disc Conc (µg/L)
ANTIMONY	0	0	0.5	0.5	0	0	0	0	1	0
CADMIUM	0	0	0.5	0.5	0	0	0	0	1	0
LEAD	0	0	0.5	0.5	0	0	0	0	1	0
PHENOL	0	0	0.5	0.5	0	0	0	0	1	0
SELENIUM	0	0	0.5	0.5	0	0	0	0	1	0
SILVER	0	0	0.5	0.5	0	0	0	0	1	0
THALLIUM	0	0	0.5	0.5	0	0	0	0	1	0
TOTAL DISSOLVED SOLIDS (PWS)	0	0	0.5	0.5	0	0	0	0	1	0

PENTOXSD Analysis Results

Hydrodynamics

<u>SWP Basin</u>		<u>Stream Code:</u>				<u>Stream Name:</u>						
19D		37456				YOUGHIOGHENY RIVER						
RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope	Depth (ft)	Width (ft)	WD Ratio	Velocity (fps)	Reach Trav Time (days)	CMT (min)	

Q7-10 Hydrodynamics

1.684	510	18.564	491.44	0.00943	0.0001	9	425	47.222	0.1285	0.1522	916.906
1.364	510	0	491.44	NA	0	0	0	0	0	0	NA

Qh Hydrodynamics

1.684	1727.4	18.564	1708.9	0.00943	0.0001	15.574	425	27.29	0.2582	0.0757	402.827
1.364	1727.4	0	1708.9	NA	0	0	0	0	0	0	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number							
1.68	Outfall 009	PA0004081							
AFC									
Q7-10:	CCT (min)	15	PMF	0.127	Analysis pH	7	Analysis Hardness	100	
	Parameter		Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	ANTIMONY		0	0	0	0	1100	1100	7320000
	CADMIUM		0	0	0	0	2.014	2.133	14210.97
	LEAD		Dissolved WQC. Chemical translator of 0.944 applied.		0	0	64.581	81.645	543907.7
	SELENIUM		Dissolved WQC. Chemical translator of 0.791 applied.		0	0	NA	NA	NA
	SILVER		0	0	0	0	3.217	3.784	25211.26
	THALLIUM		Dissolved WQC. Chemical translator of 0.85 applied.		0	0	65	65	433020.6
	PHENOL		0	0	0	0	NA	NA	NA
	TOTAL DISSOLVED SOLIDS (PWS)		0	0	0	0	NA	NA	NA
CFC									
Q7-10:	CCT (min)	720	PMF	0.886	Analysis pH	7	Analysis Hardness	100	
	Parameter		Stream Conc. (µg/L)	Stream CV	Trib Conc. (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	ANTIMONY		0	0	0	0	220	220	1.015E+07
	CADMIUM		0	0	0	0	0.246	0.271	12488.91
	LEAD		Dissolved WQC. Chemical translator of 0.909 applied.		0	0	2.517	3.182	146826.5
	SELENIUM		Dissolved WQC. Chemical translator of 0.791 applied.		0	0	4.6	4.989	230243.2
	SILVER		Dissolved WQC. Chemical translator of 0.922 applied.		0	0	NA	NA	NA
	THALLIUM		0	0	0	0	13	13	599933.8
	PHENOL		0	0	0	0	NA	NA	NA
	TOTAL DISSOLVED SOLIDS (PWS)		0	0	0	0	NA	NA	NA
THH									
Q7-10:	CCT (min)	720	PMF	0.886	Analysis pH	NA	Analysis Hardness	NA	

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number							
1.68	Outfall 009	PA0004081							
	Parameter		Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	ANTIMONY		0	0	0	0	5.6	5.6	258433
	CADMIUM		0	0	0	0	NA	NA	NA
	LEAD		0	0	0	0	NA	NA	NA
	SELENIUM		0	0	0	0	NA	NA	NA
	SILVER		0	0	0	0	NA	NA	NA
	THALLIUM		0	0	0	0	0.24	0.24	11075.7
	PHENOL		0	0	0	0	21000	21000	9.6912E+08
	TOTAL DISSOLVED SOLIDS (PWS)		0	0	0	0	500000	500000	NA

CRL

Qh:	CCT (min)	402.827	PMF	1							
	Parameter				Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)
	ANTIMONY				0	0	0	0	NA	NA	NA
	CADMIUM				0	0	0	0	NA	NA	NA
	LEAD				0	0	0	0	NA	NA	NA
	SELENIUM				0	0	0	0	NA	NA	NA
	SILVER				0	0	0	0	NA	NA	NA
	THALLIUM				0	0	0	0	NA	NA	NA
	PHENOL				0	0	0	0	NA	NA	NA
	TOTAL DISSOLVED SOLIDS (PWS)				0	0	0	0	NA	NA	NA

PENTOXSD Analysis Results

Wasteload Allocations

RMI	Name	Permit Number
1.68	Outfall 009	PA0004081

Attachment B

Toxics Screening Analysis Spreadsheet

TOXICS SCREENING ANALYSIS
WATER QUALITY POLLUTANTS OF CONCERN
VERSION 2.7

CLEAR FORM

Facility: **CP Industries Holdings, Inc.**
Analysis Hardness (mg/L): **100**
Stream Flow, Q₇₋₁₀ (cfs): **510**

NPDES Permit No.: **PA0004081**
Discharge Flow (MGD): **0.004**

Outfall: **009**
Analysis pH (SU): **7**

Parameter	Maximum Concentration in Application or DMRs (µg/L)	Most Stringent Criterion (µg/L)	Candidate for PENTOXSD Modeling?	Most Stringent WQBEL (µg/L)	Screening Recommendation	
Group 1	Total Dissolved Solids	505000	500000	Yes	NA	#VALUE!
	Chloride	124000	250000	No		#VALUE!
	Bromide	2130	N/A	No		#VALUE!
	Sulfate	44800	250000	No		#VALUE!
	Fluoride	500	2000	No		
Group 2	Total Aluminum	18	750	No		
	Total Antimony	< 20	5.6	Yes	258433	No Limits/Monitoring
	Total Arsenic	< 10	10	No		
	Total Barium	38	2400	No		
	Total Beryllium	< 10	N/A	No		
	Total Boron	106	1600	No		
	Total Cadmium	< 5	0.271	Yes	9108.655	No Limits/Monitoring
	Total Chromium	9	N/A	No		
	Hexavalent Chromium	< 10	10.4	No		
	Total Cobalt	< 5	19	No		
	Total Copper	< 5	9.3	No		
	Total Cyanide	< 5	N/A	No		
	Total Iron	363	1500	No		
	Dissolved Iron	< 200	300	No		
	Total Lead	< 5	3.2	Yes	146826.5	No Limits/Monitoring
	Total Manganese	240	1000	No		
	Total Mercury	< 0.2	0.05	No (Value < QL)		
	Total Molybdenum	19	N/A	No		
	Total Nickel	< 5	52.2	No		
	Total Phenols (Phenolics)	< 250	5	Yes	969129000	No Limits/Monitoring
	Total Selenium	< 20	5.0	Yes	230243.2	No Limits/Monitoring
	Total Silver	< 5	3.8	Yes	16159.4	No Limits/Monitoring
	Total Thallium	< 10	0.24	Yes	11075.7	No Limits/Monitoring
Total Zinc	92	119.8	No			

Attachment C

Effluent Limitation Guideline

PRODUCTION DATA FOR EFFLUENT LIMITATION GUIDELINES (ELGs)					
Complete this section for each production line with an applicable ELG. See instructions and use additional sheets as necessary.					
1. Production line and process description: <u>Hydrotest & UT Quality Test</u>					
2. Applicable ELG: 40 CFR: 420 Subpart: G					
3. Is this production considered a new source? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
4. Outfall / IMP No. receiving wastewater: <u>009</u>					
5. Units of production measurement for ELG: <u>Pounds</u>					
6. Design production capacity: <u>15,000,000 Pounds</u>					
7. Complete the table below for the five last years of production. Report production data using the same units of measurement as reported in question 5.					
Parameter	Production Years				
	2015	2016	2017	2018	2019
Total Annual Production	6,430,0000	7,956,000	4,857,000	4,761,000	3,270,000
Max Monthly Production	640,000	1,110,000	1,231,000	624,000	592,000
Month of Max Production	February	October	January	January	February
Avg Annual Production	5,660,000	5,660,000	5,660,000	5,660,000	5,660,000
Avg Production Hours/Day	8	8	8	8	8
Avg Production Days/Month	20	20	20	20	20
Avg Annual Water Usage (MGD)	.0044	.0061	.0031	.0033	.0020
Avg Annual Wastewater Flow (MGD)	.0040	.0055	.0028	.0030	.0018
8. Average annual production over the past five years: <u>5,660,000</u> Units: <u>Pounds</u>					
9. Anticipated average annual production for the next five years: <u>3,250,000</u> Units: <u>Pounds</u>					
10. Explain the basis for the anticipated average annual production for the next five years: It is based on the business projections that the market need will remain at the 2019 level for the next five years or longer.					
11. Attach any pertinent information from the applicable ELG in 40 CFR that would allow DEP to appropriately determine technology-based effluent limitations.					

Subpart G—Hot Forming Subcategory

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§420.70 Applicability; description of the hot forming subcategory.

The provisions of this subpart are applicable to discharges and to the introduction of pollutants into publicly owned treatment works resulting from hot forming operations conducted in primary, section, flat, and pipe and tube mills.

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§420.71 Specialized definitions.

(a) The term *hot forming* means those steel operations in which solidified, heated steel is shaped by rolls.

(b) The term *primary mill* means those steel hot forming operations that reduce ingots to blooms or slabs by passing the ingots between rotating steel rolls. The first hot forming operation performed on solidified steel after it is removed from the ingot molds is carried out on a "primary mill".

(c) The term *section mill* means those steel hot forming operations that produce a variety of finished and semi-finished steel products other than the products of those mills specified below in paragraphs (d), (e), (g), and (h) of this section.

(d) The term *flat mill* means those steel hot forming operations that reduce heated slabs to plates, strip and sheet, or skelp.

(e) The term *pipe and tube mill* means those steel hot forming operations that produce butt welded or seamless tubular steel products.

(f) The term *scarfing* means those steel surface conditioning operations in which flames generated by the combustion of oxygen and fuel are used to remove surface metal imperfections from slabs, billets, or blooms.

(g) The term *plate mill* means those steel hot forming operations that produce flat hot-rolled products which are (1) between 8 and 48 inches wide and over 0.23 inches thick; or (2) greater than 48 inches wide and over 0.18 inches thick.

(h) The term *hot strip and sheet mill* means those steel hot forming operations that produce flat hot-rolled products other than plates.

(i) The term *specialty steel* means those steel products containing alloying elements which are added to enhance the properties of the steel product when individual alloying elements (e.g., aluminum, chromium, cobalt, columbium, molybdenum, nickel, titanium, tungsten, vanadium, zirconium) exceed 3% or the total of all alloying elements exceed 5%.

(j) The term *carbon steel* means those steel products other than specialty steel products.

(k) The term *carbon hot forming operation* (or "carbon") means those hot forming operations which produce a majority, on a tonnage basis, of carbon steel products.

(l) The term *specialty hot forming operation* (or "specialty") applies to all hot forming operations other than "carbon hot forming operations."

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§420.72 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) *Primary mills, carbon and specialty—(1) Without scarfing.*

SUBPART G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (pounds per 1,000 lb) of product	
TSS	0.150	0.0561
O&G	0.0374	
pH	(1)	(1)

¹Within the range of 6.0 to 9.0.

(2) *With scarfing.*

SUBPART G

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	0.221	0.0830
O&G	0.0553	
pH	(1)	(1)

¹Within the range of 6.0 to 9.0.

(b) *Section mills—(1) Carbon.*

SUBPART G

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	0.357	0.134
O&G	0.0894	
pH	(1)	(1)

¹Within the range of 6.0 to 9.0.

(2) *Specialty.*

SUBPART G

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	0.224	0.0841
O&G	0.0561	
pH	(1)	(1)

¹Within the range of 6.0 to 9.0.

(c) *Flat mills—(1) Hot strip and sheet mills, carbon and specialty.*

SUBPART G

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	0.427	0.160
O&G	0.107	
pH	(1)	(1)

¹Within the range of 6.0 to 9.0.

(2) *Carbon plate mills.*

SUBPART G

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	0.227	0.0851
O&G	0.0568	
pH	(1)	(1)

¹Within the range of 6.0 to 9.0

(3) *Specialty plate mills.*

SUBPART G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
TSS	0.100	0.0378
O&G	0.0250	(1)
pH	(1)	(1)

¹Within the range of 6.0 to 9.0

(d) Pipe and tube mills, carbon and specialty.

SUBPART G

Pollutant or pollutant property	BPT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
TSS	0.212	0.0795
O&G	0.0530	(1)
pH	(1)	(1)

¹Within the range of 6.0 to 9.0

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

The Agency has determined that there are not significant quantities of toxic pollutants in hot forming wastewaters after compliance with applicable BPT limitations. Accordingly, since the BPT level of treatment provides adequate control, the Agency is not promulgating more stringent BAT limitations.

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§420.74 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) Primary mills, carbon and specialty—(1) Without scarfing.

SUBPART G

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
TSS	0.0150	0.00583
O&G	0.00373	(1)
pH	(1)	(1)

¹Within the range of 6.0 to 9.0.

(2) With scarfing.

SUBPART G

Pollutant or pollutant property	New source performance standards	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kg (pounds per 1,000 lb) of product	
TSS	0.0234	0.00878
O&G	0.00584	(1)
pH	(1)	(1)

¹Within the range of 6.0 to 9.0.

(b) Section mills—(1) Carbon.

SUBPART G

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	0.0334	0.0125
O&G	0.00834	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0.

(2) *Specialty.*

SUBPART G

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	0.0217	0.00813
O&G	0.00542	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0.

(c) *Flat mills—(1) Hot strip and sheet mills, carbon and specialty.*

SUBPART G

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 products	
TSS	0.0435	0.0163
O&G	0.0109	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0

(2) *Carbon plate mills.*

SUBPART G

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 products	
TSS	0.0234	0.00878
O&G	0.00584	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0

(3) *Specialty plate mills.*

SUBPART G

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 products	
TSS	0.0100	0.00375
O&G	0.00250	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0

(d) *Pipe and tube mills, carbon and specialty.*

SUBPART G

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 products	

TSS	0.0369	0.0138
O&G	0.00917	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0

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§420.75 Pretreatment standards for existing sources (PSES).

Any existing source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

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§420.76 Pretreatment standards for new sources (PSNS).

Any new source subject to this subpart which introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403.

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§420.77 Effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional technology (BCT).

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 conventional technology.

(a) *Primary mills, carbon and specialty—(1) Without scarfing.*

SUBPART G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (pounds per 1,000 lb) of product	
TSS	0.150	0.0561
O&G	0.0374	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0.

(2) *With scarfing.*

SUBPART G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (pounds per 1,000 lb) of product	
TSS	0.221	0.0830
O&G	0.0553	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0.

(b) *Section mills—(1) Carbon.*

SUBPART G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (pounds per 1,000 lb) of product	
TSS	0.357	0.134
O&G	0.0894	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0.

(2) *Specialty.*

SUBPART G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (pounds per 1,000 lb) of product	
TSS	0.224	0.0841
O&G	0.0561	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0.

(c) Flat mills—(1) Hot strip and sheet mills, carbon and specialty.

SUBPART G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (pounds per 1,000 lb) of product	
TSS	0.427	0.160
O&G	0.107	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0.

(2) Carbon plate mills.

SUBPART G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (pounds per 1,000 lb) of product	
TSS	0.227	0.0851
O&G	0.0568	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0.

(3) Specialty plate mills.

SUBPART G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (pounds per 1,000 lb) of product	
TSS	0.100	0.0378
O&G	0.0250	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0.

(d) Pipe and tube mills, carbon and specialty.

SUBPART G

Pollutant or pollutant property	BCT effluent limitations	
	Maximum for any 1 day	Average of daily values for 30 consecutive days
	Kg/kgg (pounds per 1,000 lb) of product	
TSS	0.212	0.0795
O&G	0.0530	
pH	(¹)	(¹)

¹Within the range of 6.0 to 9.0.

[47 FR 23284, May 27, 1982, as amended at 47 FR 41739, Sept. 22, 1982]

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United States Environmental Protection Agency
Effluent Guidelines Division
WH-552
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Water and Waste Management



Development Document for Effluent Limitations Guidelines and Standards for the

Final

JETT

Iron and Steel Manufacturing

Point Source Category

Volume IV

Hot Forming Subcategory



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TABLE II-1

BPT/BCT TREATMENT MODEL FLOWS AND
EFFLUENT QUALITY - HOT FORMING SUBCATEGORY

<u>Subdivision</u>	<u>Flow (GPT)</u>	<u>30-Day Average and Daily Maximum Concentrations</u>			
		<u>TSS</u>		<u>O&G⁽¹⁾</u>	<u>pH (Units)</u>
		<u>Avg</u>	<u>Max</u>		
1. Primary					
a. wo/scarfers	897	15	40	10	6 - 9
b. w/scarfers	1326	15	40	10	6 - 9
2. Section					
a. carbon	2142	15	40	10	6 - 9
b. specialty	1344	15	40	10	6 - 9
3. Flat					
a. hot strip	2560	15	40	10	6 - 9
b. carbon plate	1360	15	40	10	6 - 9
c. specialty plate	600	15	40	10	6 - 9
4. Pipe & Tube	1270	15	40	10	6 - 9

(1) Daily maximum concentration only.

TABLE II-3
TREATMENT MODEL FLOWS AND EFFLUENT QUALITY
HOT FORMING SUBCATEGORY

<u>Subdivision</u>	<u>Flow Rates (gal/ton)</u>			
	<u>BAT</u>	<u>NSPS</u>	<u>PSES</u>	<u>PSNS</u>
1. Primary				
a. w/o Scarfers	90	90	897	897
b. w Scarfers	140	140	1326	1326
2. Section				
a. Carbon	200	200	2142	2142
b. Specialty	130	130	1344	1344
3. Flat				
a. Hot Strip & Sheet	260	260	2560	2560
b. Carbon Plate	140	140	1360	1360
c. Specialty Plate	60	60	600	600
4. Pipe & Tube	220	220	1270	1270

<u>Pollutant</u>	<u>30-Day Average and Daily Maximum Concentrations</u>							
	<u>BAT (1)</u>		<u>NSPS</u>		<u>PSES (2)</u>		<u>PSNS (2)</u>	
	<u>Avg</u>	<u>Max</u>	<u>Avg</u>	<u>Max</u>	<u>Avg</u>	<u>Max</u>	<u>Avg</u>	<u>Max</u>
TSS	-	-	15	40	-	-	-	-
O&G	-	-	-	10	-	-	-	-
pH (Units)	-	-	6.0 to 9.0		-	-	-	-

Note: Concentrations apply to all hot forming subdivisions and are expressed in mg/l unless otherwise noted.

(1) BAT limitations have not been promulgated.

(2) Only the General Pretreatment Regulations (CFR Part 403) apply.

Attachment D
Suggested Practices to Reduce Zinc Concentrations in
Industrial Stormwater Discharges

Suggested Practices to Reduce Zinc Concentrations in Industrial Stormwater Discharges

Water Quality Program

Prepared by:

Steven Golding
Washington State Department of Ecology
Environmental Assessment Program for Water Quality Program

June 2008

Publication Number 08-10-025

Introduction

Many facilities under the Industrial Stormwater General Permit (ISWGP) have found high levels of zinc in their stormwater discharges. Zinc from stormwater harms fish and other aquatic life. Zinc can bind to fish gills and cause suffocation. You can take steps to comply with the zinc levels specified in your permit, and at the same time protect Washington's waters.

Ecology prepared this document to help you reduce zinc in your stormwater discharge. The idea is to use source control measures. Source control is removing or covering sources of zinc before they become part of stormwater runoff. This is often more effective than trying to remove zinc once it is in the stormwater. Methods for treating stormwater may be found elsewhere. An earlier Ecology Publication, *[A Survey of Zinc Concentrations in Industrial Stormwater Runoff](http://www.ecy.wa.gov/biblio/0603009.html)* shows the results of testing zinc in runoff as well as inventories of zinc sources at 28 industrial facilities (<http://www.ecy.wa.gov/biblio/0603009.html>).

This guide identifies the major sources of zinc and tells you how to remove or reduce them. Two ways in particular work well together. They are:

1. Sweeping grounds to remove dust and debris.
2. Painting galvanized surfaces to keep zinc out of runoff.

The section, "Two Ways to Reduce Sources of Zinc," appear on page 11.

Reading this guidance, you will be able to identify sources of zinc at your facility and take some simple measures to deal with them. To help in this regard, this guide includes a detailed form for walking you through a source inventory

Appendix A presents a general discussion of sources of zinc in the environment.

Appendix B presents data showing contributions of zinc from a number of actual cases.

Major Sources of Zinc in Industrial Runoff

The following sources of zinc are found at many industrial facilities:

- Galvanized metal surfaces
- Motor oil and hydraulic fluid
- Tire dust

Galvanized metal surfaces

There are galvanized metals at many industrial facilities. They are coated with zinc to protect them from corrosion or rust. As the zinc protects the metal, zinc is gradually dissolved when in contact with water.

From the perspective of water quality, zinc in runoff from these metals can be high, between about 1,000 – 15,000 $\mu\text{g/L}$ (parts per billion). Galvanized surfaces include ducts, HVAC units, turbines, and equipment boxes on roofs. Roofs with these can produce high concentrations of zinc in their runoff. A limited study found runoff from a roof with galvanized ducts ranging from 400 -500 $\mu\text{g/L}$ zinc. An identical roof, but without galvanized surfaces, had only 50 $\mu\text{g/L}$ in its runoff (Golding, 2006).

The following list includes commonly galvanized items:

- Roofs
- Roof HVAC, ductwork, turbines, equipment boxes
- Downspouts
- Roof gutters
- Storm sewer pipe
- Chain-link fence
- Light poles
- Bay doors
- Steps
- Truck trailer panels



Galvanized chain-link fence can be a major source of zinc, especially when the fence is on paved rather than vegetated ground.

Suggested Practices to Reduce Zinc Concentrations in Industrial Stormwater

Attachment E
Chapter 93 Stream Designation
and U.S.G.S StreamStats

Ch. 93

WATER QUALITY STANDARDS

25 § 93.9v

§ 93.9v. Drainage List V.

Ohio River Basin in Pennsylvania <i>Monongahela River</i>				
Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
1—Ohio River				
2—Monongahela River (WV)				
3—Unnamed Tributaries to Monongahela River	Basins (all sections in PA), Source to PA-WV State Border	Greene-Fayette	WWF	None
2—Monongahela River	Main Stem, PA-WV State Border to Confluence with Allegheny River	Allegheny	WWF; Add N	None
3—Unnamed Tributaries to Monongahela River	Basins, (all sections in PA) PA-WV State Border to Mingo Creek	Allegheny-Westmoreland-Washington-Greene-Fayette	WWF	None
3—Robinson Run	Basin (all sections in PA)	Greene	WWF	None
3—Crooked Run	Basin (all sections in PA)	Greene	WWF	None
3—Camp Run	Basin (all sections in PA)	Fayette	WWF	None
3—Cheat River (WV)				
4—Unnamed Tributaries to Cheat River	Basins (all sections in PA), Source to PA-WV State Border	Fayette	WWF	None
4—Big Sandy Creek	Main Stem, Source to PA-WV State Border	Fayette	HQ-CWF	None
5—Unnamed Tributaries to Big Sandy Creek	Basins (all sections in PA), Source to PA-WV State Border	Fayette	HQ-CWF	None
5—Braddock Run	Basin	Fayette	HQ-CWF	None
5—Chaney Run	Basin	Fayette	HQ-CWF	None
5—Scotts Run	Basin	Fayette	HQ-CWF	None
5—McIntire Run	Basin	Fayette	HQ-CWF	None
5—Stony Fork	Basin	Fayette	HQ-CWF	None
5—Quebec Run	Basin, Source to Mill Run	Fayette	EV	None

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WATER QUALITY STANDARDS

25 § 93.9v

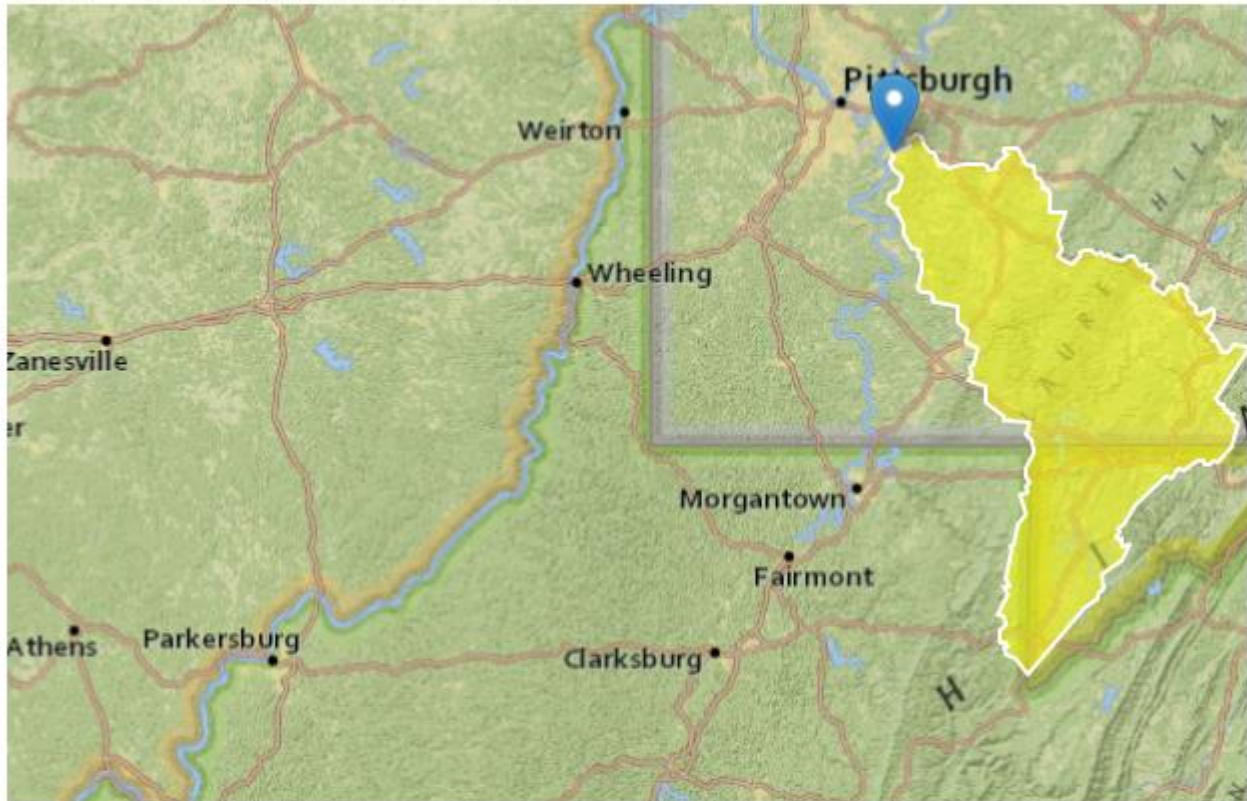
Stream	Zone	County	Water Uses Protected	Exceptions To Specific Criteria
4—Indian Creek	Basin, Camp Run to Champion Creek	Fayette	HQ-CWF	None
5—Champion Creek	Basin	Fayette	CWF	None
4—Indian Creek	Main Stem, Champion Creek to Mouth	Fayette	CWF	None
5—UNTs to Indian Creek	Basins, Champion Creek to Mouth	Fayette	CWF	None
5—Wash Run	Basin	Fayette	CWF	None
5—Back Creek	Main Stem	Fayette	CWF	None
6—Unnamed Tributaries to Back Creek	Basins	Fayette	CWF	None
6—Trout Run	Basin	Fayette	HQ-CWF	None
6—Neals Run	Basin	Fayette	HQ-CWF	None
5—Poplar Run	Basin	Fayette	CWF	None
5—Laurel Run	Basin, Source to Buck Run	Fayette	CWF	None
6—Buck Run	Basin, Source to River Mile (RM) 1.38	Fayette	HQ-CWF	None
6—Buck Run	Basin, RM 1.38 to Mouth	Fayette	CWF	None
5—Laurel Run	Basin, Buck Run to Mouth	Fayette	CWF	None
5—Stony Run	Basin	Fayette	CWF	None
5—Mill Run	Basin	Fayette	HQ-CWF	None
5—Rasler Run	Basin	Fayette	HQ-CWF	None
5—Richter Run	Basin	Fayette	CWF	None
5—Tates Run	Basin	Fayette	CWF	None
4—Laurel Run	Basin	Fayette	CWF	None
4—Dunbar Creek	Basin, Source to Gist Run	Fayette	HQ-CWF	None
5—Gist Run	Basin	Fayette	TSF	None
4—Dunbar Creek	Basin, Gist Run to Mouth	Fayette	TSF	None
4—Connell Run	Basin	Fayette	WWF	None
3—Youghiogheny River	Main Stem, Connell Run to Mouth	Allegheny	WWF	None
4—Unnamed Tributaries to Youghiogheny River	Basins, Connell Run to Mouth	Fayette-Westmoreland-Allegheny	WWF	None
4—Opossum Run	Basin	Fayette	WWF	None
4—Mounts Creek	Basin	Fayette	WWF	None
4—Galley Run	Basin	Fayette	WWF	None

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StreamStats Report

Region ID: PA
Workspace ID: PA20200304184705089000
Clicked Point (Latitude, Longitude): 40.33460, -79.85601
Time: 2020-03-04 13:47:25 -0500



PA0004081

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	1760	square miles
ELEV	Mean Basin Elevation	1994.6	feet

Low-Flow Statistics Parameters[100 Percent (1760 square miles) Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	1760	square miles	2.26	1400
ELEV	Mean Basin Elevation	1994.6	feet	1050	2580

Low-Flow Statistics Disclaimers[100 Percent (1760 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[100 Percent (1760 square miles) Low Flow Region 4]

Statistic	Value	Unit
7 Day 2 Year Low Flow	214	ft ³ /s
30 Day 2 Year Low Flow	300	ft ³ /s
7 Day 10 Year Low Flow	110	ft ³ /s
30 Day 10 Year Low Flow	141	ft ³ /s
90 Day 10 Year Low Flow	225	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/>)

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Application Version: 4.3.11