

Application Type Renewal
Facility Type Industrial
Major / Minor Minor

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

Application No. PA0080594
APS ID 842054
Authorization ID 1024899

Applicant and Facility Information

Applicant Name	<u>North American Pipe Corporation</u>	Facility Name	<u>North American Pipe Corporation – Leola, PA Plant</u>
Applicant Address	<u>88 Newport Road</u> <u>Leola, PA 17540-1821</u>	Facility Address	<u>88 Newport Road</u> <u>Leola, PA 17540</u>
Applicant Contact	<u>James Song</u>	Facility Contact	<u>James Song</u>
Applicant Phone	<u>(717) 656-2526</u>	Facility Phone	<u>(717) 656-2526</u>
Client ID	<u>234852</u>	Site ID	<u>270491</u>
SIC Code	<u>3084</u>	Municipality	<u>Upper Leacock Township</u>
SIC Description	<u>Manufacturing - Plastics, Pipe</u>	County	<u>Lancaster</u>
Date Application Received	<u>May 5, 2014</u>	EPA Waived?	<u>Yes</u>
Date Application Accepted	<u>May 7, 2014</u>	If No, Reason	<u></u>
Purpose of Application	<u>NPDES Renewal.</u>		

Summary of Review

North American Pipe Corporation has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its National Pollutant Discharge Elimination System (NPDES) permit. The permit was issued on October 26, 2009 and became effective on November 1, 2009. The permit authorized discharge of industrial wastewater from the existing facility located Upper Leacock Township, Lancaster County into UNT of Mill Creek. The existing permit expiration was October 31, 2014, and the permit has been administratively extended since that time.

Per the previous fact sheet, North American Pipe Corporation manufactures PVC and ABS plastic pipe by heat extrusion. This process involves the use of contact cooling water which is discharged to a pond that was built for fire protection. The pond provides some detention for cooling before discharging through an overflow pipe to a drainage ditch that also receives flow from another fire pond belonging to an adjacent building. The drainage ditch then flows 700 feet to the UNT of Mill Creek. There is not any streamflow or streambed upstream of the ponds. The manmade ponds and cooling water are the known sources of the drainage ditch. Since the cooling water is continuous, it is unknown if the ponds would sustain year round flow to support an aquatic community. The site was evaluated on March 15, 1994 during heavy snowmelt and high groundwater contributions. Outfall 001 was not discovered at this time, but there was strong evidence that the outfall was plugged up creating huge "springs" at the 90° bend, which overflowed into the adjacent cornfield and at the end of the outfall. Evidence of plastic deposits was the reason for this belief. The facility was told to correct the problem. The drainage ditch of the ponds was two to three feet wide and contained nothing but a mucky brown bottom. Aquatic life was checked in the best spot possible with a D-net and kick method but no life was found except an earthworm. This situation was discussed with the aquatic biologist who agreed that the point of first use would be at the confluence with the drainage ditch and the UNT of Mill Creek due to the manmade sources and the condition of the ditch.

Approve	Deny	Signatures	Date
X		Benjamin Lockwood Benjamin R. Lockwood / Environmental Engineering Specialist	September 30, 2020
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

Summary of Review

The inspection during the 1999 renewal was during a summer dry spell. Plastic deposits continued to be a problem due to the shavings and cuttings that are done in the parking/storage lot. The stream was not accessible during this time due to high growth of weeds and underbrush. The applicant did place riprap from the parking lot (Outfall 002) to the storm drain to trap any plastic leaving the parking lot. This riprap did succeed in trapping plastic. The site was inspected again during June 2004. The pond apparently had not discharged to the storm drain for a couple of years. The amount of cooling water had been reduced by recycling to the point that evaporation and infiltration exceeds the amount of water going into the pond. Although the area had experienced heavy rainfall, the level of the pond was an inch below the outfall pipe. Inspection reports noted the level as much as two feet below the pipe. The stream was completely dry with no overflow from even the neighboring fire pond. Plastic control in the riprap was acceptable. The inspection during July 2009 for the previous permit renewal revealed that the pond was discharging to the ditch once again. The ditch was still filled with muck and debris but was free of plastic. The inspection indicated that the facility was doing a good job of controlling the plastic.

Changes to this permit: More stringent temperature limits have been added. Limits have been added for Carbon Tetrachloride, 1,2-Dichloroethane, 1,1,2,2-Tetrachloroethane, and Vinyl Chloride. Monitoring requirements have been added for Chlorodibromomethane, Dichlorobromomethane, 1,3-Dichloropropylene, and 1,1,2-Trichloroethane. Stormwater monitoring has been revised.

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.

Supplemental information for this renewal is attached to the end of the fact sheet.

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>001</u>	Design Flow (MGD)	<u>.115</u>
Latitude	<u>40° 4' 40"</u>	Longitude	<u>76° 11' 29"</u>
Quad Name	<u>Leola</u>	Quad Code	<u>1836</u>
Wastewater Description:	<u>Cooling water used in extrusion machines and on manufactured plastic pipe, water supply for vacuum/compressor pumps on extrusion machines, continuous backwash of raw water filter, cooling tower blowdown, water softener backwash and regeneration, non-contact cooling water for blender, stormwater.</u>		
Receiving Waters	<u>Unnamed Tributary of Mill Creek (WWF, MF)</u>	Stream Code	<u>07611</u>
NHD Com ID	<u>57463145</u>	RMI	<u>0.65</u>
Drainage Area	<u>0.75</u>	Yield (cfs/mi ²)	<u>0.133</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.0997</u>	Q ₇₋₁₀ Basis	<u>USGS PA StreamStats</u>
Elevation (ft)	<u>112</u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>7-J</u>	Chapter 93 Class.	<u>WWF, MF</u>
Existing Use	<u>N/A</u>	Existing Use Qualifier	<u>N/A</u>
Exceptions to Use	<u>N/A</u>	Exceptions to Criteria	<u>N/A</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Pathogens, Nutrients, Siltation</u>		
Source(s) of Impairment	<u>Source Unknown, Crop Production (Crop Land or Dry Land), Grazing in Riparian or Shoreline Zones</u>		
TMDL Status	<u>N/A</u>	Name	<u>N/A</u>
Nearest Downstream Public Water Supply Intake	<u>Holtwood Power Plant</u>		
PWS Waters	<u>Susquehanna River</u>	Flow at Intake (cfs)	<u></u>
PWS RMI	<u></u>	Distance from Outfall (mi)	<u>40</u>

Changes Since Last Permit Issuance: The USGS PA StreamStats is showing a drainage area of 0.75 mi² and a Q₇₋₁₀ flow of 0.0997 ft³/s at the point of discharge.

Other Comments: None

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	<u>002</u>	Design Flow (MGD)	<u>Variable (stormwater)</u>
Latitude	<u>40° 5' 10"</u>	Longitude	<u>76° 10' 30"</u>
Quad Name	<u>Leola</u>	Quad Code	<u>1836</u>
Wastewater Description: <u>Stormwater</u>			
Receiving Waters	<u>Unnamed Tributary of Mill Creek (WWF, MF)</u>	Stream Code	<u>07611</u>
NHD Com ID	<u>57463145</u>	RMI	<u>0.65</u>
Drainage Area	<u>0.75</u>	Yield (cfs/mi ²)	<u>0.133</u>
Q ₇₋₁₀ Flow (cfs)	<u>0.0997</u>	Q ₇₋₁₀ Basis	<u>USGS PA StreamStats</u>
Elevation (ft)	<u>112</u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>7-J</u>	Chapter 93 Class.	<u>WWF</u>
Existing Use	<u>N/A</u>	Existing Use Qualifier	<u>N/A</u>
Exceptions to Use	<u>N/A</u>	Exceptions to Criteria	<u>N/A</u>
Assessment Status	<u>Impaired</u>		
Cause(s) of Impairment	<u>Pathogens, Nutrients, Siltation</u>		
Source(s) of Impairment	<u>Source Unknown, Crop Production (Crop Land or Dry Land), Grazing in Riparian or Shoreline Zones</u>		
TMDL Status	<u>N/A</u>	Name	<u>N/A</u>
Nearest Downstream Public Water Supply Intake	<u>Holtwood Power Plant</u>		
PWS Waters	<u>Susquehanna River</u>	Flow at Intake (cfs)	<u></u>
PWS RMI	<u></u>	Distance from Outfall (mi)	<u>40</u>

Changes Since Last Permit Issuance: None

Other Comments: None

Compliance History	
Summary of DMRs:	A summary of the past 12-month DMR effluent data is presented on the next page of this fact sheet.
Summary of Inspections:	<p>9/25/2014: A follow-up inspection was conducted by Andrew Hall, DEP Water Quality Specialist. The recommendations from the last visit had been addressed by adding BMPs and changing operating procedures. Daily readings will be taken from the influent flow meter to get a more exact effluent discharge flow. DMRs will include Non-Compliance Discharge Report form for all violations reported on the DMR. Regular inspections and cleaning are done in areas of concern. A street sweeper was purchased and used regularly. The site inspection revealed the new procedures and BMPs have greatly reduced this facility's potential stormwater impacts. The perimeter around the facility and storage yard was cleaner, stormwater that was actively discharging during the inspection was clear. The only water quality concern to note was in the area of the compactor. Small pieces of plastic material are escaping the containment of the compactor from several places. This area receives a high volume of stormwater flow from the roof, causing migration of the plastic waste pieces and possible discharge through the stormwater outfall. Mr. Song stated that the concern would be addressed by diverting roof drain flows away from the compactor area and constructing a roof to minimize stormwater influent to this area. An additional recommendation was given to increase compactor containment and increase housekeeping procedures for this area. DMR violations and TSS parameter exceedances are being attributed to algae growth within the cooling pond before discharging to Outfall 001. This has been an ongoing issue documented in Non-Compliance Reports and Department issued Inspection Reports. The discharge of these solids is a violation of the permit. It was requested that these violations be addressed with corrective actions to mitigate the possibility of further violations attributed to this cause. A Corrective Action Plan was requested to be submitted within 30 days.</p> <p>5/5/2015: A follow-up inspection was conducted by Andrew Hall. The facility had been modified, pond and stormwater, operations and maintenance for better compliance. As a follow-up, this inspection had reflected these changes and no water quality concerns were documented. Outfall 001 effluent was clear. Grounds were clean including areas previously noted as concerns, building perimeter and parking lot edge. The street sweeper was actively engaged at the time of inspection.</p> <p>9/28/2018: A routine inspection was conducted by Tracy Tomtishen and Kevin Buss. It was noted that the facility manufactures PVC pipes and operates 24/7. Water for non-contact cooling water is pulled from two onsite wells. Water is sent through a cooling tower and then returned to the "main pit". The pit is monitored with a high-level alarm and overflow is directed to the stormwater pond. Process water from the cooling tower is reused after passing through the water softener and chiller units. The majority of the water is recycled, and water softener backwash is sent to the stormwater pond which ultimately discharges out of Outfall 001. The cooling water receiving pond has a small amount of surface algae along the edges. Chemical additive is used for algae control. The effluent appeared clear. No water quality concerns were noted. The discharge travels approximately 400 yards to the receiving stream. The pond liner appeared to be in overall good condition. It was recommended to continually monitor the liner for rips and tears. Sediment accumulation had been minimal and cleaning had not been necessary. The pond is used to feed the building's sprinkler system. The pond outfall combines with Stormwater Outfall 002. During sampling of Outfall 002, outflow from the pond is blocked in order to obtain a representative sample. BMP practices that were implemented during 2014 inspections appear to still be in place. Stormwater catch basins throughout the facility were found and inspected. It was recommended to create and maintain a map of stormwater catch basin locations, and to regularly monitor and clean them on an as needed basis. One storm drain was covered with PVC pipe storage. It was recommended to ensure that all drains are visible and uncovered. A street sweeper is run approximately 3-4 times a week. During the</p>

	<p>inspection, safety posts for the railroad were being installed. The riprap surrounding the stormwater catch for Outfall 002 was to be replaced after the project was completed. Used liquid dye containers are stored outside of the building until removed offsite. Containers should be monitored for any sign of leakage. Used oil containers have secondary containment and are checked quarterly. A spill kit is present. A separate storage building contained liquid dye containers that were stacked two high over secondary containment, and it was recommended that additional secondary containment units be purchased to accommodate the extra liquid dye containers. Some chemical additive names have been changed, and several chemical usage rates exceeded those listed in Part C.III.B of the NPDES permit.</p> <p>1/17/2020: A routine inspection was conducted by Tracy Tomtishen and Shawn Fassel. The cooling water receiving pond had a small amount of algae along the edges. The effluent appeared clear and no water quality concerns were noted. There were no visual concerns at Outfall 001. The pond liner appeared to be in overall good condition. Sediment accumulation had been minimal, and cleaning had not been necessary. Recommendations from 2017 appeared to have been corrected and implemented. Inlet filter bags may be added to inlets to prevent debris build up. Stormwater catch basins throughout the facility were found and inspected.</p> <p>7/21/2020: An administrative inspection was conducted by Tracy Tomtishen. There have been no changes to operation besides implementing COVID-19 safety measures. All treatment units are operable and in use. There have been no repairs or maintenance to the holding tank or lined stormwater pond since the last inspection, and there have been no recent bypasses. There have been no emergency repairs due to equipment failures. There have been no issues with laboratory analysis or sample collection. No operational changes that would impact the NPDES waste stream have occurred, and no other outstanding issues were reported.</p>
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Other Comments: Other Comments: There are currently no open violations for this permittee or facility.

Compliance History

DMR Data for Outfall 001 (from July 1, 2019 to June 30, 2020)

Parameter	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19
Flow (MGD) Average Monthly	0.188	0.191	0.174	0.180	0.182	0.1736	0.159	0.187	169.7	0.176	0.186	0.178
Flow (MGD) Daily Maximum	0.218	0.220	0.198	0.214	0.214	0.193	0.193	0.204	206	0.180	0.205	0.206
pH (S.U.) Minimum	6.96	6.94	6.89	6.89	6.72	6.73	6.73	6.64	6.61	6.58	7.18	7.09
pH (S.U.) Maximum	7.32	7.31	7.41	7.32	7.31	7.24	7.24	7.32	7.44	7.52	7.86	8.04
Temperature (°F) Daily Average	71.69	56.06	56.06	55.17	46.54	45.08	27.58	44.24	60.76	69.48	69.9	71.52
BOD5 (lbs/day) Daily Maximum	9.2	2.60	6.07	6.38	2.28	< 2.00	3.89	4.53	< 2.00	2.04	< 2.0	12.5
BOD5 (mg/L) Daily Maximum	5.65	2.60	6.07	4.19	2.28	< 2.00	3.89	4.53	< 2.00	2.04	< 2.0	7.75
TSS (lbs/day) Daily Maximum	< 4.5	5.7	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00	3.67	3.43	5.67
TSS (mg/L) Daily Maximum	< 4.5	5.7	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00	< 3.00	4.33	< 3.00	3.28
Oil and Grease (mg/L) Average Monthly	< 5.00			< 5.00			< 5.00			< 5.0		
Oil and Grease (mg/L) Daily Maximum	5.00			< 5.00			< 5.00			< 5.0		

Existing Effluent Limitations and Monitoring Requirements

Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
TSS	XXX	Report	XXX	XXX	19	23.7	2/month	8-Hr Composite
BOD5	XXX	Report	XXX	XXX	26	32.5	2/month	8-Hr Composite
Oil and Grease	Report	Report	XXX	15	29	30	1/quarter	Grab
Temperature (°F) May 1 - Oct 31	XXX	XXX	XXX	90 Daily Avg	XXX	XXX	1/day	I-S
Temperature (°F) Nov 1 - Apr 30	XXX	XXX	XXX	70 Daily Avg	XXX	XXX	1/day	I-S

Compliance Sampling Location: Outfall 001

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** .115
Latitude 40° 4' 40" **Longitude** 76° 11' 29"

Wastewater Description: Cooling water used in extrusion machines and on manufactured plastic pipe, water supply for vacuum/compressor pumps on extrusion machines, continuous backwash of raw water filter, cooling tower blowdown, water softener backwash and regeneration, non-contact cooling water for blender, stormwater.

Technology-Based Limitations

The following technology-based limitations apply, subject to water quality analysis and BPJ where applicable:

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
BOD ₅	26	Maximum Daily	463.13(b)	-
Oil & Grease	29	Maximum Daily	463.13(b)	-
TSS	19	Maximum Daily	463.13(b)	-
pH	6.0 – 9.0 S.U.	Min – Max	463.13(b)	95.2(1)

This facility is regulated by an Effluent Limitation Guideline(ELG) from 40 CFR §463.13(b) for Plastics Molding and Forming Point Source Category – Subpart A – Contact Cooling and Heating Water Subcategory. Subpart A applies due to the use of contact cooling water in the manufacturing process. The existing permit limits were based on Part 463.13(b). The limits from Part 463.13(b) must be included in the permit unless water quality based effluent limits (WQBELs) are more stringent. The ELG is attached to the fact sheet.

pH

PA Code §§ 95.2(1) requires effluent pH limits of 6.0 to 9.0 standard units (S.U.) at all times in effluent. The permit will continue to require pH limit of 6.0 to 9.0 S.U.

Oil and Grease

DEP’s SOP No. BPNPSM-PMT-032 states that if the maximum concentration of oil and grease in the discharge is 8 mg/l or greater, establish an effluent limitation of 15 mg/l average monthly and 30 mg/l Instantaneous Maximum (IMAX). The maximum concentration from the past year of DMR data is <4.9 mg/l. However, there is an existing permit limit for Oil and Grease of 15 mg/l average monthly and 30 mg/l IMAX. Due to anti-backsliding requirements, these limits will remain in the permit. These limits are more stringent than the ELG limits specified above.

Temperature Limitations

A reasonable potential (RP) analysis was performed for temperature. Effluent limitations for temperature were calculated using the Case 2 Thermal Worksheet with a wastewater flow of 0.115 mgd, which is listed as the maximum daily discharge rate in the application. A stream Q₇₋₁₀ flow of 0.0997 cfs was used in the temperature worksheet. This is the flow at the point of first use for aquatic life on the UNT of Mill Creek. The worksheet recommended permit limits for a discharge to WWF; these limits will be included in the permit. These limits were rounded in accordance with DEP’s Guidance 362-0400-001 “Technical Guidance for the Development and Specification of Effluent Limitations” A printout of the worksheet is attached. According to DEP’s Guidance No. 391-2000-017, it is appropriate to express temperature limits as daily (24-hour) averages. Therefore, the limits will be expressed in the permit as daily averages. From DEP’s Guidance 362-0400-001, Table 6-4, for non-contact cooling water with discharge flows greater than 100,000 gpd, a sample type of immersion stabilization (I-S) and a monitoring frequency of 1/day should be used. These monitoring requirements will be included in the permit. A review of the past year DMRs show that this facility is capable of meeting these limits.

Total Dissolved Solids

Total Dissolved Solids (TDS) and its major constituents including Bromide, Chloride, and Sulfate have become statewide pollutants of concern and threats to DEP’s mission to prevent violations of water quality standards. The requirement to monitor these pollutants must be considered under the criteria specified in 25 Pa. Code § 95.10 and the following January 23, 2014 DEP Central Office Directive:

For point source discharges and upon issuance or reissuance of an individual NPDES permit:

- Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for TDS, sulfate, chloride, and bromide. Discharges of 0.1 MGD or less should monitor and report for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.
- Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for bromide. Discharges of 0.1 MGD or less should monitor and report for bromide if the concentration of bromide in the discharge exceeds 10 mg/L.
- Where the concentration of 1,4-dioxane (CAS 123-91-1) in a discharge exceeds 10 µg/l and the discharge flow exceeds 0.1 mgd, Part A of the permit should include monitor and report for 1,4-dioxane. Discharges of 0.1 mgd or less should monitor and report for 1,4-dioxane if the concentration of 1,4-dioxane in the discharge exceeds 100 µg/l.

North American Pipe Corporation reported a maximum effluent concentration of 474 mg/l for TDS, and believed absent for Bromide. Based upon the data provided in the application, monitoring of TDS, Bromide, Chloride, and Sulfate will not be required.

Total Suspended Solids

DEP's SOP No. BPNPSM-PMT-032 states that Best Professional Judgment (BPJ) Technology-Based Effluent Limits (TBELs) should be developed for Total Suspended Solids (TSS) if the concentration exceeds 100 mg/l in the permit application or Discharge Monitoring Reports (DMRs) and there is no applicable ELG. The maximum TSS concentration from the application is 110 mg/l, however, there is an applicable ELG which requires limits for TSS to be applied. The existing permit contains an average monthly limit of 19 mg/l, which will remain in the permit.

CBOD₅ / NH₃-N

DEP's SOP No. BPNPSM-PMT-032 states that the WQM 7.0 Model should be run if the maximum Biochemical Oxygen Demand (BOD₅) concentration exceeds 30 mg/l in the permit application or DMRs. The maximum BOD₅ concentration from the application is 9.6 mg/l, therefore it will not be necessary to run the WQM 7.0 Model.

Toxics

Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP's Toxics Management Spreadsheet Version 1.0 to develop appropriate permit requirements for toxic pollutants of concern. The Toxics Management Spreadsheet combines the functions of PENTOXSD and DEP's Toxics Screening Analysis. Based on effluent sample results reported on the application, the Toxics Management Spreadsheet recommended a WQBEL for Carbon Tetrachloride, 1,2-Dichloroethane, 1,1,2,2-Tetrachloroethane, and Vinyl Chloride, as well as a monitoring requirement for Chlorodibromomethane, Dichlorobromomethane, 1,3-Dichloropropylene, and 1,1,2-Trichloroethane. Per DEP's SOP No. BCW-PMT-037, a pre-draft permit survey was conveyed to the permittee on November 22, 2019. The NPDES Survey was received on December 9, 2019, with additional sampling received on January 14, 2020.

Stream pH and temperature inputs for this model run were based on data acquired from the National Water Quality Monitoring Council website. Data was analyzed from the Water Quality Network (WQN) Station ID 273 on the Conestoga River from October 2004 to December 2018 for pH and hardness. A 90th percentile analysis was performed on the data and resulted in a Stream pH of 8.4 and a Stream Hardness of 270 mg/l. The resulting Water Quality-Based Effluent Limits (WQBELs) from the Toxics Management Spreadsheet are shown in the following table:

Parameter	Max. Concentration in Application or DMRs (µg/l)	Most Stringent WQBEL (µg/l)	Screening Recommendation
Carbon Tetrachloride	<1	1.51	Establish Limits
Chlorodibromomethane	<1	2.63	Monitor
Dichlorobromomethane	<1	3.61	Monitor
1,2-Dichloroethane	7.19	2.5	Establish Limits
1,3-Dichloropropylene	<1	2.23	Monitor
1,1,2,2-Tetrachloroethane	<1	1.12	Establish Limits
1,1,2-Trichloroethane	<1	3.87	Monitor
Vinyl Chloride	2.85	0.16	Establish Limits

This data was analyzed based on the guidelines found in DEP's Water Quality Toxics Management Strategy (Document No. 361-0100-003) and DEP's SOP No. BPNPSM-PMT-033. Spreadsheet results are attached to this fact sheet. The Toxics Management Spreadsheet uses the following logic:

- a. Establish average monthly and IMAX limits in the draft permit where the maximum reported concentration exceeds 50% of the WQBEL.
- b. For non-conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 25% - 50% of the WQBEL.
- c. For conservative pollutants, establish monitoring requirements where the maximum reported concentration is between 10%-50% of the WQBEL.

Since the reported maximum concentrations were greater than 50% of their respective WQBEL, per DEP's SOP No. BPNPSM-PMT-033, limits will be necessary for Carbon Tetrachloride, 1,2-Dichloroethane, 1,1,2,2-Tetrachloroethane, Vinyl Chloride. The NPDES permit will contain interim and final limits, with the final limits to take effect three (3) years after the permit effective date. Additionally, monitoring will be added to the permit for Chlorodibromomethane, Dichlorobromomethane, 1,3-Dichloropropylene, and 1,1,2-Trichloroethane. A 24-Hr Composite sample type and a minimum monitoring frequency of 1/week will be used for these parameters, to be consistent with Table 6-4 of DEP's Guidance "Technical Guidance for the Development and Specification of Effluent Limitations and Other Permit Conditions in NPDES Permits" (Guidance No. 362-0400-001). Per DEP's Guidance No. 362-0400-001, the IMAX multiplier of 2.5 was used to determine the IMAX limit for the effluent limitations in this permit. Limits were rounded in accordance with this guidance.

Chesapeake Bay Total Maximum Daily Load (TMDL)

DEP developed a strategy to comply with the EPA and Chesapeake Bay Foundation requirements by reducing point source loadings of Total Nitrogen (TN) and Total Phosphorus (TP). This strategy can be located in the Pennsylvania Chesapeake Watershed Implementation Plan (WIP), dated January 11, 2011. Subsequently, an update to the WIP was published as the Phase 2 WIP. As part of the Phase 2 WIP, a Phase 2 Watershed Implementation Plan Wastewater Supplement (Phase 2 Supplement) was developed, providing an update on TMDL implementation for point sources and DEP's current implementation strategy for wastewater. A new update to the WIP was published as the Phase 3 WIP in August 2019. As part of the Phase 3 WIP, a Phase 3 Watershed Implementation Plan Wastewater Supplement (Phase 3 Supplement) was developed, and was most recently revised on December 17, 2019, and is the basis for the development of any Chesapeake Bay related permit parameters. Industrial discharges have been prioritized based on their delivered TN and TP loadings to the Bay. Significant industrial wastewater dischargers are facilities that discharge more than 75 lbs/day of TN or 25 lbs/day of TP on an average annual basis and the rest are classified as non-significant dischargers. This facility is classified as a non-significant discharger with little or no potential to introduce nutrients to the receiving stream; therefore, no additional monitoring for TP and TN due to Chesapeake Bay requirements will be needed at this time.

Chemical Additives

The following chemical additives are currently used at the plant and are expected to be present in the effluent:

Chemical Additive	Purpose	Maximum Usage (ppm)	Usage Frequency
Chem-Aqua 32115	Cooling Tower Inhibitor	300	7 Days a Week
MB-38(Sodium Hypochlorite)	Cooling Water Biocide	100	3 Times a Week
Bacticide 45B		0.8-0.9 (lb/day)	

These chemicals are included on DEP's Approved List of Chemical Additives. The permit will include Part C conditions for chemical additive usage and reporting requirements.

Anti-Degradation

The effluent limits for this discharge have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected. No High Quality Waters are impacted by this discharge. No Exceptional Value Waters are impacted by this discharge.

303(d) Listed Streams

The discharge is located on a stream segment that is designated on the 303(d) list as impaired. There is a recreational impairment due to pathogens from an unknown source, and an aquatic life impairment due to nutrients from crop production and siltation from grazing in riparian or shoreline zones. This discharge will not contribute to these impairments.

Class A Wild Trout Fisheries

No Class A Wild Trout Fisheries are impacted by this discharge.

Anti-Backsliding

Pursuant to 40 CFR § 122.44(l)(1), all proposed permit requirements addressed in this fact sheet are at least as stringent as the requirements implemented in the existing NPDES permit unless any exceptions addressed by DEP in this fact sheet.

Development of Effluent Limitations

Outfall No. <u>002</u>	Design Flow (MGD) <u>Variable (stormwater)</u>
Latitude <u>40° 5' 10"</u>	Longitude <u>76° 10' 30"</u>
Wastewater Description: <u>Stormwater</u>	

Stormwater Limitations

The application lists one (1) stormwater outfall for this facility. Outfall 002 receives stormwater from the property, and drains 9 acres. The existing permit requires annual monitoring of CBOD₅, COD, TSS, Total Phosphorus, Total Kjeldahl Nitrogen, Dissolved Iron, Oil and Grease, and pH. These monitoring requirements were derived from a previous NPDES PAG-03 General Permit. This facility falls under SIC Code 3084. According to DEP's current NPDES PAG-03 General Permit, SIC Code 3084 is subject to Appendix S monitoring requirements. This appendix requires semi-annual monitoring for the parameters listed in the table below. These parameters will replace the existing parameters in the permit renewal.

Stormwater will be monitored and managed using best management practices. The permittee shall monitor and report analytical results for the parameters listed below on Discharge Monitoring Reports (DMRs) for Outfall 002. The benchmark values listed on the table below are not effluent limitations, and exceedances do not constitute permit violations. However, if the permittee's sampling demonstrates exceedances of benchmark values for two consecutive monitoring periods, the permittee shall submit a corrective action plan within 90 days of the end of the monitoring period triggering the plan.

Parameter	Minimum Measurement Frequency	Sample Type (mg/l)	Benchmark Values
pH	1 / 6months	Grab	XXX
TSS	1 / 6months	Grab	100
Total Zinc	1 / 6months	Grab	XXX

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. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through 3 Years From Effective Date.

Outfall 001, Continued (from Permit Effective Date through 3 Years From Effective Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Temperature (°F) Jan 1-31	XXX	XXX	XXX	49	XXX	XXX	1/day	I-S
Temperature (°F) Feb 1-29	XXX	XXX	XXX	49	XXX	XXX	1/day	I-S
Temperature (°F) Mar 1-31	XXX	XXX	XXX	69	XXX	XXX	1/day	I-S
Temperature (°F) Apr 1-15	XXX	XXX	XXX	78	XXX	XXX	1/day	I-S
Temperature (°F) Apr 16-30	XXX	XXX	XXX	84	XXX	XXX	1/day	I-S
Temperature (°F) May 1-15	XXX	XXX	XXX	81	XXX	XXX	1/day	I-S
Temperature (°F) May 16-31	XXX	XXX	XXX	100	XXX	XXX	1/day	I-S
Temperature (°F) Jun 1-15	XXX	XXX	XXX	101	XXX	XXX	1/day	I-S
Temperature (°F) Jun 16-30	XXX	XXX	XXX	105	XXX	XXX	1/day	I-S
Temperature (°F) Jul 1-31	XXX	XXX	XXX	98	XXX	XXX	1/day	I-S
Temperature (°F) Aug 1-15	XXX	XXX	XXX	97	XXX	XXX	1/day	I-S
Temperature (°F) Aug 16-31	XXX	XXX	XXX	97	XXX	XXX	1/day	I-S
Temperature (°F) Sep 1-15	XXX	XXX	XXX	92	XXX	XXX	1/day	I-S

Outfall001 , Continued (from Permit Effective Date through 3 Years From Effective Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Temperature (°F) Sep 16-30	XXX	XXX	XXX	86	XXX	XXX	1/day	I-S
Temperature (°F) Oct 1-15	XXX	XXX	XXX	80	XXX	XXX	1/day	I-S
Temperature (°F) Oct 16-31	XXX	XXX	XXX	74	XXX	XXX	1/day	I-S
Temperature (°F) Nov 1-15	XXX	XXX	XXX	67	XXX	XXX	1/day	I-S
Temperature (°F) Nov 16-30	XXX	XXX	XXX	57	XXX	XXX	1/day	I-S
Temperature (°F) Dec 1-31	XXX	XXX	XXX	48	XXX	XXX	1/day	I-S
BOD5	XXX	Report	XXX	XXX	26	XXX	2/month	8-Hr Composite
TSS	XXX	Report	XXX	XXX	19	XXX	2/month	8-Hr Composite
Oil and Grease	Report	Report	XXX	15	30	XXX	2/month	Grab
Carbon Tetrachloride	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
1,2-Dichloroethane	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
1,1,2,2-Tetrachloroethane	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Vinyl Chloride	Report	Report	XXX	Report	Report	XXX	1/week	24-Hr Composite
Chlorodibromomethane	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
Dichlorobromomethane	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
1,3-Dichloropropylene	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
1,1,2-Trichloroethane	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite

Compliance Sampling Location: Outfall 001

Other Comments: None

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. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: 3 Years From Effective Date through Permit Expiration Date.

Outfall 001, Continued (from 3 Years From Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Temperature (°F) Jan 1-31	XXX	XXX	XXX	49	XXX	XXX	1/day	I-S
Temperature (°F) Feb 1-29	XXX	XXX	XXX	49	XXX	XXX	1/day	I-S
Temperature (°F) Mar 1-31	XXX	XXX	XXX	69	XXX	XXX	1/day	I-S
Temperature (°F) Apr 1-15	XXX	XXX	XXX	78	XXX	XXX	1/day	I-S
Temperature (°F) Apr 16-30	XXX	XXX	XXX	84	XXX	XXX	1/day	I-S
Temperature (°F) May 1-15	XXX	XXX	XXX	81	XXX	XXX	1/day	I-S
Temperature (°F) May 16-31	XXX	XXX	XXX	100	XXX	XXX	1/day	I-S
Temperature (°F) Jun 1-15	XXX	XXX	XXX	101	XXX	XXX	1/day	I-S
Temperature (°F) Jun 16-30	XXX	XXX	XXX	105	XXX	XXX	1/day	I-S
Temperature (°F) Jul 1-31	XXX	XXX	XXX	98	XXX	XXX	1/day	I-S
Temperature (°F) Aug 1-15	XXX	XXX	XXX	97	XXX	XXX	1/day	I-S
Temperature (°F) Aug 16-31	XXX	XXX	XXX	97	XXX	XXX	1/day	I-S
Temperature (°F) Sep 1-15	XXX	XXX	XXX	92	XXX	XXX	1/day	I-S

Outfall001 , Continued (from 3 Years From Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Temperature (°F) Sep 16-30	XXX	XXX	XXX	86	XXX	XXX	1/day	I-S
Temperature (°F) Oct 1-15	XXX	XXX	XXX	80	XXX	XXX	1/day	I-S
Temperature (°F) Oct 16-31	XXX	XXX	XXX	74	XXX	XXX	1/day	I-S
Temperature (°F) Nov 1-15	XXX	XXX	XXX	67	XXX	XXX	1/day	I-S
Temperature (°F) Nov 16-30	XXX	XXX	XXX	57	XXX	XXX	1/day	I-S
Temperature (°F) Dec 1-31	XXX	XXX	XXX	48	XXX	XXX	1/day	I-S
BOD5	XXX	Report	XXX	XXX	26	XXX	2/month	8-Hr Composite
TSS	XXX	Report	XXX	XXX	19	XXX	2/month	8-Hr Composite
Oil and Grease	Report	Report	XXX	15	30	XXX	2/month	Grab
Carbon Tetrachloride	0.0014	0.0021	XXX	0.0015	0.0022	0.0037	1/week	24-Hr Composite
1,2-Dichloroethane	0.0023	0.0035	XXX	0.0025	0.0037	0.0062	1/week	24-Hr Composite
1,1,2,2-Tetrachloroethane	0.001	0.0015	XXX	0.0011	0.0016	0.0028	1/week	24-Hr Composite
Vinyl Chloride	0.00015	0.00023	XXX	0.0001	0.0002	0.0004	1/week	24-Hr Composite
Chlorodibromomethane	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
Dichlorobromomethane	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
1,3-Dichloropropylene	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
1,1,2-Trichloroethane	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite

Compliance Sampling Location: Outfall 001

Other Comments: None

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. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

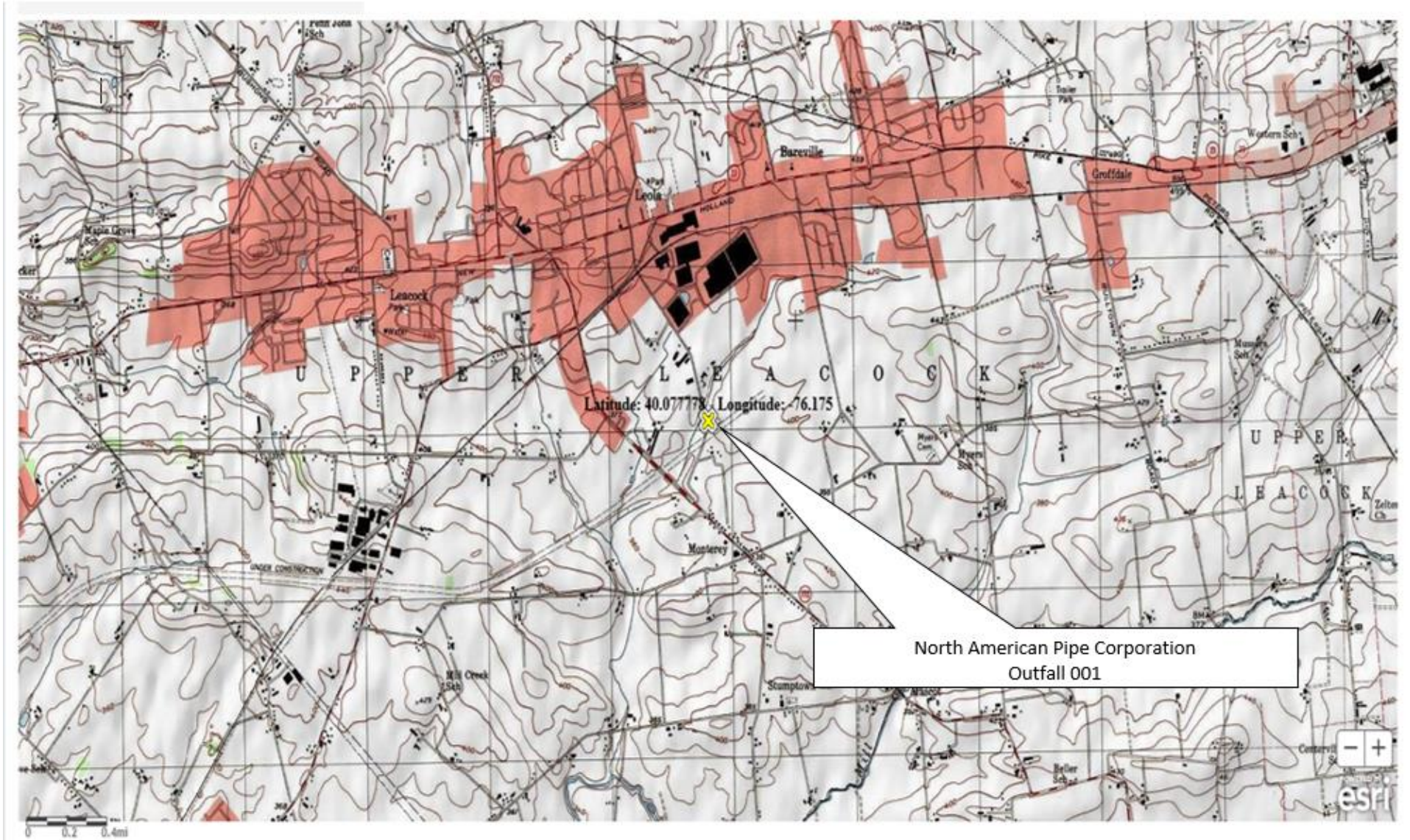
Outfall 002 Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Zinc	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfalls 002

Other Comments: None

Tools and References Used to Develop Permit	
<input type="checkbox"/>	WQM for Windows Model (see Attachment [REDACTED])
<input type="checkbox"/>	PENTOXSD for Windows Model (see Attachment [REDACTED])
<input type="checkbox"/>	TRC Model Spreadsheet (see Attachment [REDACTED])
<input checked="" type="checkbox"/>	Temperature Model Spreadsheet (see Attachment [REDACTED])
<input type="checkbox"/>	Toxics Screening Analysis Spreadsheet (see Attachment [REDACTED])
<input checked="" 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 checked="" 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 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 type="checkbox"/>	SOP: [REDACTED]
<input checked="" type="checkbox"/>	Other: DEP's Toxics Management Spreadsheet



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ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR data is current as of September 25, 2020

[Title 40](#) → [Chapter I](#) → [Subchapter N](#) → [Part 463](#) → [Subpart A](#)

Title 40: Protection of Environment

[PART 463—PLASTICS MOLDING AND FORMING POINT SOURCE CATEGORY](#)

Subpart A—Contact Cooling and Heating Water Subcategory

Contents

[§463.10](#) Applicability; description of the contact cooling and heating water subcategory.

[§463.11](#) Specialized definitions.

[§463.12](#) Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

[§463.13](#) Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

[§463.14](#) New source performance standards.

[§463.15](#) Pretreatment standards for existing sources.

[§463.16](#) Pretreatment standards for new sources.

[§463.17](#) Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

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§463.10 Applicability; description of the contact cooling and heating water subcategory.

This subpart applies to discharges of pollutants from processes in the contact cooling and heating water subcategory to waters of the United States and the introduction of such pollutants into publicly owned treatment works. Processes in the contact cooling and heating water subcategory are processes where process water comes in contact with plastic materials or plastic products for the purpose of heat transfer during plastics molding and forming.

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§463.11 Specialized definitions.

For the purpose of this subpart:

(a) The “average process water usage flow rate” of a contact cooling and heating water process in liters per day is equal to the volume of process water (liters) used per year by a process divided by the number of days per year the process operates. The “average process water usage flow rate” for a plant with more than one plastics molding and forming process that uses contact cooling and heating water is the sum of the “average process water usage flow rates” for the contact cooling and heating processes.

(b) The “volume of process water used per year” is the volume of process water that flows through a contact cooling and heating water process and comes in contact with the plastic product over a period of one year.

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§463.12 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations guidelines (*i.e.*, mass of pollutant discharged) representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available, which are calculated by multiplying the average process water usage flow rate for the contact cooling and heating water processes at a point source times the following pollutant concentrations:

SUBPART A

[Contact cooling and heating water]

Concentration used to calculate BPT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day (mg/l)
BOD ₅	28
Oil and grease	29
TSS	19
pH	(¹)

¹Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the contact cooling and heating water processes from the permittee.

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§463.13 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

(a) The BAT effluent limitations guidelines for bis(2-ethylhexyl) phthalate are reserved.

(b) The Agency has determined that, with the exception of bis(2-ethylhexyl) phthalate, there are no toxic pollutants in treatable concentrations in contact cooling and heating water. Accordingly, the Agency is promulgating BAT effluent limitations guidelines equal to the BPT effluent limitations guidelines.

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§463.14 New source performance standards.

(a) NSPS for bis(2-ethylhexyl) phthalate are reserved.

(b) Any new source subject to this subpart must achieve performance standards (*i.e.*, mass of pollutant discharged), which are calculated by multiplying the average process water usage flow rate for the contact cooling and heating water processes at a new source times the following pollutant concentrations:

SUBPART A

[Contact cooling and heating water]

Concentration used to calculate NSPS	
Pollutant or pollutant property	Maximum for any 1 day (mg/l)
BOD ₅	28
Oil and grease	29
TSS	19
pH	(¹)

¹Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the new source contact cooling and heating water processes from the permittee.

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§463.15 Pretreatment standards for existing sources.

(a) PSES for bis(2-ethylhexyl) phthalate are reserved.

(b) Any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403—General Pretreatment Regulations.

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§463.16 Pretreatment standards for new sources.

(a) PSNS for bis(2-ethylhexyl)phthalate are reserved.

(b) Any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403—General Pretreatment Regulations.

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§463.17 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology.

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the effluent limitations guidelines (*i.e.*, mass of pollutant discharged) representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology, which are calculated by multiplying the average process water usage flow rate for the contact cooling and heating water processes at a point source times the following pollutant concentrations:

SUBPART A

[Contact cooling and heating water]

Concentration used to calculate BCT effluent limitations	
Pollutant or pollutant property	Maximum for any 1 day (mg/l)
BOD ₅	26
Oil and grease	29
TSS	19
pH	(¹)

¹Within the range of 6.0 to 9.0 at all times.

The permit authority will obtain the average process water usage flow rate for the contact cooling and heating water processes from the permittee.

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	A	B	C	D	E	F	G	H	I	J	K
1	Facility: North American Pipe Corporation										
2	Permit Number: PA0080594										
3	Stream Name: UNT of Mill Creek										
4	Analyst/Engineer: Benjamin Lockwood										
5	Stream Q7-10 (cfs): 0.0997										
6											
7	Facility Flows					Stream Flows					
8		Intake	Intake	Consumptive	Discharge		PMF	Upstream	Adjusted	Downstream	
9		(Stream)	(External)	Loss	Flow			Stream Flow	Stream Flow	Stream Flow	
10		(MGD)	(MGD)	(MGD)	(MGD)			(cfs)	(cfs)	(cfs)	
11	Jan 1-31	0	0.115	0	0.115		1.00	0.32	0.32	0.50	
12	Feb 1-29	0	0.115	0	0.115		1.00	0.35	0.35	0.53	
13	Mar 1-31	0	0.115	0	0.115		1.00	0.70	0.70	0.88	
14	Apr 1-15	0	0.115	0	0.115		1.00	0.93	0.93	1.11	
15	Apr 16-30	0	0.115	0	0.115		1.00	0.93	0.93	1.11	
16	May 1-15	0	0.115	0	0.115		1.00	0.51	0.51	0.69	
17	May 16-31	0	0.115	0	0.115		1.00	0.51	0.51	0.69	
18	Jun 1-15	0	0.115	0	0.115		1.00	0.30	0.30	0.48	
19	Jun 16-30	0	0.115	0	0.115		1.00	0.30	0.30	0.48	
20	Jul 1-31	0	0.115	0	0.115		1.00	0.17	0.17	0.35	
21	Aug 1-15	0	0.115	0	0.115		1.00	0.14	0.14	0.32	
22	Aug 16-31	0	0.115	0	0.115		1.00	0.14	0.14	0.32	
23	Sep 1-15	0	0.115	0	0.115		1.00	0.11	0.11	0.29	
24	Sep 16-30	0	0.115	0	0.115		1.00	0.11	0.11	0.29	
25	Oct 1-15	0	0.115	0	0.115		1.00	0.12	0.12	0.30	
26	Oct 16-31	0	0.115	0	0.115		1.00	0.12	0.12	0.30	
27	Nov 1-15	0	0.115	0	0.115		1.00	0.16	0.16	0.34	
28	Nov 16-30	0	0.115	0	0.115		1.00	0.16	0.16	0.34	
29	Dec 1-31	0	0.115	0	0.115		1.00	0.24	0.24	0.42	
30											
31											
32											
33	Please forward all comments to Tom Starosta at 717-787-4317, tstarosta@state.pa.us.										
34	Version 2.0 -- 07/01/2005 Reference: Implementation Guidance for Temperature Criteria, DEP-ID: 391-2000-017										
35	NOTE: The user can only edit fields that are blue.										
36	NOTE: MGD x 1.547 = cfs.										
37											
38											
39											
40											
41											
42											

Flows

Criteria

WWF Stream

CWF Stream

TSF Stream

316 Results

Documentation



	A	B	C	D	E	F	G	H	I
1	Facility: North American Pipe Corporation								
2	Permit Number: PA0080594								
3	Stream: UNT of Mill Creek								
4									
5									
6									
7									
8									
9		WWF Criteria	CWF Criteria	TSF Criteria	316 Criteria		Q7-10 Multipliers	Q7-10 Multipliers	
10		(°F)	(°F)	(°F)	(°F)		(Used in Analysis)	(Default - Info Only)	
11	Jan 1-31	40	38	40	58		3.2	3.2	
12	Feb 1-29	40	38	40	58		3.5	3.5	
13	Mar 1-31	46	42	46	58		7	7	
14	Apr 1-15	52	48	52	58		9.3	9.3	
15	Apr 16-30	58	52	58	58		9.3	9.3	
16	May 1-15	64	54	64	64		5.1	5.1	
17	May 16-31	72	58	68	72		5.1	5.1	
18	Jun 1-15	80	60	70	80		3	3	
19	Jun 16-30	84	64	72	84		3	3	
20	Jul 1-31	87	66	74	87		1.7	1.7	
21	Aug 1-15	87	66	80	87		1.4	1.4	
22	Aug 16-31	87	66	87	87		1.4	1.4	
23	Sep 1-15	84	64	84	84		1.1	1.1	
24	Sep 16-30	78	60	78	78		1.1	1.1	
25	Oct 1-15	72	54	72	72		1.2	1.2	
26	Oct 16-31	66	50	66	66		1.2	1.2	
27	Nov 1-15	58	46	58	58		1.6	1.6	
28	Nov 16-30	50	42	50	58		1.6	1.6	
29	Dec 1-31	42	40	42	58		2.4	2.4	
30									
31									
32	NOTES:								
33	WWF= Warm water fishes								
34	CWF= Cold water fishes								
35	TSF= Trout stocking								
36									
37									
38									
39									
40									
41									
42									

	A	B	C	D	E	F	G	H	I	J
1	Facility:	North American Pipe Corporation								
2	Permit Number:	PA0080594								
3	Stream:	UNT of Mill Creek								
4										
5										
6										
7		WWF				WWF		WWF		PMF
8		Ambient Stream	Ambient Stream	Target Maximum	Daily		Daily			
9		Temperature (°F)	Temperature (°F)	Stream Temp. ¹	WLA ²		WLA ³	at Discharge		
10		(Default)	(Site-specific data)	(°F)	(Million BTUs/day)		(°F)	Flow (MGD)		
11	Jan 1-31	35	0	40	N/A -- Case 2		49.0	0.115		1.00
12	Feb 1-29	35	0	40	N/A -- Case 2		49.8	0.115		1.00
13	Mar 1-31	40	0	46	N/A -- Case 2		69.5	0.115		1.00
14	Apr 1-15	47	0	52	N/A -- Case 2		78.1	0.115		1.00
15	Apr 16-30	53	0	58	N/A -- Case 2		84.1	0.115		1.00
16	May 1-15	58	0	64	N/A -- Case 2		81.1	0.115		1.00
17	May 16-31	62	0	72	N/A -- Case 2		100.6	0.115		1.00
18	Jun 1-15	67	0	80	N/A -- Case 2		101.9	0.115		1.00
19	Jun 16-30	71	0	84	N/A -- Case 2		105.9	0.115		1.00
20	Jul 1-31	75	0	87	N/A -- Case 2		98.4	0.115		1.00
21	Aug 1-15	74	0	87	N/A -- Case 2		97.2	0.115		1.00
22	Aug 16-31	74	0	87	N/A -- Case 2		97.2	0.115		1.00
23	Sep 1-15	71	0	84	N/A -- Case 2		92.0	0.115		1.00
24	Sep 16-30	65	0	78	N/A -- Case 2		86.0	0.115		1.00
25	Oct 1-15	60	0	72	N/A -- Case 2		80.1	0.115		1.00
26	Oct 16-31	54	0	66	N/A -- Case 2		74.1	0.115		1.00
27	Nov 1-15	48	0	58	N/A -- Case 2		67.0	0.115		1.00
28	Nov 16-30	42	0	50	N/A -- Case 2		57.2	0.115		1.00
29	Dec 1-31	37	0	42	N/A -- Case 2		48.7	0.115		1.00
30										
31										
32	¹ This is the maximum of the WWF WQ criterion or the ambient temperature. The ambient temperature may be									
33	either the design (median) temperature for WWF, or the ambient stream temperature based on site-specific data entered by the user.									
34	A minimum of 1°F above ambient stream temperature is allocated.									
35	² The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.									
36	³ The WLA expressed in °F is valid only if the limit is tied to a daily discharge flow limit (may be used for Case 1 or Case 2).									
37	WLAs greater than 110°F are displayed as 110°F.									
38										
39										
40										
41										
42										

	A	B	C	D	E	F	G	H	I	J	K
1	Facility: North American Pipe Corporation										
2	Permit Number: PA0080594										
3	Stream: UNT of Mill Creek										
4											
5											
6											
7			316	316	316		316			PMF	
8			Ambient Stream	Target Maximum	Daily		Daily				
9			Temperature ⁴	Stream Temp. ¹	WLA ²		WLA ³	at Discharge			
10			(°F)	(°F)	(Million BTUs/day)		(°F)	Flow (MGD)			
11	Jan	1-31	34.2	58	N/A -- Case 2		100.7	0.115	1.00		
12	Feb	1-29	32	58	N/A -- Case 2		109.0	0.115	1.00		
13	Mar	1-31	39.9	58	N/A -- Case 2		110.0	0.115	1.00		
14	Apr	1-15	46.7	58	N/A -- Case 2		110.0	0.115	1.00		
15	Apr	16-30	52.4	58	N/A -- Case 2		87.2	0.115	1.00		
16	May	1-15	62.2	64	N/A -- Case 2		69.1	0.115	1.00		
17	May	16-31	58.4	72	N/A -- Case 2		110.0	0.115	1.00		
18	Jun	1-15	82.3	83.3	N/A -- Case 2		85.0	0.115	1.00		
19	Jun	16-30	79.7	84	N/A -- Case 2		91.2	0.115	1.00		
20	Jul	1-31	82.3	87	N/A -- Case 2		91.5	0.115	1.00		
21	Aug	1-15	84	87	N/A -- Case 2		89.4	0.115	1.00		
22	Aug	16-31	78.9	87	N/A -- Case 2		93.4	0.115	1.00		
23	Sep	1-15	77.4	84	N/A -- Case 2		88.1	0.115	1.00		
24	Sep	16-30	75.2	78	N/A -- Case 2		79.7	0.115	1.00		
25	Oct	1-15	57.5	72	N/A -- Case 2		81.8	0.115	1.00		
26	Oct	16-31	52.7	66	N/A -- Case 2		74.9	0.115	1.00		
27	Nov	1-15	50.6	58	N/A -- Case 2		64.6	0.115	1.00		
28	Nov	16-30	45.2	58	N/A -- Case 2		69.5	0.115	1.00		
29	Dec	1-31	35.15	58	N/A -- Case 2		88.7	0.115	1.00		
30											
31	¹ These data are the output from the 316 study. A minimum of 1°F above ambient stream temperature is allocated.										
32											
33											
34	² The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.										
35	³ The WLA expressed in °F 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 110°F are displayed as 110°F.										
36	⁴ The ambient stream temperature must be entered by the user. It can be the default temperature for WWF, CWF, or TSF waters, or it can be based on site-specific data.										
37											
38											
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40											
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42											



Discharge Information

Instructions Discharge Stream

Facility: North American Pipe Corporation NPDES Permit No.: PA0080594 Outfall No.: 001

Evaluation Type: Major Sewage / Industrial Waste Wastewater Description: Sewage Effluent

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q ₇₋₁₀	Q _h
0.115	382	7.8						

Discharge Pollutant	Units	Max Discharge Conc	0 if left blank		0.6 if left blank		0 if left blank			1 if left blank	
			Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1											
Total Dissolved Solids (PWS)	mg/L	382									
Chloride (PWS)	mg/L										
Bromide	mg/L										
Sulfate (PWS)	mg/L										
Fluoride (PWS)	mg/L	0.1									
Group 2											
Total Aluminum	µg/L	< 50									
Total Antimony	µg/L										
Total Arsenic	µg/L										
Total Barium	µg/L	66.7									
Total Beryllium	µg/L										
Total Boron	µg/L	< 50									
Total Cadmium	µg/L										
Total Chromium (III)	µg/L										
Hexavalent Chromium	µg/L										
Total Cobalt	µg/L										
Total Copper	µg/L										
Free Available Cyanide	µg/L										
Total Cyanide	µg/L										
Dissolved Iron	µg/L										
Total Iron	µg/L										
Total Lead	µg/L										
Total Manganese	µg/L	< 5									
Total Mercury	µg/L										
Total Nickel	µg/L										
Total Phenols (Phenolics) (PWS)	µg/L										
Total Selenium	µg/L										
Total Silver	µg/L										
Total Thallium	µg/L										
Total Zinc	µg/L										
Total Molybdenum	µg/L										
Acrolein	µg/L	< 2									
Acrylamide	µg/L										
Acrylonitrile	µg/L	< 2									
Benzene	µg/L	< 1									
Bromoform	µg/L	< 1									



Stream / Surface Water Information

North American Pipe Corporation, NPDES Permit No. PA0080594, Outfall 001

Instructions Discharge **Stream**

Receiving Surface Water Name: UNT of Mill Creek

No. Reaches to Model: 1

- Statewide Criteria
- Great Lakes Criteria
- ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi ²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	007611	0.65	112	0.75			Yes
End of Reach 1	007611	0	107	1.3			Yes

Q₇₋₁₀

Location	RMI	LFY (cfs/mi ²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	0.65	0.1	0.0997									278.8	8.3		
End of Reach 1	0	0.1	0.153									278.8	8.3		

Q_h

Location	RMI	LFY (cfs/mi ²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	0.65														
End of Reach 1	0														



Model Results

North American Pipe Corporation, NPDES Permit No. PA0080594, Outfall 001

All
 Inputs
 Results
 Limits

Hydrodynamics

Q₇₋₁₀

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
0.65	0.10		0.10	0.178	0.001	0.438	6.456	14.802	0.099	0.403	0.67
0	0.15		0.153								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
0.65	0.99		0.99	0.178	0.001	0.821	6.456	7.865	0.22	0.18	1.448
0	1.44		1.44								

Wasteload Allocations

Recommended WQBELs & Monitoring Requirements

No. Samples/Month:

Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Carbon Tetrachloride	0.001	0.002	1.51	2.36	3.78	µg/L	1.51	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Chlorodibromomethane	Report	Report	Report	Report	Report	µg/L	2.63	CRL	Discharge Conc > 25% WQBEL (no RP)
Dichlorobromomethane	Report	Report	Report	Report	Report	µg/L	3.61	CRL	Discharge Conc > 25% WQBEL (no RP)
1,2-Dichloroethane	0.002	0.004	2.5	3.89	6.24	µg/L	2.5	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,3-Dichloropropylene	Report	Report	Report	Report	Report	µg/L	2.23	CRL	Discharge Conc > 25% WQBEL (no RP)
1,1,2,2-Tetrachloroethane	0.001	0.002	1.12	1.74	2.79	µg/L	1.12	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,1,2-Trichloroethane	Report	Report	Report	Report	Report	µg/L	3.87	CRL	Discharge Conc > 25% WQBEL (no RP)
Vinyl Chloride	0.0002	0.0002	0.16	0.26	0.41	µg/L	0.16	CRL	Discharge Conc ≥ 50% WQBEL (RP)

