pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**New**	Application No.	**PA0233102**
Facility Type	**Industrial**	APS ID	**1034810**
Major / Minor	**Minor**	Authorization ID	**1347364**

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

Applicant and Facility Information

Applicant Name	**Danzer Veneer Americas, Inc.**	Facility Name	**Danzer Veneer Americas**
Applicant Address	240 N Reach Road	Facility Address	240 N Reach Road
	Williamsport, PA 17701-9101		Williamsport, PA 17701-9101
Applicant Contact	Kevin Falkingham	Facility Contact	Kevin Falkingham
Applicant Phone	(570) 322-4400	Facility Phone	(570) 322-4400
Client ID	287869	Site ID	555406
SIC Code	2435	Municipality	City of Williamsport
SIC Description	Manufacturing - Hardwood Veneer and Plywood	County	Lycoming

Date Application Received: March 23, 2021 EPA Waived? Yes

Date Application Accepted: April 5, 2021 If No, Reason

Purpose of Application: New industrial waste permit to replace existing stormwater permit (PAR224839).

Overview

Background

Danzer Veneer Americas, Inc. ("DVA") located on N. Reach Road in Williamsport, PA has historically been covered under Appendix J of the PAG-03 (PAR224839). Upon the most recent renewal of the PAG-03, the facility's SIC code has been moved from the "catch-all" Appendix J to a more timber industry-specific Appendix D. Appendix D of the PAG-03 specifically precludes discharges that result from wet-decking, as it is a process wastewater covered under EPA effluent limit guidelines at 40 CFR § 429.103. Wet-decking is the process of spraying logs with water during warm-weather months to keep them moist. Since DVA uses a wet deck at the Williamsport site, they have applied for a new individual industrial wastewater NPDES permit.

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.

Approve	Deny	Signatures	Date
X		*Derek S. Garner* Derek S. Garner / Project Manager	May 6, 2021
X		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	May 6, 2021

Facility Summary

DVA is a hardwood veneer manufacturer. As part of the veneer manufacturing process, timbers are stored in an uncovered, paved, log yard. In order to prevent the timber from drying out, the end of the logs are capped with wax and sprayed with water from the Williamsport Municipal Water Authority, a process known as wet-decking. The runoff water from wet-decking, as well as any stormwater, is drained to one of two vegetated ditches (East or West) and discharged via Outfall 001 to an Unnamed Tributary of West Branch Susquehanna River. To separate Outfall 001's process wastewater (wet-deck runoff) and stormwater sampling requirements, Outfall 002 has been created. Outfall 002 is physically the same outfall as 001 but was created in DEP's database so that the stormwater sampling requirements can be coded separate from the process wastewater requirements.

Wastewater produced by "cooking" logs in hot vats, as well as all sewage, is conveyed to the Williamsport Sanitary Authority sewer system.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	n/a
Latitude	41º 13' 40"	Longitude	-77º 4' 4"
Quad Name	Williamsport	Quad Code	41077
Wastewater Description:	Process wastewater		

Outfall No.	002	Design Flow (MGD)	n/a
Latitude	41º 13' 40"	Longitude	-77º 4' 4"
Quad Name	Williamsport	Quad Code	41077
Wastewater Description:	Stormwater		

Receiving Waters	**Unnamed Tributary of West Branch Susquehanna River**	Stream Code	20943
NHD Com ID	66915971	RMI	0.53
Drainage Area	0.18	Yield (cfs/mi^2)	0.044
Q_{7-10} Flow (cfs)	n/a	Q_{7-10} Basis	n/a
Elevation (ft)	517	Slope (ft/ft)	n/a
Watershed No.	10-A	Chapter 93 Class.	WWF, MF
Existing Use	n/a	Existing Use Qualifier	n/a
Exceptions to Use	n/a	Exceptions to Criteria	n/a
Assessment Status	Impaired		
Cause(s) of Impairment	Flow regime modification		
Source(s) of Impairment	Highway/road/bridge runoff (non-construction related), rural (residential areas), urban runoff/storm sewers		
TMDL Status	n/a	Name	n/a

Nearest Downstream Public Water Supply Intake	**PA American Water Company**		
PWS Waters	West Branch Susquehanna River	Flow at Intake (cfs)	679.73
PWS RMI	10.66	Distance from Outfall (mi)	29.6

Compliance History

Discharge monitoring reports for the monitoring periods of 07/01/2017 to 12/31/2017 and 01/01/2018 to 06/30/2018 were submitted late.

No open violations are associated with the permittee as of the date of this fact sheet.

The facility was most recently inspected by DEP on November 15, 2019. No violations were identified during the inspection except for the abovementioned late DMR submittals.

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.0282
Latitude 41º 13' 40.00" **Longitude** -77º 4' 4.00"
Wastewater Description: Process wastewater

Technology-Based Limitations

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

Parameter	Limit (mg/l)	SBC	Federal Regulation	State Regulation
pH (S.U.)	6.0	IMIN	429.101, 429.103	95.2(1)
	9.0	IMAX	429.101, 429.103	95.2(1)
Oil and Grease [(1)]	15	Daily Maximum		95.2(2)(ii)
	30	IMAX		95.2(2)(ii)
Dissolved Iron [(2)]	7.0	IMAX		95.2(4)

(1) Oil and grease was not detected in the three samples taken to complete the application's wastewater characterization. Since there does not appear to be a reasonable potential to exceed the abovementioned technology-based limits, no oil and grease limits are proposed.

(2) Dissolved iron was detected in two of the three samples taken to complete the application's wastewater characterization. The maximum detected concentration was 0.1 µg/l. Since there does not appear to be a reasonable potential to exceed the abovementioned technology-based limit, no dissolved iron limits are proposed.

Water Quality-Based Limitations

The discharge and receiving stream characteristics were entered DEP's Toxics Management Spreadsheet v1.2 to evaluate the applicability of water quality-based limitations. The model's recommendations are as follows:

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	0.18	0.21	750	886	886	µg/l	750	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Cadmium	Report	Report	Report	Report	Report	µg/l	0.26	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	Report	Report	Report	Report	Report	µg/l	8.86	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Lead	0.0006	0.001	2.72	4.24	6.79	µg/l	2.72	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Manganese	Report	Report	Report	Report	Report	µg/l	1,182	THH	Discharge Conc > 10% WQBEL (no RP)
Total Silver (1)	Report	Report	Report	Report	Report	µg/l	2.44	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/l	96.5	AFC	Discharge Conc > 10% WQBEL (no RP)
Acrolein	0.0007	0.0008	3.0	3.54	3.54	µg/l	3.0	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Acrylamide (1)	0.00006	0.00009	0.24	0.38	0.61	µg/l	0.24	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Carbon Tetrachloride (1)	0.0002	0.0003	0.8	1.25	2.0	µg/l	0.8	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Chlorodibromomethane (1)	0.0003	0.0005	1.39	2.17	3.48	µg/l	1.39	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Dichlorobromomethane (1)	0.0005	0.0007	1.91	2.99	4.79	µg/l	1.91	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,2-Dichloroethane (1)	0.0003	0.0005	1.32	2.06	3.31	µg/l	1.32	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,3-Dichloropropylene (1)	0.0003	0.0004	1.18	1.85	2.96	µg/l	1.18	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Methylene Chloride (1)	Report	Report	Report	Report	Report	µg/l	16.0	CRL	Discharge Conc > 25% WQBEL (no RP)
1,1,2,2-Tetrachloroethane (1)	0.0001	0.0002	0.59	0.92	1.48	µg/l	0.59	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Tetrachloroethylene (1)	Report	Report	Report	Report	Report	µg/l	2.4	CRL	Discharge Conc > 25% WQBEL (no RP)
1,1,2-Trichloroethane (1)	Report	Report	Report	Report	Report	µg/l	2.05	CRL	Discharge Conc > 25% WQBEL (no RP)
Vinyl Chloride (1)	0.00002	0.00003	0.087	0.14	0.22	µg/l	0.087	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Hexachlorobutadiene (1)	0.0004	0.0006	1.53	2.39	3.83	µg/l	1.53	CRL	Discharge Conc ≥ 50% WQBEL (RP)

(1) These parameters were not detected in the effluent, but the quantitation limit ("QL") used during analysis was not sufficiently low enough to rule out reasonable potential. The permittee will be made aware of the situation in the draft permit's cover letter and will be allowed to resample the wet deck process wastewater to possibly achieve a lower QL and demonstrate the pollutant is not present, or present at a lesser concentration, in the effluent.

The applicability of water quality-based effluent limits for total residual chlorine was evaluated using the TRC_CALC spreadsheet. The spreadsheet (attached), recommends an average monthly limit of 0.09 mg/l and instantaneous maximum limit of 0.13 mg/l.

Chesapeake Bay Considerations

Per Phase 3 of the Chesapeake Bay Watershed Implementation Plan Wastewater Supplement, this is an existing non-significant industrial wastewater discharge. Non-significant industrial wastewater discharges that do not have a potential to introduce a net increase of nitrogen or phosphorus do not require any monitoring requirements. Since wet-decking doesn't introduce a net increase of nitrogen or phosphorus loading to the watershed, no monitoring requirements are proposed.

Anti-Backsliding

This is a new permit. Anti-backsliding regulations are not applicable.

Outfall No. 002 **Design Flow (MGD)** n/a
Latitude 41º 13' 40.00" **Longitude** -77º 4' 4.00"
Wastewater Description: Stormwater

Technology-Based Limitations

There are no technology-based limitations applicable to stormwater associated with hardwood veneer manufacturing.

Water Quality-Based Limitations

DEP does not have an established procedure for modeling stormwater discharges. Accordingly, no water quality-based limitations are proposed.

Best Professional Judgment (BPJ) Limitations

Since Outfall 002 receives contributions from stormwater, DEP has proposed stormwater monitoring requirements. The requirements are taken from Appendix D of the PAG-03. Appendix D sets forth monitoring requirements, benchmark values, and BMPs for stormwater associated with the timber industry. The proposed monitoring requirements and benchmark values are as follows:

Parameter	Monitoring Requirements		Benchmark Values
	Minimum Measurement Frequency	Sample Type	
pH (S.U.)	1/6 months	Grab	XXX
Chemical Oxygen Demand (COD) (mg/l)	1/6 months	Grab	120 (3)
Total Suspended Solids (TSS) (mg/l)	1/6 months	Grab	100 (3)
Pentachlorophenol (mg/l) (1)	1/6 months	Grab	XXX
Total Arsenic (mg/l) (2)	1/6 months	Grab	XXX
Total Chromium (mg/l) (2)	1/6 months	Grab	XXX
Total Copper (mg/l) (2)	1/6 months	Grab	XXX

(1) Facilities that use chlorophenolic formulations must monitor for Pentachlorophenol. For all other facilities, monitoring for Pentachlorophenol is optional. If monitoring is not conducted, the permittee shall use a No Discharge Indicator (NODI) code on the DMR in lieu of sample data.

(2) Facilities that use chromium/copper/arsenic formulations must monitor for Total Arsenic, Total Chromium and Total Copper. For all other facilities, monitoring for Total Arsenic, Total Chromium and Total Copper is optional. If monitoring is not conducted, the permittee shall use a No Discharge Indicator (NODI) code on the DMR in lieu of sample data.

(3) These benchmark values 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.

As stated above Outfall 001 and 002 are physically the same outfall but have been broken into two for reporting purposes. A condition will be included in Part C of the permit that prohibits sampling when wet-deck runoff is comingled with stormwater.

Proposed Effluent Limitations

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 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	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Monthly When Discharging	Calculation
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	Monthly When Discharging	Grab
TRC	XXX	XXX	XXX	0.09	XXX	0.13	Monthly When Discharging	Grab
Total Aluminum (ug/L)	0.18	0.21	XXX	750.0	886.0	886	Monthly When Discharging	Grab
Total Cadmium (ug/L)	Report	Report	XXX	Report	Report	XXX	Monthly When Discharging	Grab
Total Copper (ug/L)	Report	Report	XXX	Report	Report	XXX	Monthly When Discharging	Grab
Total Lead (ug/L)	0.0006	0.001	XXX	2.72	4.24	6.79	Monthly When Discharging	Grab
Total Manganese (ug/L)	Report	Report	XXX	Report	Report	XXX	Monthly When Discharging	Grab
Total Silver (ug/L)	Report	Report	XXX	Report	Report	XXX	Monthly When Discharging	Grab
Total Zinc (ug/L)	Report	Report	XXX	Report	Report	XXX	Monthly When Discharging	Grab
Acrolein (ug/L)	0.0007	0.0008	XXX	3.0	3.54	3.54	Monthly When Discharging	Grab
Acrylamide (ug/L)	0.00006	0.00009	XXX	0.24	0.38	0.61	Monthly When Discharging	Grab
1,3-Dichloro-propylene (ug/L)	0.0003	0.0004	XXX	1.18	1.85	2.96	Monthly When Discharging	Grab
Carbon Tetrachloride (ug/L)	0.0002	0.0003	XXX	Report	Report	XXX	Monthly When Discharging	Grab

Outfall 001, Continued (from 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	Average Monthly	Daily Maximum	Instant. Maximum		
Chlorodibromo-methane (ug/L)	0.0003	0.0005	XXX	0.8	1.25	2	Monthly When Discharging	Grab
1,1,2-Trichloroethane (ug/L)	Report	Report	XXX	Report	Report	XXX	Monthly When Discharging	Grab
1,2-Dichloroethane (ug/L)	0.0003	0.0005	XXX	1.32	2.06	3.31	Monthly When Discharging	Grab
Dibromochloro-methane (ug/L)	0.0005	0.0007	XXX	1.91	2.99	4.79	Monthly When Discharging	Grab
1,1,2,2-Tetra-chloroethane (ug/L)	0.0001	0.0002	XXX	0.59	0.92	1.48	Monthly When Discharging	Grab
Hexachloro-butadiene (ug/L)	0.0004	0.0006	XXX	1.53	2.39	3.83	Monthly When Discharging	Grab
Methyl Chloride (ug/L)	Report	Report	XXX	Report	Report	XXX	Monthly When Discharging	Grab
Tetrachloro-ethylene (ug/L)	Report	Report	XXX	Report	Report	XXX	Monthly When Discharging	Grab
Vinyl Chloride (ug/L)	0.00002	0.00003	XXX	0.087	0.14	0.22	Monthly When Discharging	Grab

Compliance Sampling Location: Outfall 001

Outfall 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	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
COD	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
TSS	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Arsenic (2)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Chromium (2)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Copper (2)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Pentachloro-phenol (1)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 002

(1) Facilities that use chlorophenolic formulations must monitor for Pentachlorophenol. For all other facilities, monitoring for Pentachlorophenol is optional. If monitoring is not conducted, the permittee shall use a No Discharge Indicator (NODI) code on the DMR in lieu of sample data.

(2) Facilities that use chromium/copper/arsenic formulations must monitor for Total Arsenic, Total Chromium and Total Copper. For all other facilities, monitoring for Total Arsenic, Total Chromium and Total Copper is optional. If monitoring is not conducted, the permittee shall use a No Discharge Indicator (NODI) code on the DMR in lieu of sample data.

USGS
science for a changing world

Low-Flow (Q_{7-10}) Calculation

Facility: **Danzer Veneer Americas, Inc.**
NPDES Permit No. **PA0233102**

Gage Information

Drainage Area: **173** mi^2
Q_{7-10}: **7.6** cfs
LFY: **0.044** cfsm

Outfall Information

Drainage Area: **0.18** mi^2
Q_{7-10}: **0.01** cfs

Downstream Locations

RMI: **0**
Drainage Area: **2.03** mi^2
Q_{7-10}: **0.089** cfs

RMI:
Drainage Area: mi^2
Q_{7-10}: cfs

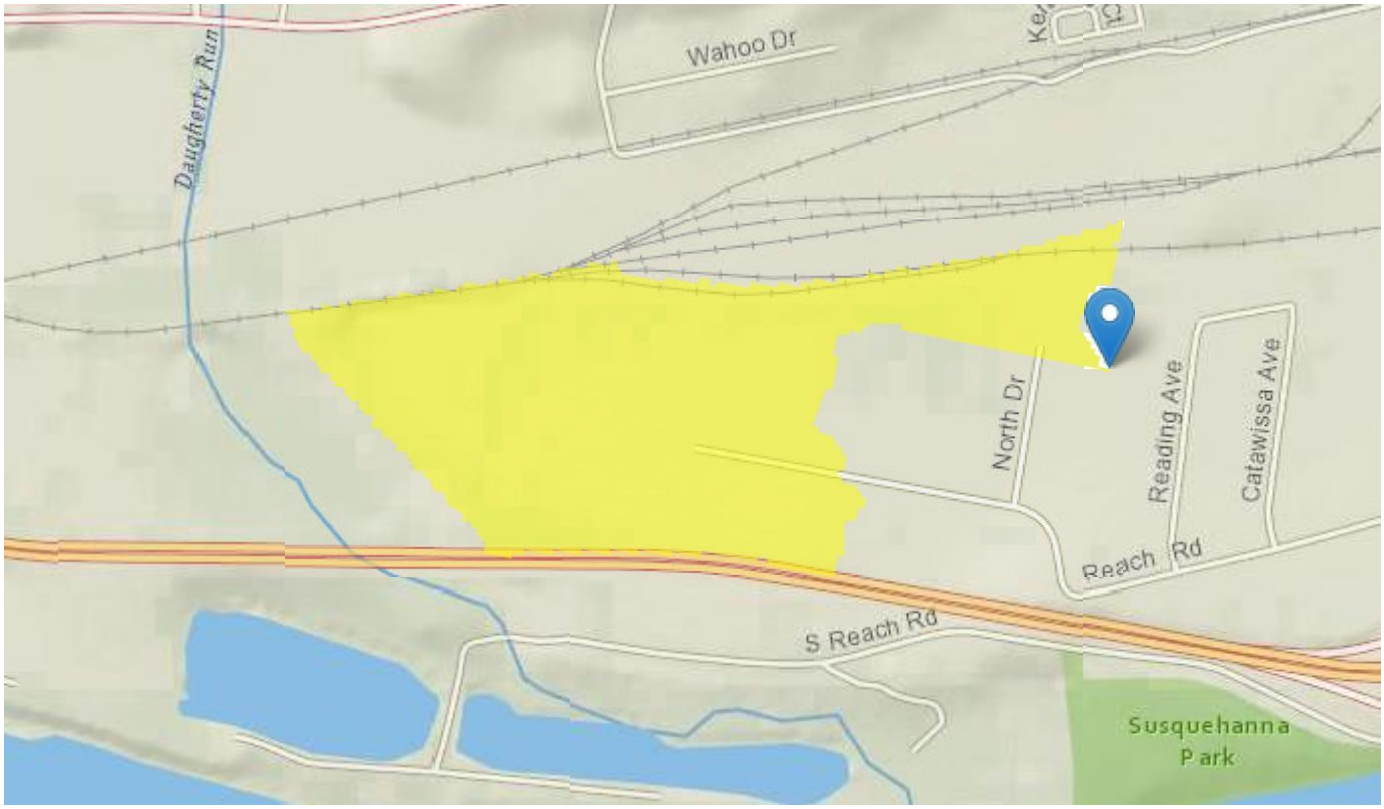
RMI:
Drainage Area: mi^2
Q_{7-10}: cfs

RMI:
Drainage Area: mi^2
Q_{7-10}: cfs

RMI:
Drainage Area: mi^2
Q_{7-10}: cfs

RMI:
Drainage Area: mi^2
Q_{7-10}: cfs

RMI:
Drainage Area: mi^2
Q_{7-10}: cfs


Wahoo Dr
Daugherty Run
North Dr
Reading Ave
Catawissa Ave
Reach Rd
S Reach Rd
Susquehanna
Park

Discharge Information

Instructions | Discharge | Stream

Facility: **Danzer Veneer Americas** NPDES Permit No.: **PA0233102** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Industrial waste**

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
0.0282	73.4	6.79						

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		228									
	Chloride (PWS)	mg/L		44.5									
	Bromide	mg/L	<	0.4									
	Sulfate (PWS)	mg/L		18.4									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		528									
	Total Antimony	µg/L		0.121									
	Total Arsenic	µg/L	<	0.0015									
	Total Barium	µg/L		98.8									
	Total Beryllium	µg/L	<	0.5									
	Total Boron	µg/L		0.105									
	Total Cadmium	µg/L		0.032									
	Total Chromium (III)	µg/L	<	0.025									
	Hexavalent Chromium	µg/L	<	0.00025									
	Total Cobalt	µg/L		0.392									
	Total Copper	µg/L		3.07									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L		0.006									
	Dissolved Iron	µg/L		0.1									
	Total Iron	µg/L		0.96									
	Total Lead	µg/L		1.8									
	Total Manganese	µg/L		150									
	Total Mercury	µg/L	<	0.001									
	Total Nickel	µg/L		1.96									
	Total Phenols (Phenolics) (PWS)	µg/L	<	1									
	Total Selenium	µg/L	<	2.5									
	Total Silver	µg/L	<	0.5									
	Total Thallium	µg/L	<	0.1									
	Total Zinc	µg/L		20.3									
	Total Molybdenum	µg/L		0.364									
	Acrolein	µg/L		4.5									
	Acrylamide	µg/L	<	1									
	Acrylonitrile	µg/L	<	1									
	Benzene	µg/L	<	1									
	Bromoform	µg/L	<	1									

Group 3	Carbon Tetrachloride	µg/L	<	1									
	Chlorobenzene	µg/L		1									
	Chlorodibromomethane	µg/L	<	1									
	Chloroethane	µg/L	<	1									
	2-Chloroethyl Vinyl Ether	µg/L	<	10									
	Chloroform	µg/L	<	1									
	Dichlorobromomethane	µg/L	<	1									
	1,1-Dichloroethane	µg/L	<	1									
	1,2-Dichloroethane	µg/L	<	1									
	1,1-Dichloroethylene	µg/L	<	1									
	1,2-Dichloropropane	µg/L	<	1									
	1,3-Dichloropropylene	µg/L	<	1									
	1,4-Dioxane	µg/L	<	1									
	Ethylbenzene	µg/L	<	3									
	Methyl Bromide	µg/L	<	1									
	Methyl Chloride	µg/L	<	1									
	Methylene Chloride	µg/L	<	5									
	1,1,2,2-Tetrachloroethane	µg/L	<	1									
	Tetrachloroethylene	µg/L	<	1									
	Toluene	µg/L	<	1									
	1,2-trans-Dichloroethylene	µg/L	<	1									
	1,1,1-Trichloroethane	µg/L	<	1									
	1,1,2-Trichloroethane	µg/L	<	1									
	Trichloroethylene	µg/L	<	1									
	Vinyl Chloride	µg/L	<	1									
Group 4	2-Chlorophenol	µg/L	<	1									
	2,4-Dichlorophenol	µg/L	<	2									
	2,4-Dimethylphenol	µg/L	<	2									
	4,6-Dinitro-o-Cresol	µg/L	<	1									
	2,4-Dinitrophenol	µg/L	<	1									
	2-Nitrophenol	µg/L	<	1									
	4-Nitrophenol	µg/L	<	1									
	p-Chloro-m-Cresol	µg/L	<	1									
	Pentachlorophenol	µg/L	<	1									
	Phenol	µg/L	<	1									
	2,4,6-Trichlorophenol	µg/L	<	1									
Group 5	Acenaphthene	µg/L	<	1									
	Acenaphthylene	µg/L	<	1									
	Anthracene	µg/L	<	1									
	Benzidine	µg/L	<	5									
	Benzo(a)Anthracene	µg/L	<	1									
	Benzo(a)Pyrene	µg/L	<	1									
	3,4-Benzofluoranthene	µg/L	<	1									
	Benzo(ghi)Perylene	µg/L	<	1									
	Benzo(k)Fluoranthene	µg/L	<	1									
	Bis(2-Chloroethoxy)Methane	µg/L	<	1									
	Bis(2-Chloroethyl)Ether	µg/L	<	1									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	1									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	1									
	4-Bromophenyl Phenyl Ether	µg/L	<	1									
	Butyl Benzyl Phthalate	µg/L		9.45									
	2-Chloronaphthalene	µg/L	<	1									
	4-Chlorophenyl Phenyl Ether	µg/L	<	1									
	Chrysene	µg/L	<	1									
	Dibenzo(a,h)Anthrancene	µg/L	<	1									
	1,2-Dichlorobenzene	µg/L	<	1									
	1,3-Dichlorobenzene	µg/L	<	1									
	1,4-Dichlorobenzene	µg/L	<	1									
	3,3-Dichlorobenzidine	µg/L	<	1									
	Diethyl Phthalate	µg/L	<	1									
	Dimethyl Phthalate	µg/L	<	1									
	Di-n-Butyl Phthalate	µg/L		0.52									
	2,4-Dinitrotoluene	µg/L	<	1									

	2,6-Dinitrotoluene	µg/L	<	1									
	Di-n-Octyl Phthalate	µg/L	<	1									
	1,2-Diphenylhydrazine	µg/L	<	1									
	Fluoranthene	µg/L	<	1									
	Fluorene	µg/L	<	1									
	Hexachlorobenzene	µg/L	<	1									
	Hexachlorobutadiene	µg/L	<	1									
	Hexachlorocyclopentadiene	µg/L	<	1									
	Hexachloroethane	µg/L	<	1									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	1									
	Isophorone	µg/L	<	1									
	Naphthalene	µg/L	<	1									
	Nitrobenzene	µg/L	<	1									
	n-Nitrosodimethylamine	µg/L	<	1									
	n-Nitrosodi-n-Propylamine	µg/L	<	1									
	n-Nitrosodiphenylamine	µg/L	<	1									
	Phenanthrene	µg/L	<	1									
	Pyrene	µg/L	<	1									
	1,2,4-Trichlorobenzene	µg/L	<	1									
Group 6	Aldrin	µg/L	<	0.0102									
	alpha-BHC	µg/L	<	0.0102									
	beta-BHC	µg/L	<	0.0204									
	gamma-BHC	µg/L	<	0.0102									
	delta BHC	µg/L	<	0.0102									
	Chlordane	µg/L	<	0.51									
	4,4-DDT	µg/L	<	0.0102									
	4,4-DDE	µg/L	<	0.0102									
	4,4-DDD	µg/L	<	0.0102									
	Dieldrin	µg/L	<	0.0102									
	alpha-Endosulfan	µg/L	<	0.0102									
	beta-Endosulfan	µg/L	<	0.0102									
	Endosulfan Sulfate	µg/L	<	0.0102									
	Endrin	µg/L	<	0.0204									
	Endrin Aldehyde	µg/L	<	0.0102									
	Heptachlor	µg/L	<	0.0102									
	Heptachlor Epoxide	µg/L	<	0.0102									
	PCB-1016	µg/L	<	0.05									
	PCB-1221	µg/L	<	0.05									
	PCB-1232	µg/L	<	0.05									
	PCB-1242	µg/L	<	0.05									
	PCB-1248	µg/L	<	0.05									
	PCB-1254	µg/L	<	0.05									
	PCB-1260	µg/L	<	0.05									
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<	0.05									
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

Stream / Surface Water Information

Danzer Veneer Americas, NPDES Permit No. PA0233102, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **UNT to West Branch Susquehanna Riv**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	020943	0.53	517	0.18			Yes
End of Reach 1	020943	0	516	2.03			Yes

Q *7-10*

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	0.53	0.044										100	7		
End of Reach 1	0	0.044										100	7		

Q *h*

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	0.53														
End of Reach 1	0														

Model Results

Danzer Veneer Americas, NPDES Permit No. PA0233102, Outfall 001

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.067 PMF: 1 Analysis Hardness (mg/l): 77.487 Analysis pH: 6.82

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	886	
Total Antimony	0	0		0	1,100	1,100	1,300	
Total Arsenic	0	0		0	340	340	402	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	24,812	
Total Boron	0	0		0	8,100	8,100	9,571	
Total Cadmium	0	0		0	1.571	1.65	1.94	Chem Translator of 0.955 applied
Total Chromium (III)	0	0		0	462.353	1,463	1,729	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	19.3	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	112	
Total Copper	0	0		0	10.568	11.0	13.0	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	48.869	59.0	69.7	Chem Translator of 0.828 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	1.95	Chem Translator of 0.85 applied
Total Nickel	0	0		0	377.357	378	447	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	2.074	2.44	2.88	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	76.8	
Total Zinc	0	0		0	94.406	96.5	114	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	3.54	
Acrylamide	0	0		0	N/A	N/A	N/A	

Acrylonitrile	0	0		0	650	650	768	
Benzene	0	0		0	640	640	756	
Bromoform	0	0		0	1,800	1,800	2,127	
Carbon Tetrachloride	0	0		0	2,800	2,800	3,308	
Chlorobenzene	0	0		0	1,200	1,200	1,418	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	21,268	
Chloroform	0	0		0	1,900	1,900	2,245	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	17,723	
1,1-Dichloroethylene	0	0		0	7,500	7,500	8,862	
1,2-Dichloropropane	0	0		0	11,000	11,000	12,997	
1,3-Dichloropropylene	0	0		0	310	310	366	
Ethylbenzene	0	0		0	2,900	2,900	3,426	
Methyl Bromide	0	0		0	550	550	650	
Methyl Chloride	0	0		0	28,000	28,000	33,083	
Methylene Chloride	0	0		0	12,000	12,000	14,179	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	1,182	
Tetrachloroethylene	0	0		0	700	700	827	
Toluene	0	0		0	1,700	1,700	2,009	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	8,035	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	3,545	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	4,017	
Trichloroethylene	0	0		0	2,300	2,300	2,718	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	662	
2,4-Dichlorophenol	0	0		0	1,700	1,700	2,009	
2,4-Dimethylphenol	0	0		0	660	660	780	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	94.5	
2,4-Dinitrophenol	0	0		0	660	660	780	
2-Nitrophenol	0	0		0	8,000	8,000	9,452	
4-Nitrophenol	0	0		0	2,300	2,300	2,718	
p-Chloro-m-Cresol	0	0		0	160	160	189	
Pentachlorophenol	0	0		0	7.253	7.25	8.57	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	544	
Acenaphthene	0	0		0	83	83.0	98.1	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	354	
Benzo(a)Anthracene	0	0		0	0.5	0.5	0.59	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	30,000	30,000	35,446	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	5,317	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	319	
Butyl Benzyl Phthalate	0	0		0	140	140	165	

2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	969	
1,3-Dichlorobenzene	0	0		0	350	350	414	
1,4-Dichlorobenzene	0	0		0	730	730	863	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	4,726	
Dimethyl Phthalate	0	0		0	2,500	2,500	2,954	
Di-n-Butyl Phthalate	0	0		0	110	110	130	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	1,890	
2,6-Dinitrotoluene	0	0		0	990	990	1,170	
1,2-Diphenylhydrazine	0	0		0	15	15.0	17.7	
Fluoranthene	0	0		0	200	200	236	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	10	10.0	11.8	
Hexachlorocyclopentadiene	0	0		0	5	5.0	5.91	
Hexachloroethane	0	0		0	60	60.0	70.9	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	11,815	
Naphthalene	0	0		0	140	140	165	
Nitrobenzene	0	0		0	4,000	4,000	4,726	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	20,086	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	354	
Phenanthrene	0	0		0	5	5.0	5.91	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	154	
Aldrin	0	0		0	3	3.0	3.54	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	0.95	0.95	1.12	
Chlordane	0	0		0	2.4	2.4	2.84	
4,4-DDT	0	0		0	1.1	1.1	1.3	
4,4-DDE	0	0		0	1.1	1.1	1.3	
4,4-DDD	0	0		0	1.1	1.1	1.3	
Dieldrin	0	0		0	0.24	0.24	0.28	
alpha-Endosulfan	0	0		0	0.22	0.22	0.26	
beta-Endosulfan	0	0		0	0.22	0.22	0.26	
Endrin	0	0		0	0.086	0.086	0.1	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.52	0.52	0.61	
Heptachlor Epoxide	0	0		0	0.5	0.5	0.59	
Toxaphene	0	0		0	0.73	0.73	0.86	

☑ ***CFC*** CCT (min): 0.067 PMF: 1 Analysis Hardness (mg/l): 77.487 Analysis pH: 6.82

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	260	
Total Arsenic	0	0		0	150	150	177	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	4,844	
Total Boron	0	0		0	1,600	1,600	1,890	
Total Cadmium	0	0		0	0.206	0.22	0.26	Chem Translator of 0.92 applied
Total Chromium (III)	0	0		0	60.143	69.9	82.6	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	12.3	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	22.4	
Total Copper	0	0		0	7.202	7.5	8.86	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	1,772	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	1.904	2.3	2.72	Chem Translator of 0.828 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	1.07	Chem Translator of 0.85 applied
Total Nickel	0	0		0	41.913	42.0	49.7	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	5.89	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	15.4	
Total Zinc	0	0		0	95.178	96.5	114	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	3.54	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	130	130	154	
Benzene	0	0		0	130	130	154	
Bromoform	0	0		0	370	370	437	
Carbon Tetrachloride	0	0		0	560	560	662	
Chlorobenzene	0	0		0	240	240	284	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	4,135	
Chloroform	0	0		0	390	390	461	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	3,663	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,772	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,599	
1,3-Dichloropropylene	0	0		0	61	61.0	72.1	
Ethylbenzene	0	0		0	580	580	685	
Methyl Bromide	0	0		0	110	110	130	
Methyl Chloride	0	0		0	5,500	5,500	6,499	
Methylene Chloride	0	0		0	2,400	2,400	2,836	

1,1,2,2-Tetrachloroethane	0	0		0	210	210	248	
Tetrachloroethylene	0	0		0	140	140	165	
Toluene	0	0		0	330	330	390	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	1,654	
1,1,1-Trichloroethane	0	0		0	610	610	721	
1,1,2-Trichloroethane	0	0		0	680	680	803	
Trichloroethylene	0	0		0	450	450	532	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	130	
2,4-Dichlorophenol	0	0		0	340	340	402	
2,4-Dimethylphenol	0	0		0	130	130	154	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	18.9	
2,4-Dinitrophenol	0	0		0	130	130	154	
2-Nitrophenol	0	0		0	1,600	1,600	1,890	
4-Nitrophenol	0	0		0	470	470	555	
p-Chloro-m-Cresol	0	0		0	30	30.0	35.4	
Pentachlorophenol	0	0		0	5.565	5.56	6.57	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	108	
Acenaphthene	0	0		0	17	17.0	20.1	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	69.7	
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.12	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	6,000	6,000	7,089	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	1,075	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	63.8	
Butyl Benzyl Phthalate	0	0		0	35	35.0	41.4	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	160	160	189	
1,3-Dichlorobenzene	0	0		0	69	69.0	81.5	
1,4-Dichlorobenzene	0	0		0	150	150	177	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	945	
Dimethyl Phthalate	0	0		0	500	500	591	
Di-n-Butyl Phthalate	0	0		0	21	21.0	24.8	
2,4-Dinitrotoluene	0	0		0	320	320	378	
2,6-Dinitrotoluene	0	0		0	200	200	236	
1,2-Diphenylhydrazine	0	0		0	3	3.0	3.54	
Fluoranthene	0	0		0	40	40.0	47.3	

Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	2	2.0	2.36	
Hexachlorocyclopentadiene	0	0		0	1	1.0	1.18	
Hexachloroethane	0	0		0	12	12.0	14.2	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	2,481	
Naphthalene	0	0		0	43	43.0	50.8	
Nitrobenzene	0	0		0	810	810	957	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	4,017	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	69.7	
Phenanthrene	0	0		0	1	1.0	1.18	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	30.7	
Aldrin	0	0		0	0.1	0.1	0.12	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0043	0.004	0.005	
4,4-DDT	0	0		0	0.001	0.001	0.001	
4,4-DDE	0	0		0	0.001	0.001	0.001	
4,4-DDD	0	0		0	0.001	0.001	0.001	
Dieldrin	0	0		0	0.056	0.056	0.066	
alpha-Endosulfan	0	0		0	0.056	0.056	0.066	
beta-Endosulfan	0	0		0	0.056	0.056	0.066	
Endrin	0	0		0	0.036	0.036	0.043	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.004	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.004	
Toxaphene	0	0		0	0.0002	0.0002	0.0002	

☑ ***THH*** CCT (min): 0.067 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	6.62	
Total Arsenic	0	0		0	10	10.0	11.8	
Total Barium	0	0		0	2,400	2,400	2,836	
Total Boron	0	0		0	3,100	3,100	3,663	
Total Cadmium	0	0		0	N/A	N/A	N/A	

Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	300	300	354	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	1,182	
Total Mercury	0	0		0	0.050	0.05	0.059	
Total Nickel	0	0		0	610	610	721	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	0.28	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	6	6.0	7.09	
Acrylamide	0	0		0	N/A	N/A	N/A	
Acrylonitrile	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	
Bromoform	0	0		0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0		0	N/A	N/A	N/A	
Chlorobenzene	0	0		0	130	130	154	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	N/A	N/A	N/A	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	N/A	N/A	N/A	
1,1-Dichloroethylene	0	0		0	33	33.0	39.0	
1,2-Dichloropropane	0	0		0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0		0	N/A	N/A	N/A	
Ethylbenzene	0	0		0	530	530	626	
Methyl Bromide	0	0		0	47	47.0	55.5	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	N/A	N/A	N/A	
1,1,2,2-Tetrachloroethane	0	0		0	N/A	N/A	N/A	
Tetrachloroethylene	0	0		0	N/A	N/A	N/A	
Toluene	0	0		0	1,300	1,300	1,536	
1,2-trans-Dichloroethylene	0	0		0	140	140	165	
1,1,1-Trichloroethane	0	0		0	N/A	N/A	N/A	
1,1,2-Trichloroethane	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0		0	N/A	N/A	N/A	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	81	81.0	95.7	
2,4-Dichlorophenol	0	0		0	77	77.0	91.0	
2,4-Dimethylphenol	0	0		0	380	380	449	

4,6-Dinitro-o-Cresol	0	0		0	13	13.0	15.4	
2,4-Dinitrophenol	0	0		0	69	69.0	81.5	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	N/A	N/A	N/A	
Phenol	0	0		0	10,400	10,400	12,288	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	670	670	792	
Anthracene	0	0		0	8,300	8,300	9,807	
Benzidine	0	0		0	N/A	N/A	N/A	
Benzo(a)Anthracene	0	0		0	N/A	N/A	N/A	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroisopropyl)Ether	0	0		0	1,400	1,400	1,654	
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	150	150	177	
2-Chloronaphthalene	0	0		0	1,000	1,000	1,182	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	420	420	496	
1,3-Dichlorobenzene	0	0		0	420	420	496	
1,4-Dichlorobenzene	0	0		0	420	420	496	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	17,000	17,000	20,086	
Dimethyl Phthalate	0	0		0	270,000	270,000	319,017	
Di-n-Butyl Phthalate	0	0		0	2,000	2,000	2,363	
2,4-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
1,2-Diphenylhydrazine	0	0		0	N/A	N/A	N/A	
Fluoranthene	0	0		0	130	130	154	
Fluorene	0	0		0	1,100	1,100	1,300	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0		0	40	40.0	47.3	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.0038	0.004	0.004	
Isophorone	0	0		0	35	35.0	41.4	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	17	17.0	20.1	
n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	

n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	830	830	981	
1,2,4-Trichlorobenzene	0	0		0	35	35.0	41.4	
Aldrin	0	0		0	N/A	N/A	N/A	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	0.098	0.098	0.12	
Chlordane	0	0		0	N/A	N/A	N/A	
4,4-DDT	0	0		0	N/A	N/A	N/A	
4,4-DDE	0	0		0	N/A	N/A	N/A	
4,4-DDD	0	0		0	N/A	N/A	N/A	
Dieldrin	0	0		0	N/A	N/A	N/A	
alpha-Endosulfan	0	0		0	62	62.0	73.3	
beta-Endosulfan	0	0		0	62	62.0	73.3	
Endrin	0	0		0	0.059	0.059	0.07	
Endrin Aldehyde	0	0		0	0.29	0.29	0.34	
Heptachlor	0	0		0	N/A	N/A	N/A	
Heptachlor Epoxide	0	0		0	N/A	N/A	N/A	
Toxaphene	0	0		0	0.00028	0.0003	0.0003	

☑ ***CRL*** CCT (min): 0.706 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	

Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	N/A	N/A	N/A	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	N/A	N/A	N/A	
Acrylamide	0	0		0	0.07	0.07	0.24	
Acrylonitrile	0	0		0	0.051	0.051	0.18	
Benzene	0	0		0	1.2	1.2	4.18	
Bromoform	0	0		0	4.3	4.3	15.0	
Carbon Tetrachloride	0	0		0	0.23	0.23	0.8	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.4	0.4	1.39	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	19.8	
Dichlorobromomethane	0	0		0	0.55	0.55	1.91	
1,2-Dichloroethane	0	0		0	0.38	0.38	1.32	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0		0	0.34	0.34	1.18	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Methyl Bromide	0	0		0	N/A	N/A	N/A	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	4.6	4.6	16.0	
1,1,2,2-Tetrachloroethane	0	0		0	0.17	0.17	0.59	
Tetrachloroethylene	0	0		0	0.69	0.69	2.4	
Toluene	0	0		0	N/A	N/A	N/A	
1,2-trans-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,1,1-Trichloroethane	0	0		0	N/A	N/A	N/A	
1,1,2-Trichloroethane	0	0		0	0.59	0.59	2.05	
Trichloroethylene	0	0		0	2.5	2.5	8.7	
Vinyl Chloride	0	0		0	0.025	0.025	0.087	
2-Chlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0		0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0		0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0		0	N/A	N/A	N/A	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	0.270	0.27	0.94	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.4	1.4	4.87	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.000086	0.00009	0.0003	

Benzo(a)Anthracene	0	0		0	0.0038	0.004	0.013	
Benzo(a)Pyrene	0	0		0	0.0038	0.004	0.013	
3,4-Benzofluoranthene	0	0		0	0.0038	0.004	0.013	
Benzo(k)Fluoranthene	0	0		0	0.0038	0.004	0.013	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.1	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	1.2	1.2	4.18	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.0038	0.004	0.013	
Dibenzo(a,h)Anthrancene	0	0		0	0.0038	0.004	0.013	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.021	0.021	0.073	
Diethyl Phthalate	0	0		0	N/A	N/A	N/A	
Dimethyl Phthalate	0	0		0	N/A	N/A	N/A	
Di-n-Butyl Phthalate	0	0		0	N/A	N/A	N/A	
2,4-Dinitrotoluene	0	0		0	0.05	0.05	0.17	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.17	
1,2-Diphenylhydrazine	0	0		0	0.036	0.036	0.13	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00028	0.0003	0.001	
Hexachlorobutadiene	0	0		0	0.44	0.44	1.53	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	1.4	1.4	4.87	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.00069	0.0007	0.002	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.017	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	11.5	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	
Aldrin	0	0		0	0.000049	0.00005	0.0002	
alpha-BHC	0	0		0	0.0026	0.003	0.009	
beta-BHC	0	0		0	0.0091	0.009	0.032	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0008	0.0008	0.003	
4,4-DDT	0	0		0	0.00022	0.0002	0.0008	
4,4-DDE	0	0		0	0.00022	0.0002	0.0008	

4,4-DDD	0	0		0	0.00031	0.0003	0.001	
Dieldrin	0	0		0	0.000052	0.00005	0.0002	
alpha-Endosulfan	0	0		0	N/A	N/A	N/A	
beta-Endosulfan	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	N/A	N/A	N/A	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.000079	0.00008	0.0003	
Heptachlor Epoxide	0	0		0	0.000039	0.00004	0.0001	
Toxaphene	0	0		0	0.00028	0.0003	0.001	

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

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	0.18	0.21	750	886	886	µg/L	750	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Cadmium	Report	Report	Report	Report	Report	µg/L	0.26	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Copper	Report	Report	Report	Report	Report	µg/L	8.86	CFC	Discharge Conc > 10% WQBEL (no RP)
Total Lead	0.0006	0.001	2.72	4.24	6.79	µg/L	2.72	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Manganese	Report	Report	Report	Report	Report	µg/L	1,182	THH	Discharge Conc > 10% WQBEL (no RP)
Total Silver	Report	Report	Report	Report	Report	µg/L	2.44	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	96.5	AFC	Discharge Conc > 10% WQBEL (no RP)
Acrolein	0.0007	0.0008	3.0	3.54	3.54	µg/L	3.0	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Acrylamide	0.00006	0.00009	0.24	0.38	0.61	µg/L	0.24	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Carbon Tetrachloride	0.0002	0.0003	0.8	1.25	2.0	µg/L	0.8	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Chlorodibromomethane	0.0003	0.0005	1.39	2.17	3.48	µg/L	1.39	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Dichlorobromomethane	0.0005	0.0007	1.91	2.99	4.79	µg/L	1.91	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,2-Dichloroethane	0.0003	0.0005	1.32	2.06	3.31	µg/L	1.32	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,3-Dichloropropylene	0.0003	0.0004	1.18	1.85	2.96	µg/L	1.18	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Methylene Chloride	Report	Report	Report	Report	Report	µg/L	16.0	CRL	Discharge Conc > 25% WQBEL (no RP)
1,1,2,2-Tetrachloroethane	0.0001	0.0002	0.59	0.92	1.48	µg/L	0.59	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Tetrachloroethylene	Report	Report	Report	Report	Report	µg/L	2.4	CRL	Discharge Conc > 25% WQBEL (no RP)
1,1,2-Trichloroethane	Report	Report	Report	Report	Report	µg/L	2.05	CRL	Discharge Conc > 25% WQBEL (no RP)
Vinyl Chloride	0.00002	0.00003	0.087	0.14	0.22	µg/L	0.087	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Hexachlorobutadiene	0.0004	0.0006	1.53	2.39	3.83	µg/L	1.53	CRL	Discharge Conc ≥ 50% WQBEL (RP)

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable

Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Antimony	6.62	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	2,836	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	1,890	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	82.6	µg/L	Discharge Conc < TQL
Hexavalent Chromium	12.3	µg/L	Discharge Conc < TQL
Total Cobalt	22.4	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	354	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	1,772	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.059	µg/L	Discharge Conc < TQL
Total Nickel	49.7	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	5.89	µg/L	Discharge Conc < TQL
Total Thallium	0.28	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrylonitrile	0.18	µg/L	Discharge Conc < TQL
Benzene	4.18	µg/L	Discharge Conc ≤ 25% WQBEL
Bromoform	15.0	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorobenzene	154	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	4,135	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroform	19.8	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethane	N/A	N/A	No WQS
1,1-Dichloroethylene	39.0	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-Dichloropropane	2,599	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	626	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	55.5	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	6,499	µg/L	Discharge Conc ≤ 25% WQBEL
Toluene	390	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	165	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	721	µg/L	Discharge Conc ≤ 25% WQBEL
Trichloroethylene	8.7	µg/L	Discharge Conc ≤ 25% WQBEL
2-Chlorophenol	95.7	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	91.0	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	154	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	15.4	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	81.5	µg/L	Discharge Conc < TQL
2-Nitrophenol	1,890	µg/L	Discharge Conc < TQL
4-Nitrophenol	555	µg/L	Discharge Conc < TQL

p-Chloro-m-Cresol	35.4	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.94	µg/L	Discharge Conc < TQL
Phenol	12,288	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	4.87	µg/L	Discharge Conc < TQL
Acenaphthene	20.1	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	9,807	µg/L	Discharge Conc < TQL
Benzidine	0.0003	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.013	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.013	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.013	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.013	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.1	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	1,654	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	4.18	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	63.8	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	41.4	µg/L	Discharge Conc ≤ 25% WQBEL
2-Chloronaphthalene	1,182	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.013	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.013	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	189	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	81.5	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	177	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	0.073	µg/L	Discharge Conc < TQL
Diethyl Phthalate	945	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	591	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	24.8	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	0.17	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.17	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.13	µg/L	Discharge Conc < TQL
Fluoranthene	47.3	µg/L	Discharge Conc < TQL
Fluorene	1,300	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.001	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.18	µg/L	Discharge Conc < TQL
Hexachloroethane	4.87	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.004	µg/L	Discharge Conc < TQL
Isophorone	41.4	µg/L	Discharge Conc < TQL
Naphthalene	50.8	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	20.1	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.002	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.017	µg/L	Discharge Conc < TQL

n-Nitrosodiphenylamine	11.5	µg/L	Discharge Conc < TQL
Phenanthrene	1.18	µg/L	Discharge Conc < TQL
Pyrene	981	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	30.7	µg/L	Discharge Conc ≤ 25% WQBEL
Aldrin	0.0002	µg/L	Discharge Conc < TQL
alpha-BHC	0.009	µg/L	Discharge Conc < TQL
beta-BHC	0.032	µg/L	Discharge Conc < TQL
gamma-BHC	0.12	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.003	µg/L	Discharge Conc < TQL
4,4-DDT	0.0008	µg/L	Discharge Conc < TQL
4,4-DDE	0.0008	µg/L	Discharge Conc < TQL
4,4-DDD	0.001	µg/L	Discharge Conc < TQL
Dieldrin	0.0002	µg/L	Discharge Conc < TQL
alpha-Endosulfan	0.066	µg/L	Discharge Conc < TQL
beta-Endosulfan	0.066	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	N/A	N/A	No WQS
Endrin	0.043	µg/L	Discharge Conc < TQL
Endrin Aldehyde	0.34	µg/L	Discharge Conc < TQL
Heptachlor	0.0003	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.0001	µg/L	Discharge Conc < TQL
PCB-1016	N/A	N/A	No WQS
PCB-1221	N/A	N/A	No WQS
PCB-1232	N/A	N/A	No WQS
PCB-1242	N/A	N/A	No WQS
PCB-1248	N/A	N/A	No WQS
PCB-1254	N/A	N/A	No WQS
PCB-1260	N/A	N/A	No WQS
Toxaphene	0.0002	µg/L	Discharge Conc < TQL

1A	B	C	D	E	F	G
2	**TRC EVALUATION**					
3	Input appropriate values in B4:B8 and E4:E7					
4	0.01	= Q stream (cfs)		0.5	= CV Daily	
5	0.0282	= Q discharge (MGD)		0.5	= CV Hourly	
6	1	= no. samples		1	= AFC_Partial Mix Factor	
7	0.3	= Chlorine Demand of Stream		1	= CFC_Partial Mix Factor	
8	0	= Chlorine Demand of Discharge		15	= AFC_Criteria Compliance Time (min)	
9	0.5	= BAT/BPJ Value		720	= CFC_Criteria Compliance Time (min)	
	0	= % Factor of Safety (FOS)		0	=Decay Coefficient (K)	
10	Source	Reference	AFC Calculations		Reference	CFC Calculations
11	TRC	1.3.2.iii	WLA afc = 0.092		1.3.2.iii	WLA cfc = 0.082
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.373		5.1c	LTAMULT cfc = 0.581
13	PENTOXSD TRG	5.1b	LTA_afc= 0.034		5.1d	LTA_cfc = 0.048
14						
15	Source		Effluent Limit Calculations			
16	PENTOXSD TRG	5.1f	AML MULT = 2.684			
17	PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.092		AFC	
18			INST MAX LIMIT (mg/l) = 0.138			

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