pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0100161**
Facility Type	**Industrial**	APS ID	**1017395**
Major / Minor	**Minor**	Authorization ID	**1316198**

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

Applicant and Facility Information

Applicant Name	**Triangle Suspension Systems, Inc.**	Facility Name	**DuBois Spring Plant**
Applicant Address	PO Box 425	Facility Address	200 E Maloney Road
	DuBois, PA 15801-1015		DuBois, PA 15801
Applicant Contact	Christopher Vota	Facility Contact	Christopher Vota
Applicant Phone	(814) 375-7268	Facility Phone	(814) 375-7268
Client ID	162960	Site ID	241311
SIC Code	3493	Municipality	Sandy Township
SIC Description	Manufacturing - Steel Springs, Except Wire	County	Clearfield
Date Application Received	June 2, 2020	EPA Waived?	Yes
Date Application Accepted	June 16, 2020	If No, Reason	
Purpose of Application	Renewal of a NPDES Permit		

Summary of Review

The subject facility manufactures vehicle and trailer leaf springs in Sandy Township, Clearfield County. Contact and non-contact cooling waters result from the manufacturing process.

A map of the discharge location is attached.

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		Keith C. Allison Keith C. Allison / Project Manager	June 3, 2021
X		Nicholas W. Hartranft Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	June 8, 2021

Discharge, Receiving Waters and Water Supply Information			
Outfall No.	001	Design Flow (MGD)	0.0095
Latitude	41º 6' 27.49"	Longitude	-78º 46' 10.23"
Quad Name	DuBois, PA	Quad Code	1015
Wastewater Description:	Contact Cooling Water (CCW), Noncontact Cooling Water (NCCW)		
Receiving Waters	Pentz Run (CWF)	Stream Code	48791
NHD Com ID	123857207	RMI	1.14
Drainage Area	2.96 mi^2	Yield (cfs/mi^2)	0.1
Q_{7-10} Flow (cfs)	0.30	Q_{7-10} Basis	Assumption
Elevation (ft)	1420	Slope (ft/ft)	0.00319
Watershed No.	17-C	Chapter 93 Class.	CWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
Nearest Downstream Public Water Supply Intake	Hawthorne Area Water Authority		
PWS Waters	Redbank Creek	Distance from Outfall (mi)	Approx. 35

Changes Since Last Permit Issuance: None.

Other Comments: The above stream and drainage characteristics were determined for previous reviews and remain adequate.

Both cooling water and stormwater runoff are discharged by Outfall 001. A separate internal monitoring point (101) has been established for the monitoring of the contact and non-contact cooling water. The permit will again specify in a footnote in Part A that the monitoring for these non-stormwater discharges at Internal Monitoring Point 101 shall not be collected within the 48 hours following a storm event that is greater than 0.1 inches in magnitude. This is included in order minimize the influence of stormwater in the monitoring of the cooling water.

No downstream water supply is expected to be affected by this discharge at this time with the limitations and the monitoring proposed.

Stormwater Discharges from Industrial Activities

Stormwater from the facility discharges through Outfall 001.

The permittee would be subject to Appendix U of the current PAG-03 general permit for discharges of stormwater from industrial activities. The associated monitoring requirements for Appendix U include semiannual monitoring for pH, TSS, Nitrate-Nitrite, Total Aluminum, Total Iron, and Total Zinc and therefore, the relevant BMPs and monitoring requirements of Appendix U will be included in this NPDES Permit. The existing permit gave the option of either conducting annual stormwater sampling or annual inspections. Included in Part C of the permit will be a benchmark value for TSS of 100 mg/L. 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.

The Outfall receives runoff from approximately 320,100 square feet of drainage area around the plant area.

Compliance History

DMR Data for Outfall 101 (from April 1, 2020 to March 31, 2021)

Parameter	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20	OCT-20	SEP-20	AUG-20	JUL-20	JUN-20	MAY-20	APR-20
Flow (MGD) Average Monthly	0.008	0.010	0.009	0.007	0.013	0.009	0.008	0.007	0.009	0.007	0.009	0.009
Flow (MGD) Daily Maximum	0.009	0.012	0.012	0.009	0.015	0.011	0.012	0.011	0.016	0.009	0.011	0.009
pH (S.U.) Minimum	8.29	7.93	7.82	7.82	7.67	7.83	7.50	8.03	7.81	7.40	7.59	7.58
pH (S.U.) Maximum	8.29	7.93	7.82	7.82	7.67	7.83	7.50	8.03	7.81	7.40	7.59	7.58
Temperature (ºF) Daily Maximum	50.9	47.1	52.5	53.6	62.4	70.3	74.4	78.8	79.9	73.7	58.3	57.9
TSS (lbs/day) Average Monthly	< 0.167	< 0.209	< 0.188	< 0.146	< 0.271	< 0.188	< 0.164	< 0.146	< 0.188	< 0.146	< 0.188	< 0.188
TSS (lbs/day) Daily Maximum	< 0.188	< 0.250	< 0.250	< 0.188	< 0.313	< 0.229	< 0.250	< 0.229	< 0.334	< 0.188	< 0.229	< 0.188
TSS (mg/L) Average Monthly	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50
TSS (mg/L) Daily Maximum	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50	< 2.50
Oil and Grease (lbs/day) Average Monthly	< 0.334	< 0.417	< 0.375	< 0.292	< 0.542	< 0.398	< 0.334	< 0.292	< 0.375	< 0.298	< 0.387	< 0.379
Oil and Grease (lbs/day) Daily Maximum	< 0.375	< 0.500	< 0.500	< 0.375	< 0.626	< 0.486	< 0.500	< 0.459	< 0.667	< 0.383	< 0.472	< 0.379
Oil and Grease (mg/L) Average Monthly	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.30	< 5.00	< 5.00	< 5.00	< 5.10	< 5.15	< 5.05
Total Toxic Organics (lbs/day) Daily Maximum				0.0027								
Total Toxic Organics (mg/L) Daily Maximum				0.0201								

Compliance History, Cont'd	
Summary of Inspections:	The facility has been inspected periodically by the Department over the past permit term. The most recent inspection of the facility on December 9, 2019 identified no violations at the time of inspection.
Other Comments:	A query in WMS found no open violations in eFACTS for Triangle Suspension Systems.

Existing Effluent Limitations and Monitoring Requirements

Outfall 101

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	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
Temperature (ºF)	XXX	XXX	XXX	XXX	Report	XXX	1/week	I-S
TSS	Report	Report	XXX	31	60	77	1/month	8-Hr Composite
Oil and Grease	Report	Report	XXX	15	XXX	30	1/month	8-Hr Composite
Total Toxic Organics	XXX	Report	XXX	XXX	2.13	XXX	1/year	8-Hr Composite

Development of Effluent Limitations

Outfall No. 101 **Design Flow (MGD)** 0.0095
Latitude 41º 6' 27.50" **Longitude** -78º 46' 9.70"
Wastewater Description: Contact Cooling Water (CCW), Noncontact Cooling Water (NCCW)

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
pH	6-9 S.U.	Min-Max	---	95.2(1)
Oil and Grease	15	Monthly Ave	---	95.2(2)(ii)
	30	Daily Max		

Comments: The above limits for pH and Oil and Grease from 25 Pa. Code 95 are already included in the permit. The permit also has existing BPJ limits for Total Toxic Organics (TTO) and TSS which were based on the Metal Finishing ELGs at 40 CFR 433. 40 CFR 433 is not directly applicable due to the cooling water discharges from the facility not being subject. These limits are adequate and will remain in the permit. Other metals listed in the ELGs are not included because they are not seen in the discharge at concentrations within an order of magnitude of the ELG levels based on application sampling data (See Attachments B and C).

Temperature

The Department uses a spreadsheet model to determine daily average temperature limitations for Temperature based on the criteria of 25 Pa. Code §93 and available dilution. The daily maximum temperatures by month for the discharge can be seen by the data on Page 3 of this Fact Sheet. The attached modeling shows no additional limits are necessary compared to the actual discharge temperatures (See Attachment D).

Toxics Management

A “Reasonable Potential Analysis” was performed to determine parameters with the potential to violate water quality standards. See Appendix C. The Department’s Toxics Management Spreadsheet was used which is a mass-balance water quality analysis model that includes consideration for mixing and other factors to determine recommended water quality-based effluent limits. The spreadsheet incorporates the water quality criteria of 25 Pa. Code §93.

The parameters listed below were initially determined by the Toxics Management Spreadsheet to be candidates for limitations or monitoring in the NPDES permit. The analysis had recommended limits or monitoring for these toxic pollutants because the monitoring was at reporting limits greater than the Department’s Target Quantitation Limits (QLs). The table below shows the permittee’s initial sample results, the WQ-based monthly average, the Target Quantitation Limit, and the re-test value for each parameter. The permittee conducted an additional round of samples in May 2021 meeting the Target QLs for these parameters.

Because the new sample results are all below detection at a reporting limit at or below the Target QL, limitations or monitoring are no longer recommended for these parameters. The updated Toxics Management Spreadsheet is included as Attachment C.

Pollutant	Application Sample Results (µg/L)	WQBEL (µg/L) Average Monthly	Target Quantitation Limit (µg/L)	Retest Results (µg/L)
Total Cadmium	<4	5.72	0.2	<0.123
Hexavalent Chromium	<50	221	1	<0.250
Total Lead	<8	66.9	1	<0.172
Total Selenium	<20	106	5	<1.67
Total Thallium	<20	5.11	2	<0.068
Vinyl Chloride	<1	3.53	0.5	<0.46
4,6-Dinitro-O-Cresol	<10	42.6	5	<0.90
Pentachlorophenol	<25	5.29	10	<0.970

Pollutant	Application Sample Results (µg/L)	WQBEL (µg/L) Average Monthly	Target Quantitation Limit (µg/L)	Retest Results (µg/L)
Benzo(a)Anthracene	<5	0.18	2.5	<0.210
Benzo(a)Pyrene	<5	0.018	2.5	<0.290
3,4-Benzofluoranthene	<5	0.18	2.5	<0.310
Benzo(k)fluoranthene	<5	1.76	2.5	<0.400
Dibenzo (a,h) Anthracene	<5	0.018	2.5	<0.280
Hexachlorobutadiene	<5	1.76	0.5	<0.270
Indeno(1,2,3-cd) Pyrene	<5	0.18	2.5	<0.250
1,2,4-trichlorobenzene	<5	1.49	0.5	<0.170

Chesapeake Bay/Nutrient Requirements

The Triangle Suspensions facility is considered an insignificant IW facility for Chesapeake Bay discharge permitting pursuant to the Phase III Watershed Implementation Plan (WIP) and is not expected to add a net addition of nutrients to the watershed. The facility conducted analyses for Total Phosphorus and both TKN and NO2-NO3 for the renewal application and all results were below detection. Based on these samples, the average discharge load of Total Nitrogen (TN) is <1.0 lbs/day and Total Phosphorus (TP) is 0.0022 lbs/day, which are well under the thresholds of 75 lbs/day and 25 lbs/day for Total Nitrogen and Total Phosphorus, respectively, in the WIP. Because the facility adds no significant net additions of nutrients to the Bay watershed, no periodic nutrient monitoring will be required in the NPDES permit.

Chemical Additives

No chemical additives discharged under these permitted discharges. Additives are used in a separate non-contact cooling water stream that is discharged to the sanitary sewer.

Best Professional Judgment (BPJ) Limitations

No additional BPJ limits are necessary beyond the limits for TSS and TTO noted above.

Anti-Backsliding

No limitations have been made less stringent consistent with the anti-backsliding requirements of the Clean Water Act and 40 CFR 122.4(l).

Additional Considerations

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 101, 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	1/week	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/month	Grab
Temperature (ºF)	XXX	XXX	XXX	XXX	Report	XXX	1/week	I-S
TSS	Report	Report	XXX	31	60	77	1/month	8-Hr Composite
Oil and Grease	Report	Report	XXX	15	XXX	30	1/month	8-Hr Composite
Total Toxic Organics	XXX	Report	XXX	XXX	2.13	XXX	1/year	8-Hr Composite

(*) - Samples shall not be collected within the 48 hours following a storm event that is greater than 0.1 inches in magnitude.

Compliance Sampling Location: at Internal Monitoring Point 101

Other Comments: The above limits and monitoring are unchanged from the existing permit.

The purpose of the requirement for not collecting samples after storm events is to minimize the influence of stormwater on the monitoring of the cooling water discharges.

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 Permit Expiration Date.

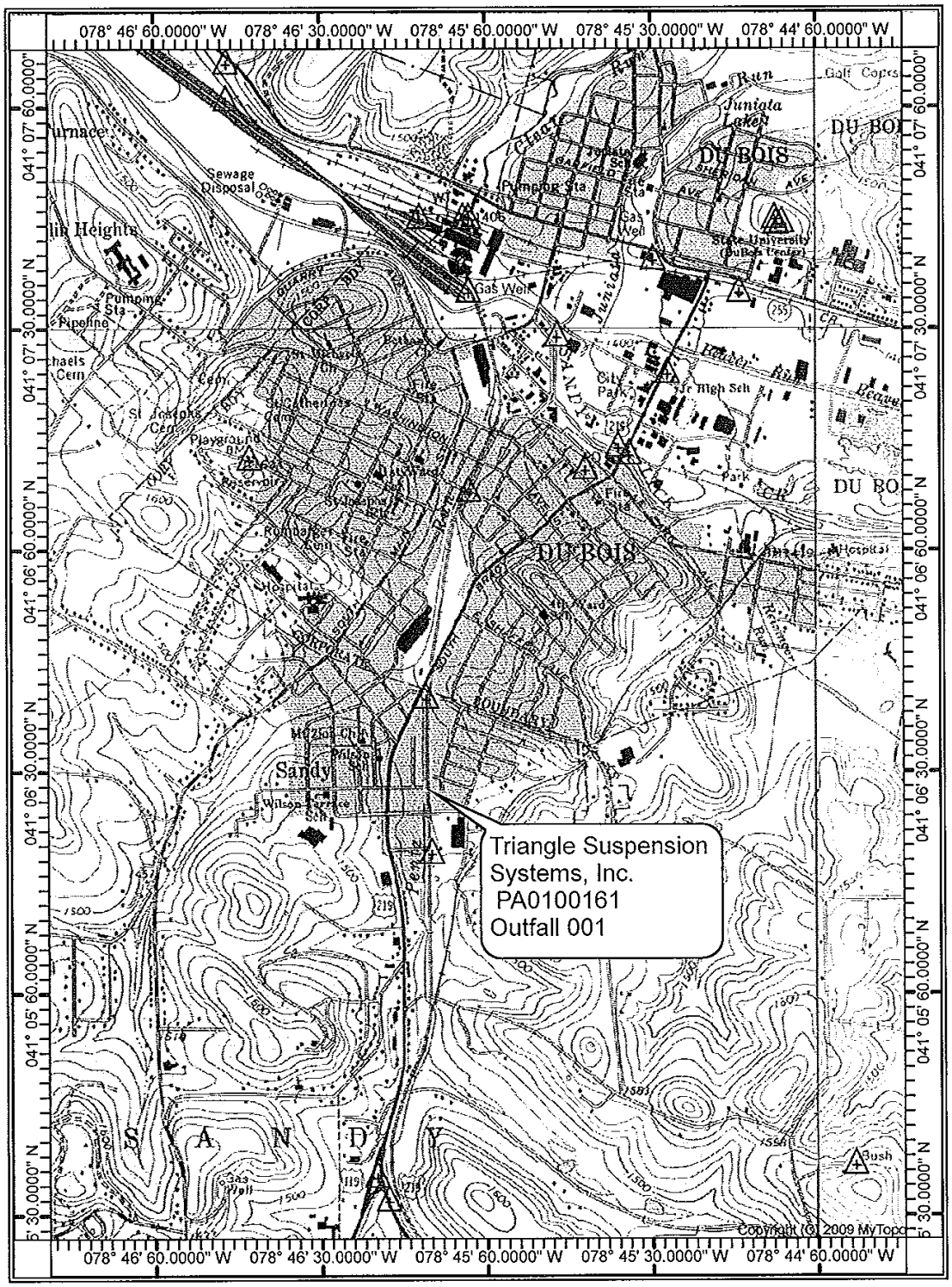
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day)		Concentrations (mg/L)				Minimum Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Total Suspended Solids	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Nitrate-Nitrite as N	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Aluminum, Total	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Iron, Total	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab
Zinc, Total	XXX	XXX	XXX	XXX	Report	XXX	1/6 months	Grab

Compliance Sampling Location: Outfall 001

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☒	DEP Toxic Management Spreadsheet (see Attachment **C**)
☐	TRC Model Spreadsheet (see Attachment)
☒	Temperature Model Spreadsheet (see Attachment **D**)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☐	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☒	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☒	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: Establishing Effluent Limitations for Individual Industrial Permits, 9/10/13, Establishing WQBELs for Toxic Pollutants and Permit Conditions for Toxic Pollutants, 5/20/21
☐	Other:

Attachments:

A. Discharge Location Map
B. 40 CFR 433 Subpart A
C. Toxics Management Spreadsheet
D. Temperature Model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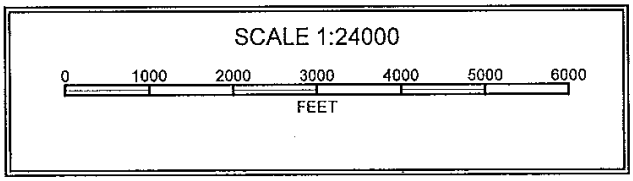
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e-CFR Data is current as of March 31, 2015

Title 40 → Chapter I → Subchapter N → Part 433 → Subpart A

Title 40: Protection of Environment
PART 433—METAL FINISHING POINT SOURCE CATEGORY

Subpart A—Metal Finishing Subcategory

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§433.10 Applicability; description of the metal finishing point source category.

(a) Except as noted in paragraphs (b) and (c), of this section, the provisions of this subpart apply to plants which perform any of the following six metal finishing operations on any basis material: Electroplating, Electroless Plating, Anodizing, Coating (chromating, phosphating, and coloring), Chemical Etching and Milling, and Printed Circuit Board Manufacture. If any of those six operations are present, then this part applies to discharges from those operations and also to discharges from any of the following 40 process operations: Cleaning, Machining, Grinding, Polishing, Tumbling, Burnishing, Impact Deformation, Pressure Deformation, Shearing, Heat Treating, Thermal Cutting, Welding, Brazing, Soldering, Flame Spraying, Sand Blasting, Other Abrasive Jet Machining, Electric Discharge Machining, Electrochemical Machining, Electron Beam Machining, Laser Beam Machining, Plasma Arc Machining, Ultrasonic Machining, Sintering, Laminating, Hot Dip Coating, Sputtering, Vapor Plating, Thermal Infusion, Salt Bath Descaling, Solvent Degreasing, Paint Stripping, Painting, Electrostatic Painting, Electropainting, Vacuum Metalizing, Assembly, Calibration, Testing, and Mechanical Plating.

(b) In some cases effluent limitations and standards for the following industrial categories may be effective and applicable to wastewater discharges from the metal finishing operations listed above. In such cases these part 433 limits shall not apply and the following regulations shall apply:

Nonferrous metal smelting and refining (40 CFR part 421)

Coil coating (40 CFR part 465)

Porcelain enameling (40 CFR part 466)

Battery manufacturing (40 CFR part 461)

Iron and steel (40 CFR part 420)

Metal casting foundries (40 CFR part 464)

Aluminum forming (40 CFR part 467)

Copper forming (40 CFR part 468)

Plastic molding and forming (40 CFR part 463)

Nonferrous forming (40 CFR part 471)

Electrical and electronic components (40 CFR part 469)

(c) This part does not apply to:

(1) Metallic platemaking and gravure cylinder preparation conducted within or for printing and publishing facilities; and

(2) Existing indirect discharging job shops and independent printed circuit board manufacturers which are covered by 40 CFR part 413.)

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983; 48 FR 45105, Oct. 3, 1983; 51 FR 40421, Nov. 7, 1986]

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§433.11 Specialized definitions.

The definitions set forth in 40 CFR part 401 and the chemical analysis methods set forth in 40 CFR part 136 are both incorporated here by reference. In addition, the following definitions apply to this part:

(a) The term "T", as in "Cyanide, T", shall mean total.

(b) The term "A", as in "Cyanide A", shall mean amenable to alkaline chlorination.

(c) The term "job shop" shall mean a facility which owns not more than 50% (annual area basis) of the materials undergoing metal finishing.

(d) The term "independent" printed circuit board manufacturer shall mean a facility which manufacturers printed circuit boards principally for sale to other companies.

(e) The term "TTO" shall mean total toxic organics, which is the summation of all quantifiable values greater than .01 milligrams per liter for the following toxic organics:

Acenaphthene

Acrolein

Acrylonitrile

Benzene

Benzidine

Carbon tetrachloride (tetrachloromethane)

Chlorobenzene

1,2,4-Trichlorobenzene

Hexachlorobenzene

1,2,-Dichloroethane

1,1,1-Trichloroethane

Hexachloroethane

1,1-Dichloroethane

1,1,2-Trichloroethane

1,1,2,2-Tetrachloroethane

Chloroethane

Bis (2-chloroethyl) ether

2-Chloroethyl vinyl ether (mixed)

2-Chloronaphthalene

2,4,6-Trichlorophenol

Parachlorometa cresol

Chloroform (trichloromethane)

2-Chlorophenol

1,2-Dichlorobenzene

1,3-Dichlorobenzene

1,4-Dichlorobenzene

3,3-Dichlorobenzidine

1,1-Dichloroethylene

1,2-Trans-dichloroethylene

2,4-Dichlorophenol

1,2-Dichloropropane

1,3-Dichloropropylene (1,3-dichloropropene)

2,4-Dimethylphenol

2,4-Dinitrotoluene

2,6-Dinitrotoluene

1,2-Diphenylhydrazine

Ethylbenzene

Fluoranthene

4-Chlorophenyl phenyl ether

4-Bromophenyl phenyl ether

Bis (2-chloroisopropyl) ether

Bis (2-chloroethoxy) methane

Methylene chloride (dichloromethane)

Methyl chloride (chloromethane)

Methyl bromide (bromomethane)

Bromoform (tribromomethane)

Dichlorobromomethane

Chlorodibromomethane

Hexachlorobutadiene

Hexachlorocyclopentadiene

Isophorone

Naphthalene

Nitrobenzene

2-Nitrophenol

4-Nitrophenol

2,4-Dinitrophenol

4,6-Dinitro-o-cresol

N-nitrosodimethylamine

N-nitrosodiphenylamine

N-nitrosodi-n-propylamine

Pentachlorophenol

Phenol

Bis (2-ethylhexyl) phthalate

Butyl benzyl phthalate

Di-n-butyl phthalate

Di-n-octyl phthalate

Diethyl phthalate

Dimethyl phthalate

1,2-Benzanthracene

(benzo(a)anthracene)

Benzo(a)pyrene (3,4-benzopyrene)

3,4-Benzofluoranthene (benzo(b)fluoranthene)

11,12-Benzofluoranthene (benzo(k)fluoranthene)

Chrysene

Acenaphthylene

Anthracene

1,12-Benzoperylene (benzo(ghi)perylene)

Fluorene

Phenanthrene

1,2,5,6-Dibenzanthracene (dibenzo(a,h)anthracene)

Indeno(1,2,3-cd) pyrene (2,3-o-phenlene pyrene)

Pyrene

Tetrachloroethylene

Toluene

Trichloroethylene

Vinyl chloride (chloroethylene)

Aldrin

Dieldrin

Chlordane (technical mixture and metabolites)

4,4-DDT

4,4-DDE (p,p-DDX)

4,4-DDD (p,p-TDE)

Alpha-endosulfan

Beta-endosulfan

Endosulfan sulfate

Endrin

Endrin aldehyde

Heptachlor

Heptachlor epoxide

(BHC-hexachloro-

cyclohexane)

Alpha-BHC

Beta-BHC

Gamma-BHC

Delta-BHC

(PCB-polychlorinated biphenyls)

PCB-1242 (Arochlor 1242)

PCB-1254 (Arochlor 1254)

PCB-1221 (Arochlor 1221)

PCB-1232 (Arochlor 1232)

PCB-1248 (Arochlor 1248)

PCB-1260 (Arochlor 1260)

PCB-1016 (Arochlor 1016)

Toxaphene

2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983, as amended at 51 FR 40421, Nov. 7, 1986]

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§433.12 Monitoring requirements.

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

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

(c) Self-monitoring for cyanide must be conducted after cyanide treatment and before dilution with other streams. Alternatively, samples may be taken of the final effluent, if the plant limitations are adjusted based on the dilution ratio of the cyanide waste stream flow to the effluent flow.

(Approved by the Office of Management and Budget under control number 2040-0074)

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983, as amended at 49 FR 34823, Sept. 4, 1984]

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

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

BPT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71

Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	
Oil & Grease	52	26
TSS	60	31
pH	([1])	([1])

[1]Within 6.0 to 9.0.

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

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

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

BAT EFFLUENT LIMITATIONS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

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§433.15 Pretreatment standards for existing sources (PSES).

(a) Except as provided in 40 CFR 403.7 and 403.13, any existing source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for existing sources (PSES):

PSES FOR ALL PLANTS EXCEPT JOB SHOPS AND INDEPENDENT PRINTED CIRCUIT BOARD MANUFACTURERS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.69	0.26
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

(b) Alternatively, for industrial facilities with cyanide treatment, upon agreement between a source subject to those limits and the pollution control authority. The following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user introducing wastewater pollutants into a publicly owned treatment works under the provisions of this subpart shall augment the use of process wastewater as a partial or total substitute for adequate treatment to achieve compliance with this standard.

(d) An existing source submitting a certification in lieu of monitoring pursuant to §433.12 (a) and (b) of this regulation must implement the toxic organic management plan approved by the control authority.

(e) An existing source subject to this subpart shall comply with a daily maximum pretreatment standard for TTO of 4.57 mg/l.

(f) Compliance with the provisions of paragraph (c), (d), and (e) of this section shall be achieved as soon as possible, but not later than June 30, 1984, however metal finishing facilities which are also covered by part 420 (iron and steel) need not comply before July 10, 1985. Compliance with the

provisions of paragraphs (a) and (b) of this section shall be achieved as soon as possible, but not later than February 15, 1986.

[48 FR 32485, July 15, 1983, as amended at 48 FR 41410, Sept. 15, 1983; 48 FR 43682, Sept. 26, 1983]

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§433.16 New source performance standards (NSPS).

(a) Any new source subject to this subpart must achieve the following performance standards:

NSPS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.11	0.07
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	
Oil and Grease	52	26
TSS	60	31
pH	([1])	([1])

[1]Within 6.0 to 9.0.

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to those limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983]

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§433.17 Pretreatment standards for new sources (PSNS).

(a) Except as provided in 40 CFR 403.7, any new source subject to this subpart that introduces pollutants into a publicly owned treatment works must comply with 40 CFR part 403 and achieve the following pretreatment standards for new sources (PSNS):

PSNS

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cadmium (T)	0.11	0.07
Chromium (T)	2.77	1.71
Copper (T)	3.38	2.07
Lead (T)	0.69	0.43
Nickel (T)	3.98	2.38
Silver (T)	0.43	0.24
Zinc (T)	2.61	1.48
Cyanide (T)	1.20	0.65
TTO	2.13	

(b) Alternatively, for industrial facilities with cyanide treatment, and upon agreement between a source subject to these limits and the pollution control authority, the following amenable cyanide limit may apply in place of the total cyanide limit specified in paragraph (a) of this section:

Pollutant or pollutant property	Maximum for any 1 day	Monthly average shall not exceed
	Milligrams per liter (mg/l)	
Cyanide (A)	0.86	0.32

(c) No user subject to the provisions of this subpart shall augment the use of process wastewater or otherwise dilute the wastewater as a partial or total substitute for adequate treatment to achieve compliance with this limitation.

(d) An existing source submitting a certification in lieu of monitoring pursuant to §433.12 (a) and (b) of this regulation must implement the toxic organic management plan approved by the control authority.

[48 FR 32485, July 15, 1983; 48 FR 43682, Sept. 26, 1983]

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Discharge Information

Instructions | Discharge | Stream

Facility: **Triangle Suspension Systems** NPDES Permit No.: **PA0100161** Outfall No.: **001**

Evaluation Type: **Major Sewage / Industrial Waste** Wastewater Description: **Contact and Non-Contact Cooling Water**

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
0.0095	80	7.67						

					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		226									
	Chloride (PWS)	mg/L		70.5									
	Bromide	mg/L	<	0.4									
	Sulfate (PWS)	mg/L		15.5									
	Fluoride (PWS)	mg/L	<	2									
Group 2	Total Aluminum	µg/L	<	100									
	Total Antimony	µg/L	<	10									
	Total Arsenic	µg/L	<	8									
	Total Barium	µg/L		42.6									
	Total Beryllium	µg/L	<	2									
	Total Boron	µg/L	<	100									
	Total Cadmium	µg/L	<	0.123									
	Total Chromium (III)	µg/L											
	Hexavalent Chromium	µg/L	<	0.25									
	Total Cobalt	µg/L	<	10									
	Total Copper	µg/L	<	10									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	10									
	Dissolved Iron	µg/L	<	200									
	Total Iron	µg/L		1490									
	Total Lead	µg/L	<	0.172									
	Total Manganese	µg/L		165									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L	<	50									
	Total Phenols (Phenolics) (PWS)	µg/L	<	20									
	Total Selenium	µg/L	<	1.67									
	Total Silver	µg/L	<	4									
	Total Thallium	µg/L	<	0.068									
	Total Zinc	µg/L		36.8									
	Total Molybdenum	µg/L	<	10									
	Acrolein	µg/L	<	10									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	1									
	Benzene	µg/L	<	1									
	Bromoform	µg/L	<	1									

Group 3	Carbon Tetrachloride	µg/L	<	2									
	Chlorobenzene	µg/L	<	1									
	Chlorodibromomethane	µg/L	<	1									
	Chloroethane	µg/L	<	1									
	2-Chloroethyl Vinyl Ether	µg/L	<	10									
	Chloroform	µg/L		14.3									
	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	<	3.2									
	Ethylbenzene	µg/L	<	1									
	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	<	0.46									
Group 4	2-Chlorophenol	µg/L	<	5									
	2,4-Dichlorophenol	µg/L	<	5									
	2,4-Dimethylphenol	µg/L	<	5									
	4,6-Dinitro-o-Cresol	µg/L	<	0.9									
	2,4-Dinitrophenol	µg/L	<	25									
	2-Nitrophenol	µg/L	<	5									
	4-Nitrophenol	µg/L	<	5									
	p-Chloro-m-Cresol	µg/L	<	5									
	Pentachlorophenol	µg/L	<	0.97									
	Phenol	µg/L	<	5									
	2,4,6-Trichlorophenol	µg/L	<	5									
	Acenaphthene	µg/L	<	5									
	Acenaphthylene	µg/L	<	5									
	Anthracene	µg/L	<	5									
	Benzidine	µg/L	<	25									
	Benzo(a)Anthracene	µg/L	<	0.21									
	Benzo(a)Pyrene	µg/L	<	0.29									
Group 5	3,4-Benzofluoranthene	µg/L	<	0.31									
	Benzo(ghi)Perylene	µg/L	<	5									
	Benzo(k)Fluoranthene	µg/L	<	0.4									
	Bis(2-Chloroethoxy)Methane	µg/L	<	5									
	Bis(2-Chloroethyl)Ether	µg/L	<	5									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	5									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	5									
	4-Bromophenyl Phenyl Ether	µg/L	<	5									
	Butyl Benzyl Phthalate	µg/L	<	5									
	2-Chloronaphthalene	µg/L	<	5									
	4-Chlorophenyl Phenyl Ether	µg/L	<	5									
	Chrysene	µg/L	<	5									
	Dibenzo(a,h)Anthrancene	µg/L	<	0.28									
	1,2-Dichlorobenzene	µg/L	<	5									
	1,3-Dichlorobenzene	µg/L	<	5									
	1,4-Dichlorobenzene	µg/L	<	5									
	3,3-Dichlorobenzidine	µg/L	<	5									
	Diethyl Phthalate	µg/L	<	5									
	Dimethyl Phthalate	µg/L	<	5									
	Di-n-Butyl Phthalate	µg/L	<	5									
	2,4-Dinitrotoluene	µg/L	<	5									

2,6-Dinitrotoluene	µg/L	<	5										
Di-n-Octyl Phthalate	µg/L	<	5										
1,2-Diphenylhydrazine	µg/L	<	5										
Fluoranthene	µg/L	<	5										
Fluorene	µg/L	<	5										
Hexachlorobenzene	µg/L	<	5										
Hexachlorobutadiene	µg/L	<	0.27										
Hexachlorocyclopentadiene	µg/L	<	5										
Hexachloroethane	µg/L	<	5										
Indeno(1,2,3-cd)Pyrene	µg/L	<	0.25										
Isophorone	µg/L	<	5										
Naphthalene	µg/L	<	5										
Nitrobenzene	µg/L	<	5										
n-Nitrosodimethylamine	µg/L	<	5										
n-Nitrosodi-n-Propylamine	µg/L	<	5										
n-Nitrosodiphenylamine	µg/L	<	5										
Phenanthrene	µg/L	<	5										
Pyrene	µg/L	<	5										
1,2,4-Trichlorobenzene	µg/L	<	0.17										

Stream / Surface Water Information

Triangle Suspension Systems, NPDES Permit No. PA0100161, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Pentz Run**

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	048791	1.14	1415	2.98			Yes
End of Reach 1	048791	0.0001	1400	4.79			Yes

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

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	1.14	0.1										100	7		
End of Reach 1	0.0001	0.1													

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	1.14														
End of Reach 1	0.0001														

Model Results

Triangle Suspension Systems, NPDES Permit No. PA0100161, Outfall 001

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

☑ ***Hydrodynamics***

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

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)
1.14	0.30		0.30	0.015	0.002	0.43	8.935	20.766	0.081	0.857	7.054
0.0001	0.48		0.479								

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)
1.14	2.58		2.58	0.015	0.002	1.091	8.935	8.186	0.266	0.262	1.901
0.0001	3.905		3.90								

☑ ***Wasteload Allocations***

☑ *AFC* CCT (min): 7.054 PMF: 1 Analysis Hardness (mg/l): 99.06 Analysis pH: 7.02

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	15,958	
Total Antimony	0	0		0	1,100	1,100	23,405	
Total Arsenic	0	0		0	340	340	7,234	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	446,816	
Total Boron	0	0		0	8,100	8,100	172,343	
Total Cadmium	0	0		0	1.995	2.11	45.0	Chem Translator of 0.944 applied
Hexavalent Chromium	0	0		0	16	16.3	347	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	2,021	
Total Copper	0	0		0	13.320	13.9	295	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	63.921	80.7	1,716	Chem Translator of 0.792 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	35.0	Chem Translator of 0.85 applied
Total Nickel	0	0		0	464.510	465	9,903	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	3.165	3.72	79.2	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	1,383	
Total Zinc	0	0		0	116.246	119	2,529	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	63.8	
Acrylonitrile	0	0		0	650	650	13,830	
Benzene	0	0		0	640	640	13,617	
Bromoform	0	0		0	1,800	1,800	38,298	
Carbon Tetrachloride	0	0		0	2,800	2,800	59,575	
Chlorobenzene	0	0		0	1,200	1,200	25,532	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	382,985	
Chloroform	0	0		0	1,900	1,900	40,426	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	319,154	
1,1-Dichloroethylene	0	0		0	7,500	7,500	159,577	
1,2-Dichloropropane	0	0		0	11,000	11,000	234,046	
1,3-Dichloropropylene	0	0		0	310	310	6,596	
Ethylbenzene	0	0		0	2,900	2,900	61,703	
Methyl Bromide	0	0		0	550	550	11,702	
Methyl Chloride	0	0		0	28,000	28,000	595,754	
Methylene Chloride	0	0		0	12,000	12,000	255,323	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	21,277	
Tetrachloroethylene	0	0		0	700	700	14,894	
Toluene	0	0		0	1,700	1,700	36,171	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	144,683	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	63,831	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	72,342	
Trichloroethylene	0	0		0	2,300	2,300	48,937	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	11,915	
2,4-Dichlorophenol	0	0		0	1,700	1,700	36,171	
2,4-Dimethylphenol	0	0		0	660	660	14,043	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	1,702	
2,4-Dinitrophenol	0	0		0	660	660	14,043	
2-Nitrophenol	0	0		0	8,000	8,000	170,215	
4-Nitrophenol	0	0		0	2,300	2,300	48,937	
p-Chloro-m-Cresol	0	0		0	160	160	3,404	
Pentachlorophenol	0	0		0	8.868	8.87	189	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	9,787	
Acenaphthene	0	0		0	83	83.0	1,766	

Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	6,383	
Benzo(a)Anthracene	0	0		0	0.5	0.5	10.6	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	30,000	30,000	638,308	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	95,746	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	5,745	
Butyl Benzyl Phthalate	0	0		0	140	140	2,979	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	17,447	
1,3-Dichlorobenzene	0	0		0	350	350	7,447	
1,4-Dichlorobenzene	0	0		0	730	730	15,532	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	85,108	
Dimethyl Phthalate	0	0		0	2,500	2,500	53,192	
Di-n-Butyl Phthalate	0	0		0	110	110	2,340	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	34,043	
2,6-Dinitrotoluene	0	0		0	990	990	21,064	
1,2-Diphenylhydrazine	0	0		0	15	15.0	319	
Fluoranthene	0	0		0	200	200	4,255	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	10	10.0	213	
Hexachlorocyclopentadiene	0	0		0	5	5.0	106	
Hexachloroethane	0	0		0	60	60.0	1,277	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	212,769	
Naphthalene	0	0		0	140	140	2,979	
Nitrobenzene	0	0		0	4,000	4,000	85,108	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	361,708	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	6,383	
Phenanthrene	0	0		0	5	5.0	106	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	2,766	

☑ *CFC* CCT (min): 7.054 PMF: 1 Analysis Hardness (mg/l): 99.06 Analysis pH: 7.02

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	4,681	
Total Arsenic	0	0		0	150	150	3,192	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	87,235	
Total Boron	0	0		0	1,600	1,600	34,043	
Total Cadmium	0	0		0	0.244	0.27	5.72	Chem Translator of 0.909 applied
Hexavalent Chromium	0	0		0	10	10.4	221	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	404	
Total Copper	0	0		0	8.884	9.25	197	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	31,915	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.491	3.14	66.9	Chem Translator of 0.792 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	19.3	Chem Translator of 0.85 applied
Total Nickel	0	0		0	51.593	51.7	1,101	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	106	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	277	
Total Zinc	0	0		0	117.197	119	2,529	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	63.8	
Acrylonitrile	0	0		0	130	130	2,766	
Benzene	0	0		0	130	130	2,766	
Bromoform	0	0		0	370	370	7,872	
Carbon Tetrachloride	0	0		0	560	560	11,915	
Chlorobenzene	0	0		0	240	240	5,106	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	74,469	
Chloroform	0	0		0	390	390	8,298	

Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	65,959	
1,1-Dichloroethylene	0	0		0	1,500	1,500	31,915	
1,2-Dichloropropane	0	0		0	2,200	2,200	46,809	
1,3-Dichloropropylene	0	0		0	61	61.0	1,298	
Ethylbenzene	0	0		0	580	580	12,341	
Methyl Bromide	0	0		0	110	110	2,340	
Methyl Chloride	0	0		0	5,500	5,500	117,023	
Methylene Chloride	0	0		0	2,400	2,400	51,065	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	4,468	
Tetrachloroethylene	0	0		0	140	140	2,979	
Toluene	0	0		0	330	330	7,021	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	29,788	
1,1,1-Trichloroethane	0	0		0	610	610	12,979	
1,1,2-Trichloroethane	0	0		0	680	680	14,468	
Trichloroethylene	0	0		0	450	450	9,575	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	2,340	
2,4-Dichlorophenol	0	0		0	340	340	7,234	
2,4-Dimethylphenol	0	0		0	130	130	2,766	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	340	
2,4-Dinitrophenol	0	0		0	130	130	2,766	
2-Nitrophenol	0	0		0	1,600	1,600	34,043	
4-Nitrophenol	0	0		0	470	470	10,000	
p-Chloro-m-Cresol	0	0		0	500	500	10,638	
Pentachlorophenol	0	0		0	6.803	6.8	145	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	1,936	
Acenaphthene	0	0		0	17	17.0	362	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	1,255	
Benzo(a)Anthracene	0	0		0	0.1	0.1	2.13	
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	127,662	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	19,362	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	1,149	
Butyl Benzyl Phthalate	0	0		0	35	35.0	745	
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	3,404	
1,3-Dichlorobenzene	0	0		0	69	69.0	1,468	
1,4-Dichlorobenzene	0	0		0	150	150	3,192	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	17,022	
Dimethyl Phthalate	0	0		0	500	500	10,638	
Di-n-Butyl Phthalate	0	0		0	21	21.0	447	
2,4-Dinitrotoluene	0	0		0	320	320	6,809	
2,6-Dinitrotoluene	0	0		0	200	200	4,255	
1,2-Diphenylhydrazine	0	0		0	3	3.0	63.8	
Fluoranthene	0	0		0	40	40.0	851	
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	42.6	
Hexachlorocyclopentadiene	0	0		0	1	1.0	21.3	
Hexachloroethane	0	0		0	12	12.0	255	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	44,682	
Naphthalene	0	0		0	43	43.0	915	
Nitrobenzene	0	0		0	810	810	17,234	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	72,342	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	1,255	
Phenanthrene	0	0		0	1	1.0	21.3	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	553	

☑ *THH* CCT (min): 7.054 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Fluoride (PWS)	0	0		0	2,000	2,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	119	
Total Arsenic	0	0		0	10	10.0	213	
Total Barium	0	0		0	2,400	2,400	51,065	
Total Boron	0	0		0	3,100	3,100	65,959	
Total Cadmium	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	6,383	
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	21,277	
Total Mercury	0	0		0	0.050	0.05	1.06	
Total Nickel	0	0		0	610	610	12,979	
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	5.11	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	63.8	
Acrylonitrile	0	0		0	N/A	N/A	N/A	
Benzene	0	0		0	N/A	N/A	N/A	
Bromoform	0	0		0	N/A	N/A	N/A	
Carbon Tetrachloride	0	0		0	N/A	N/A	N/A	
Chlorobenzene	0	0		0	100	100.0	2,128	
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	702	
1,2-Dichloropropane	0	0		0	N/A	N/A	N/A	
1,3-Dichloropropylene	0	0		0	N/A	N/A	N/A	
Ethylbenzene	0	0		0	68	68.0	1,447	
Methyl Bromide	0	0		0	100	100.0	2,128	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	N/A	N/A	N/A	
1,1,2,2-Tetrachloroethane	0	0		0	N/A	N/A	N/A	
Tetrachloroethylene	0	0		0	N/A	N/A	N/A	
Toluene	0	0		0	57	57.0	1,213	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	2,128	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	212,769	
1,1,2-Trichloroethane	0	0		0	N/A	N/A	N/A	
Trichloroethylene	0	0		0	N/A	N/A	N/A	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	30	30.0	638	
2,4-Dichlorophenol	0	0		0	10	10.0	213	
2,4-Dimethylphenol	0	0		0	100	100.0	2,128	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	42.6	
2,4-Dinitrophenol	0	0		0	10	10.0	213	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	N/A	N/A	N/A	
Phenol	0	0		0	4,000	4,000	85,108	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	1,489	
Anthracene	0	0		0	300	300	6,383	
Benzidine	0	0		0	N/A	N/A	N/A	

Benzo(a)Anthracene	0	0		0	N/A	N/A	N/A	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroisopropyl)Ether	0	0		0	200	200	4,255	
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	0.1	0.1	2.13	
2-Chloronaphthalene	0	0		0	800	800	17,022	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	21,277	
1,3-Dichlorobenzene	0	0		0	7	7.0	149	
1,4-Dichlorobenzene	0	0		0	300	300	6,383	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	12,766	
Dimethyl Phthalate	0	0		0	2,000	2,000	42,554	
Di-n-Butyl Phthalate	0	0		0	20	20.0	426	
2,4-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
2,6-Dinitrotoluene	0	0		0	N/A	N/A	N/A	
1,2-Diphenylhydrazine	0	0		0	N/A	N/A	N/A	
Fluoranthene	0	0		0	20	20.0	426	
Fluorene	0	0		0	50	50.0	1,064	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0		0	4	4.0	85.1	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	34	34.0	723	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	213	
n-Nitrosodimethylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	N/A	N/A	N/A	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	20	20.0	426	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	1.49	

☑ *CRL* CCT (min): 1.901 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
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	
Acrylonitrile	0	0		0	0.06	0.06	10.6	
Benzene	0	0		0	0.58	0.58	102	
Bromoform	0	0		0	7	7.0	1,235	
Carbon Tetrachloride	0	0		0	0.4	0.4	70.6	
Chlorobenzene	0	0		0	N/A	N/A	N/A	

Chlorodibromomethane	0	0		0	0.8	0.8	141	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	1,006	
Dichlorobromomethane	0	0		0	0.95	0.95	168	
1,2-Dichloroethane	0	0		0	9.9	9.9	1,747	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	159	
1,3-Dichloropropylene	0	0		0	0.27	0.27	47.7	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Methyl Bromide	0	0		0	N/A	N/A	N/A	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	20	20.0	3,530	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	35.3	
Tetrachloroethylene	0	0		0	10	10.0	1,765	
Toluene	0	0		0	N/A	N/A	N/A	
1,2-trans-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,1,1-Trichloroethane	0	0		0	N/A	N/A	N/A	
1,1,2-Trichloroethane	0	0		0	0.55	0.55	97.1	
Trichloroethylene	0	0		0	0.6	0.6	106	
Vinyl Chloride	0	0		0	0.02	0.02	3.53	
2-Chlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dichlorophenol	0	0		0	N/A	N/A	N/A	
2,4-Dimethylphenol	0	0		0	N/A	N/A	N/A	
4,6-Dinitro-o-Cresol	0	0		0	N/A	N/A	N/A	
2,4-Dinitrophenol	0	0		0	N/A	N/A	N/A	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	0.030	0.03	5.29	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	265	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.0001	0.0001	0.018	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.18	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.018	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.18	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	1.76	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	5.29	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	56.5	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.12	0.12	21.2	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.018	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.05	0.05	8.82	
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	8.82	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	8.82	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	5.29	
Fluoranthene	0	0		0	N/A	N/A	N/A	
Fluorene	0	0		0	N/A	N/A	N/A	
Hexachlorobenzene	0	0		0	0.00008	0.00008	0.014	
Hexachlorobutadiene	0	0		0	0.01	0.01	1.76	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	17.6	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.18	
Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.0007	0.0007	0.12	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.88	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	582	
Phenanthrene	0	0		0	N/A	N/A	N/A	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	N/A	N/A	N/A	

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

No. Samples/Month: 4

Pollutants	*Mass Limits*		*Concentration Limits*				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Fluoride (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	10,228	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	119	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	213	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	51,065	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	34,043	µg/L	Discharge Conc < TQL
Total Cadmium	5.72	µg/L	Discharge Conc < TQL
Hexavalent Chromium	221	µg/L	Discharge Conc < TQL
Total Cobalt	404	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	189	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	6,383	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	31,915	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	66.9	µg/L	Discharge Conc < TQL
Total Manganese	21,277	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	1.06	µg/L	Discharge Conc < TQL
Total Nickel	1,101	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	106	µg/L	Discharge Conc < TQL
Total Silver	50.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	5.11	µg/L	Discharge Conc < TQL
Total Zinc	1,621	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	40.9	µg/L	Discharge Conc ≤ 25% WQBEL
Acrylonitrile	10.6	µg/L	Discharge Conc < TQL
Benzene	102	µg/L	Discharge Conc ≤ 25% WQBEL
Bromoform	1,235	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	70.6	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorobenzene	2,128	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	141	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	74,469	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroform	1,006	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	168	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	1,747	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethylene	702	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-Dichloropropane	159	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichloropropylene	47.7	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	1,447	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	2,128	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	117,023	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	3,530	µg/L	Discharge Conc ≤ 25% WQBEL

1,1,2,2-Tetrachloroethane	35.3	µg/L	Discharge Conc ≤ 25% WQBEL
Tetrachloroethylene	1,765	µg/L	Discharge Conc ≤ 25% WQBEL
Toluene	1,213	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	2,128	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	12,979	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2-Trichloroethane	97.1	µg/L	Discharge Conc ≤ 25% WQBEL
Trichloroethylene	106	µg/L	Discharge Conc ≤ 25% WQBEL
Vinyl Chloride	3.53	µg/L	Discharge Conc < TQL
2-Chlorophenol	638	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	213	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	2,128	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	42.6	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	213	µg/L	Discharge Conc ≤ 25% WQBEL
2-Nitrophenol	34,043	µg/L	Discharge Conc < TQL
4-Nitrophenol	10,000	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	2,182	µg/L	Discharge Conc < TQL
Pentachlorophenol	5.29	µg/L	Discharge Conc < TQL
Phenol	85,108	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	265	µg/L	Discharge Conc < TQL
Acenaphthene	362	µg/L	Discharge Conc ≤ 25% WQBEL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	6,383	µg/L	Discharge Conc ≤ 25% WQBEL
Benzidine	0.018	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.18	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.018	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.18	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	1.76	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	5.29	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	4,255	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	56.5	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	1,149	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	2.13	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	17,022	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	21.2	µg/L	Discharge Conc ≤ 25% WQBEL
Dibenzo(a,h)Anthrancene	0.018	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	3,404	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	149	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	3,192	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	8.82	µg/L	Discharge Conc < TQL
Diethyl Phthalate	12,766	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	10,638	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	426	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	8.82	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	8.82	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	5.29	µg/L	Discharge Conc < TQL
Fluoranthene	426	µg/L	Discharge Conc ≤ 25% WQBEL
Fluorene	1,064	µg/L	Discharge Conc ≤ 25% WQBEL
Hexachlorobenzene	0.014	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	1.76	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	21.3	µg/L	Discharge Conc < TQL
Hexachloroethane	17.6	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.18	µg/L	Discharge Conc < TQL
Isophorone	723	µg/L	Discharge Conc < TQL
Naphthalene	915	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	213	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.12	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.88	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	582	µg/L	Discharge Conc < TQL
Phenanthrene	21.3	µg/L	Discharge Conc ≤ 25% WQBEL
Pyrene	426	µg/L	Discharge Conc ≤ 25% WQBEL
1,2,4-Trichlorobenzene	1.49	µg/L	Discharge Conc < TQL

Flow Data for Thermal Discharge Analysis

Facility: Triangle Suspension Systems
Permit Number: PA0100161
Stream Name: Pentz Run
Analyst/Engineer: K. Allison
Stream Q7-10 (cfs): 0.3

	Facility Flows[1]				Stream Flows	
	Stream (Intake) (MGD)	External (Intake) (MGD)	Consumptive (Loss) (MGD)	Discharge (MGD)	Adj. Q7-10 Stream Flow (cfs)	Downstream[2] Stream Flow (cfs)
Jan 1-31	0	0.0095	0	0.0095	1.0	1.0
Feb 1-29	0	0.0095	0	0.0095	1.1	1.1
Mar 1-31	0	0.0095	0	0.0095	2.1	2.1
Apr 1-15	0	0.0095	0	0.0095	2.8	2.8
Apr 16-30	0	0.0095	0	0.0095	2.8	2.8
May 1-15	0	0.0095	0	0.0095	1.5	1.5
May 16-30	0	0.0095	0	0.0095	1.5	1.5
Jun 1-15	0	0.0095	0	0.0095	0.9	0.9
Jun 16-30	0	0.0095	0	0.0095	0.9	0.9
Jul 1-31	0	0.0095	0	0.0095	0.5	0.5
Aug 1-15	0	0.0095	0	0.0095	0.4	0.4
Aug 16-31	0	0.0095	0	0.0095	0.4	0.4
Sep 1-15	0	0.0095	0	0.0095	0.3	0.3
Sep 16-30	0	0.0095	0	0.0095	0.3	0.3
Oct 1-15	0	0.0095	0	0.0095	0.4	0.4
Oct 16-31	0	0.0095	0	0.0095	0.4	0.4
Nov 1-15	0	0.0095	0	0.0095	0.5	0.5
Nov 16-30	0	0.0095	0	0.0095	0.5	0.5
Dec 1-31	0	0.0095	0	0.0095	0.7	0.7

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

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

Thermal Discharge Recommended Permit Limits — Cold Water Fishes (CWF) Stream

Facility: **Triangle Suspension Systems**
Permit Number: PA0100161
Stream: Pentz Run

	CWF Ambient Stream Temperature (°F) (Default)	Ambient Stream Temperature (°F) (Site-specific data)	Target Maximum Stream Temp.[1] (°F)	CWF Daily WLA[2] (Million BTUs/day)	CWF Daily WLA[3] (°F)	at Discharge Flow (MGD)
Jan 1-31	34	0	38	N/A – Case 2	110.0	0.0095
Feb 1-29	35	0	38	N/A – Case 2	110.0	0.0095
Mar 1-31	39	0	42	N/A – Case 2	110.0	0.0095
Apr 1-15	46	0	48	N/A – Case 2	110.0	0.0095
Apr 16-30	52	0	53	N/A – Case 2	110.0	0.0095
May 1-15	55	0	56	N/A – Case 2	110.0	0.0095
May 16-30	59	0	60	N/A – Case 2	110.0	0.0095
Jun 1-15	63	0	64	N/A – Case 2	110.0	0.0095
Jun 16-30	67	0	68	N/A – Case 2	110.0	0.0095
Jul 1-31	71	0	72	N/A – Case 2	106.7	0.0095
Aug 1-15	70	0	71	N/A – Case 2	99.6	0.0095
Aug 16-31	70	0	71	N/A – Case 2	99.6	0.0095
Sep 1-15	66	0	67	N/A – Case 2	89.5	0.0095
Sep 16-30	60	0	61	N/A – Case 2	83.5	0.0095
Oct 1-15	55	0	56	N/A – Case 2	80.5	0.0095
Oct 16-31	51	0	52	N/A – Case 2	76.5	0.0095
Nov 1-15	46	0	47	N/A – Case 2	79.7	0.0095
Nov 16-30	40	0	42	N/A – Case 2	107.3	0.0095
Dec 1-31	35	0	40	N/A – Case 2	110.0	0.0095

[1] This is the maximum of the CWF WQ criterion or the ambient temperature. The ambient temperature may be either the design (median) temperature for CWF, or the ambient stream temperature based on site-specific data entered by the user. A minimum of 1°F above ambient stream temperature is allocated.
[2] The WLA expressed in Million BTUs/day is valid for Case 1 scenarios, and disabled for Case 2 scenarios.
[3] The WLA expressed in °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.

TriangleThermal Discharge Limit Calc v1.0 — 6/2/2021