pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0208779**
Facility Type	**Industrial**	APS ID	**1038375**
Major / Minor	**Minor**	Authorization ID	**1353941**

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

Applicant and Facility Information

Applicant Name	**Clearfield Leather, Inc.**	Facility Name	**Wickett & Craig-Curwensville Tannery**
Applicant Address	120 Cooper Road	Facility Address	120 Cooper Road
	Curwensville, PA 16833-1542		Curwensville, PA 16833-1542
Applicant Contact	Stanley Spaid	Facility Contact	Stanley Spaid
Applicant Phone	(814) 236-2220 x227	Facility Phone	(814) 236-2220 x227
Client ID	216065	Site ID	262295
SIC Code	3111	Municipality	Curwensville Borough
SIC Description	Manufacturing - Leather Tanning and Finishing	County	Clearfield
Date Application Received	May 11, 2021	EPA Waived?	Yes
Date Application Accepted	May 12, 2021	If No, Reason	

Purpose of Application: Renewal of an Application for a NPDES Permit

Summary of Review

The subject facility is a leather tanning and finishing facility is Curwensville Borough, Clearfield County. A map indicating the facility location is attached. (See Attachment A)

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	February 23, 2022
X		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	February 24, 2022

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	0.133
Latitude	40º 58' 11.58"	Longitude	-78º 30' 47.34"
Quad Name	Curwensville, PA	Quad Code	1117
Wastewater Description:	IW Process Effluent		
Receiving Waters	West Branch Susquehanna River (WWF)	Stream Code	18668
NHD Com ID	61831501	RMI	183
Drainage Area	368	Yield (cfs/mi^2)	0.123
Q_{7-10} Flow (cfs)	45.2	Q_{7-10} Basis	USGS Gage 01541200, West Branch Susquehanna River at Curwensville (1967-2008)
Elevation (ft)	1121	Slope (ft/ft)	0.00069
Watershed No.	8-B	Chapter 93 Class.	WWF
Existing Use	N/A	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Attaining Use(s)		
TMDL Status	Final	Name	West Branch Susquehanna
Nearest Downstream Public Water Supply Intake	Shawville Power @ Shawville, PA		
PWS Waters	West Branch Susquehanna River	Distance from Outfall (mi)	Approx. 16

Changes Since Last Permit Issuance: The above stream and drainage characteristics above were determined for the previous review and remain adequate.

Other Comments:

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

Portions of the West Branch Susquehanna River are impaired by pH and metals, primarily from AMD. An EPA approved TMDL has been developed for the impairment. The primary metals of concern are Aluminum, Iron and Manganese and the existing permit included monitoring for these three metals. A review of the available data for these parameters indicates that both Total Iron and Total Manganese levels are below their respective instream criteria and therefore, these will no longer require monitoring in the permit. Aluminum levels are above the criteria levels. See below under Development of Limitations for more information regarding Aluminum.

Treatment Facility Summary

Treatment Facility Name: Wickett & Craig of America

WQM Permit No.	Issuance Date	Permit Covered:
1704204	4/16/04 A-1 7/17/17	Course bubble diffusers for equalization tank, fine bubble diffusers for extended aeration tank and new blowers Blower replacement
1794202	Transfer -12/30/03 Original- 9/26/94	Original Treatment system

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Industrial	Secondary	Activated Sludge	No Disinfection	0.23 MGD

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
	3,800	Not Overloaded	Dewatering	

Changes Since Last Permit Issuance: The blower upgrade approved under WQM Permit No. 1704204 A-1.

Other Comments: Treatment consists of screening, equalization, neutralization, flocculation, sedimentation, activated sludge, flocculation, sedimentation, and sludge dewatering.

Stormwater Discharges from Industrial Activities

Stormwater discharges from the facility are currently permitted under the NPDES General Permit PAG-03 for discharges of stormwater from industrial activities under approval No. PAR134804. The facility has identified three stormwater outfalls that are included in this NDPES Permit.

As a leather tannery and a SIC Code 3111 facility, it would be subject to Appendix T for Leather Tanning and Finishing of the PAG-03 and its monitoring requirements (Sampling twice per year for pH, TSS, and TKN). These monitoring requirements will be included in Part A of this draft NPDES Permit. A benchmark value for TSS of 100 mg/L from Appendix T of the PAG03 will be listed in Part C of the permit. The permittee has been performing twice per year sampling for TSS, TKN, TP, and Oil and Grease under the existing permit.

Compliance History

DMR Data for Outfall 001 (from January 1, 2021 to December 31, 2021)

Parameter	DEC-21	NOV-21	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21
Flow (MGD) Average Monthly	0.092	0.095	0.115	0.104	0.118	0.066	0.111	0.103	0.103	0.116	0.114	0.094
Flow (MGD) Daily Maximum	0.177	0.196	0.202	0.191	0.206	0.185	0.18	0.186	0.184	0.176	0.187	0.170
pH (S.U.) Minimum	7.02	7.2	7.17	7.14	7.32	7.22	7.19	7.15	6.93	7.24	7.33	7.17
pH (S.U.) Maximum	7.76	7.78	7.82	7.88	7.96	7.88	7.81	7.88	7.8	7.82	7.92	7.88
BOD5 (lbs/day) Average Monthly	5	19	< 5	7	< 6	6	< 32	< 6	< 23	< 6	5	< 6
BOD5 (lbs/day) Daily Maximum	9	52	10	12	9	13	140	14	77	< 8	6	10
BOD5 (mg/L) Average Monthly	4.57	16.06	< 4.18	5.26	< 3.7	7.44	< 22.2	< 4.51	< 17.82	< 4.27	4	< 5.6
BOD5 (mg/L) Daily Maximum	7.56	42.4	8.53	7.84	5.95	17.5	96.8	9.38	57.8	< 6	5	9
TSS (lbs/day) Average Monthly	25	35	19	24	29	23	27	24	27	27	33	17
TSS (lbs/day) Daily Maximum	47	46	22	30	36	34	43	28	33	39	42	20
TSS (mg/L) Average Monthly	23.3	30	17	19.7	20	25	21	16.7	22.7	19.4	25	15
TSS (mg/L) Daily Maximum	39	37	18.5	24	25	46	31	18	26.5	27	32	19
Total Dissolved Solids (lbs/day) Average Monthly	6155			2892			3167			4210		
Total Dissolved Solids (mg/L) Average Monthly	4920			3940			2260			4104		
Oil and Grease (lbs/day) Average Monthly	< 0.7	< 6	< 5	< 7	< 8	< 4	< 7	< 7	< 8	< 7	< 6	< 5
Oil and Grease (lbs/day) Daily Maximum	< 0.7	< 6	< 5	< 7	< 8	< 4	< 7	< 7	< 8	< 7	< 6	< 5

Oil and Grease (mg/L) Average Monthly	< 2	< 3	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5
Oil and Grease (mg/L) Daily Maximum	< 1.82	< 3.44	< 5.1	< 5.25	< 5.15	< 5	< 5.1	< 5.1	< 5.4	< 5	< 5	< 5
Total Nitrogen (lbs/day) Average Monthly	59			< 36			48			55		
Total Nitrogen (mg/L) Average Monthly	47.23			< 49.177			34.51			54		
Ammonia (mg/L) Average Monthly	< 1	< 6	< 1	< 1	< 1	< 2	< 4	< 4	< 2	< 1	3	3
Ammonia (mg/L) Daily Maximum	1.82	12.08	< 0.5	1.15	< 1	2.8	7.68	< 10	3.93	1.46	8.04	6.7
Total Phosphorus (lbs/day) Average Monthly	6			3			4			2		
Total Phosphorus (mg/L) Average Monthly	4.76			4.39			2.94			2.13		
Total Chromium (lbs/day) Average Monthly	< 0.03			< 0.004			< 0.007			0.007		
Total Chromium (lbs/day) Daily Maximum	< 0.03			< 0.004			< 0.007			0.007		
Total Chromium (mg/L) Average Monthly	< 0.025			< 0.005			< 0.005			0.007		
Total Chromium (mg/L) Daily Maximum	< 0.025			< 0.005			< 0.005			0.007		
Sulfate (lbs/day) Average Monthly	1314			564			1141			925		
Sulfate (mg/L) Average Monthly	1050			769			814			902		
Chloride (lbs/day) Average Monthly	1539			1057			1625			1334		
Chloride (mg/L) Average Monthly	1230			1440			1160			1300		

Compliance History, Cont'd	
Summary of Inspections:	The facility has been inspected approximately annually over the past permit term. The most recent inspection on February 8, 2022 identifieded no violations at the time of inspection.
Other Comments:	A query is WMS found no open violations in eFACTS for Clearfield Leather, Inc.

Existing Effluent Limitations and Monitoring Requirements – Outfall 001

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) [1]		Concentrations (mg/L)				Minimum [2] Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	9.0 Max	XXX	1/day	Grab
BOD5	77	168	XXX	Report	Report	172	1/week	24-Hr Composite
TSS	111	243	XXX	Report	Report	248	1/week	24-Hr Composite
Total Dissolved Solids	Report	XXX	XXX	Report	XXX	XXX	1/quarter	24-Hr Composite
Oil and Grease	13	26	XXX	15	30	30	1/month	Grab
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/quarter	24-Hr Composite
Ammonia	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/quarter	24-Hr Composite
Total Aluminum	Report	XXX	XXX	Report	XXX	XXX	1/year	24-Hr Composite
Total Chromium	1.7	4.2	XXX	Report	Report	4.7	1/quarter	24-Hr Composite
Total Iron	Report	XXX	XXX	Report	XXX	XXX	1/year	24-Hr Composite
Total Manganese	Report	XXX	XXX	Report	XXX	XXX	1/year	24-Hr Composite
Sulfate	Report	XXX	XXX	Report	XXX	XXX	1/quarter	24-Hr Composite
Chloride	Report	XXX	XXX	Report	XXX	XXX	1/quarter	24-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 0.133
Latitude 40º 58' 11.70" **Longitude** -78º 30' 47.30"
Wastewater Description: IW Process Effluent without ELG

Technology-Based Limitations

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

Parameter	Conc. Limit (mg/l)	Load Limit (lb/day)	SBC	Federal Regulation	State Regulation
BOD_5	-	44	Monthly Ave	40 CFR §425 Subpart B	---
	-	97	Daily Max		
TSS	-	64	Monthly Ave	40 CFR §425 Subpart B	---
	-	140	Daily Max		
Oil and Grease	-	18	Monthly Ave	40 CFR §425 Subpart B	---
	-	39	Daily Max		
	15	16.6	Monthly Ave	---	95.2(2)(ii)
	30	33.2	Daily Max		
Total Chromium	-	0.98	Monthly Ave	40 CFR §425 Subpart B	---
	-	2.4	Daily Max		
pH	6-9 S.U.		Min – Max	40 CFR §425 Subpart B	95.2(1)

Oil and grease limits from 95.2 are explicitly listed as concentrations limits and have also been converted to loadings based on design flow. The loading limits above for BOD_5, TSS and Total Chromium are based on 40 CFR 425.34 production-based factors at the production rate of 200 hides per day as discussed below.

Effluent Limitation Guidelines (ELGs)

The facility is subject to the Effluent Limitation Guidelines - Leather Tanning and Finishing Point Source Category at 40 CFR §425 Subpart C (Hair Save Pulp, Non-Chrome Tan, Retan-Wet Finish Subcategory). See Attachment B for the text of Subpart C. The analysis below results in limits that are more stringent (lower) than the existing limits for BOD5, TSS, and Total Chromium. The applicable production-based limitations are listed in the Table below, taken from §425.34 (NSPS). New source standards are applied because the facility was established in Curwensville in 1990 which is after the ELG promulgation date of 04/04/88.

40 CFR §425 Subpart C – NSPS Standards

Pollutant or Pollutant property	Maximum for any one day (lb/1,000 lb of raw material)	Maximum for Monthly Average (lb/1,000 lb of raw material)
BOD5	5.9	2.7
TSS	8.5	3.9
Oil and Grease	2.4	1.1
Total Chromium	0.15	0.06
pH	Within range of 6-9	Within range of 6-9

Per the application, Average Daily production is 48,000 hides per year which corresponds to 200 hides per day (at 20 typical days of production per month) and average weight per hide is 82.42 lbs (based on the past five years of data provided with the application). Therefore, the average daily production in pounds per day is 16,483.6 lbs/day. EPA's permit writer's manual indicates expected long-term average production expected to occur over the next permit cycle should be used in determining limits from ELGs. This is typically found by taking the average of the past 5 years of production data which has been used here. Using this production rate and the limitation factors listed above produces the following limits:

Proposed Technology-based Limits

Pollutant or Pollutant property	Maximum Daily (lb pollutant/day)	Maximum Monthly Average (lb pollutant/day)
BOD5	97.2	44.5
TSS	140	64.2
Oil and Grease	39.5	18.1
Total Chromium	2.47	0.98

For reference, the existing limits for these are listed below.

Existing Loading Limits

Pollutant or Pollutant property	Maximum Daily (lb pollutant/day)	Maximum Monthly Average (lb pollutant/day)
BOD5	168	77
TSS	243	111
Oil and Grease	26	13
Total Chromium	4.2	1.7

The technology-based limits for BOD5, TSS, and Total Chromium are more stringent (lower) than the existing limits due to a decrease in facility production and per the eDMR effluent data on pages 4-5 of this Fact Sheet they are currently achievable. The more stringent Oil and Grease loading limits based on the concentration requirements from §95.2 will be included with updated loadings at the design flow of 0.133 MGD.

The existing permit only contains Instantaneous Maximum (IMAX) concentration limits for BOD5, TSS and Total Chromium and this will be kept in the proposed permit with new limits calculated as twice the monthly average load limit converted to concentration: (i.e., (loading (lbs/day) / 0.0107 MGD / 8.34) x 2). A factor of 2.5x is used for Total Chromium because it is a toxic pollutant consistent with Department policy. The IMAX limits for BOD5, TSS, and Total Chromium are less stringent than the existing due to the flow rate. These IMAX limits are listed below. The existing Oil and Grease IMAX based on 2x the monthly average limit from §95.2 will be kept. A more stringent TSS limit will be applied as noted in the BPJ section below.

Instantaneous Maximum Limitations

Parameter	Current IMAX Limit (mg/L)	ELG-based IMAX Limit (mg/L)
BOD5	172	175
TSS	248	252
Oil and Grease	30	71
Total Chromium	4.7	5.5

Water Quality-Based Limitations

DO, BOD5 and NH3-N

The WQM7.0 model allows the Department to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia-nitrogen (NH_3-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH_3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and NH_3-N. WQM7.0 modeling was performed (see Attachment C) for the discharge to the West Branch Susquehanna River and showed that no limitations are necessary beyond the technology-based limits listed above. A monthly average limit of 40.1 mg/L input in the model was derived from the BOD5 loading limit of 44.5 lb/day noted above. The WQM model considers CBOD5 rather than BOD5 which is regulated for this facility. The BOD concentrations were input into the model which is a conservative assumption as the CBOD would be less than the BOD and therefore, the discharge limits are protective. DO Monitoring will be included at this time as is typical for BOD-bearing wastes.

Toxics Management

A “Reasonable Potential Analysis” was performed to determine additional parameters with the potential to violate water quality standards (see the Toxics Management Spreadsheet in Attachment D). The Toxics Management Spreadsheet (TMS) 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 model incorporates the water quality criteria in 25 Pa. Code §93.

The parameters listed below were determined by the TMS to be candidates for limitations or monitoring in the NPDES permit. The analysis recommended monitoring for Total Aluminum and Hexavalent Chromium because these were detected in the effluent in at least one sample at a sufficient level to warrant monitoring. The analysis also recommended effluent limits or monitoring for the additional parameters listed in the table below because the monitoring was at reporting limits greater than the Department’s Target Quantitation Limits. Effluent limits are generally recommended for results greater than 50% of the WQBEL and monitoring is recommended for results greater than 25% of the WQBEL for non-

conservative pollutants and 10% for conservative pollutants. The table below shows the permittee's initial sample results, the WQ-based monthly average limitation, the Target Quantitation Limits, and the Toxics Management Spreadsheet recommendation for the relevant parameters

The applicant will be given the option of conducting an additional sampling event for those parameters that were non-detectable but not at the Target Quantitation Limits. If the additional samples meet their respective Target Quantitation Limits and are still not-detect then the Department will evaluate the results to consider removing the monitoring requirements for these parameters from the final permit.

Recommended Monitoring or Limitations from TMS

Pollutant	Sample Results (µg/L)	WQBEL (µg/L)	Target Quantitation Limit (µg/L)	TMS Recommendation
Total Aluminum	2250	16,572	10	Monitor
Hexavalent Chromium	200	360	1	Monitor
Pentachlorophenol	<25	30.4	10	Limitation
Benzo(a)Anthracene	<5	1.01	2.5	Limitation
Benzo(a)Pyrene	<5	0.1	2.5	Limitation
3,4-Benzofluoranthene	<5	1.01	2.5	Limitation
Benzo(k)Fluoranthene	<5	10.1	2.5	Report
Dibenzo(a,h)Anthracene	<5	0.1	2.5	Report
Hexachlorobutadiene	<5	10.1	0.5	Monitor
Indeno(1,2,3-cd) Pyrene	<5	1.01	2.5	Report
1,2,4-Trichlorobenzene	<5	15.5	0.5	Monitor

Quarterly TDS monitoring was required over the past permit term. Data for the past two years in eDMR found the TDS to average 3650 mg/L and 3190 lbs/day. Consistent with §95.10 and the Department's guidance on §95.10 and because the concentrations are above 1000 mg/L and the loading is less than the *de minimus* threshold from §95.10(a)(7) of 5000 lbs/day no limitations are necessary. Because the levels are greater than half of the 5,000 lb/day threshold the monitoring frequency for TDS will increase from quarterly to monthly.

Total Iron and Total Manganese monitoring were previously required due to the downstream impairment in the West Branch Susquehanna River watershed. Because the monitoring over the past term found the levels to be less than instream criteria no further monitoring is necessary.

Sulfate and Chloride were previously required in conjunction with the TDS monitoring. The monitoring has shown levels of both parameters to be under their respective instream criteria as well and therefore, no additional monitoring is being required for these.

Chesapeake Bay/Nutrient Requirements

The Clearfield Leather facility is an insignificant IW facility for Chesapeake Bay discharge permitting pursuant to the Phase III Watershed Implementation Plan (WIP). The facility conducted quarterly analyses for Total Phosphorus and Total Nitrogen under the current NPDES permit. Based on the most recent 2 years of samples, the average discharge load of Total Nitrogen (TN) is 59 lbs/day and of Total Phosphorus (TP) is 6 lbs/day, which are less than the thresholds of 75 lbs/day and 25 lbs/day for Total Nitrogen and Total Phosphorus, respectively, in the WIP. While no cap loads are necessary for the discharge, periodic nutrient monitoring is necessary for discharges with net additions of nutrients to the Bay watershed. Due to the levels near the thresholds the Total Nitrogen and Total Phosphorus monitoring will be increased in the draft NPDES permit from quarterly to monthly.

Chemical Additives

The facility proposes using nine treatment chemicals in the next permit term that the Department considers to be chemical additives. See below for a list of the proposed additives. These additives are all included in the Department's approved list of chemical additives. Chemical Additive Notification Forms were included with the application as well as Toxic Management Spreadsheets and additional calculations to show that no monitoring or limitations are necessary for any of these at the proposed usage rates. Therefore, no limits or monitoring will be included for these in the draft NPDES Permit.

Proposed Chemical Additives

Additive	Manufacturer	Max Usage Rate (lb/day)
Busan 30WB	Buckman Laboratories	34.6
Busan 115	Buckman Laboratories	21.2
Busan 1009	Buckman Laboratories	2.0
Formula 159	Garrett-Callahan	0.41
Formula 291	Garrett-Callahan	0.61
Formula 455	Garrett-Callahan	0.31
Busan 30L	Buckman Laboratories	2.9
Formula 151	Garrett-Callahan	2.0
Formula LC	Garrett-Callahan	0.15

Best Professional Judgment (BPJ) Limitations

Comments: The Department's recommended Instantaneous Maximum for TSS of 200 mg/L for aesthetics for discharges to the Susquehanna River is included per a 1998 memo (see Attachment E). No additional BPJ limits are necessary beyond the technology and water quality-based limits noted above.

Anti-Backsliding

IMAX concentration limitations for BOD5 and Total Chromium have increased consistent with the requirements of 40 CFR §425.34 due to changed production and flow rate consistent with the allowance in 40 CFR 122.44(I) for material or substantial changes at §425.34 (I)(2)(i)(A). In addition the Oil and Grease Loading limits have increased due to increased flow also consistent with the allowance in 40 CFR 122.44(I) for material or substantial changes at §425.34 (I)(2)(i)(A).

No additional limitations were made less stringent consistent with the anti-degradation requirements of the Clean Water Act and 40 CFR 122.44(I).

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) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	Report Inst Min	XXX	XXX	XXX	1/day	Grab
Biochemical Oxygen Demand (BOD5)	44	97	XXX	Report	Report	175	1/week	24-Hr Composite
Total Suspended Solids	64	140	XXX	Report	Report	200	1/week	24-Hr Composite
Total Dissolved Solids	Report	XXX	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Oil and Grease	16	35	XXX	15	30	30	1/month	Grab
Total Nitrogen	XXX	Report Avg Mo	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Ammonia-Nitrogen	XXX	XXX	XXX	Report	Report	XXX	1/week	24-Hr Composite
Total Phosphorus	XXX	Report Avg Mo	XXX	Report	XXX	XXX	1/month	24-Hr Composite
Aluminum, Total	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
Chromium, Hexavalent	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
Chromium, Total	0.98 Avg Qrtly	2.47	XXX	Report Avg Qrtly	Report	5.5	1/quarter	24-Hr Composite
Pentachlorophenol (ug/L)	0.034	0.053	XXX	30.4	47.4	75.9	2/month	24-Hr Composite

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
1,2,4-Trichlorobenzene (ug/L)	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
Benzo(a)Anthracene (ug/L)	0.001	0.002	XXX	1.01	1.58	2.53	2/month	24-Hr Composite
Benzo(a)Pyrene (ug/L)	0.0001	0.0002	XXX	0.1	0.16	0.25	2/month	24-Hr Composite
Benzo(k)Fluoranthene (ug/L)	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
3,4-Benzofluoranthene (ug/L)	0.001	0.002	XXX	1.01	1.58	2.53	2/month	24-Hr Composite
Dibenzo(a,h)Anthracene (ug/L)	0.0001	0.0002	XXX	0.1	0.16	0.25	2/month	24-Hr Composite
Hexachlorobutadiene (ug/L)	Report	Report	XXX	Report	Report	XXX	1/month	24-Hr Composite
Indeno(1,2,3-cd)Pyrene (ug/L)	0.001	0.002	XXX	1.01	1.58	2.53	2/month	24-Hr Composite

Compliance Sampling Location: Outfall 001

Other Comments: Limitations for BOD5, TSS, Oil and Grease, and Total Chromium have changed as mentioned above. In addition, monitoring for Total Nitrogen, Total Phosphorus, and Total Dissolved Solids have changed as also mentioned above and the Total Aluminum monitoring frequency has changed due to the TMS determination. Limitations or monitoring for Dissolved Oxygen, Hexavalent Chromium, and multiple Organic Pollutants are also new as mentioned above.

Proposed Effluent Limitations and Monitoring Requirements

The limitations and monitoring requirements specified below are proposed for the draft permit, and reflect the most stringent limitations amongst technology, water quality and BPJ. Instantaneous Maximum (IMAX) limits are determined using multipliers of 2 (conventional pollutants) or 2.5 (toxic pollutants). Sample frequencies and types are derived from the "NPDES Permit Writer's Manual" (362-0400-001), SOPs and/or BPJ.

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

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

Compliance Sampling Location: Outfall 002

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 003, Effective Period: Permit Effective Date through Permit Expiration Date.

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

Compliance Sampling Location: Outfall 003

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 004, Effective Period: Permit Effective Date through Permit Expiration Date.

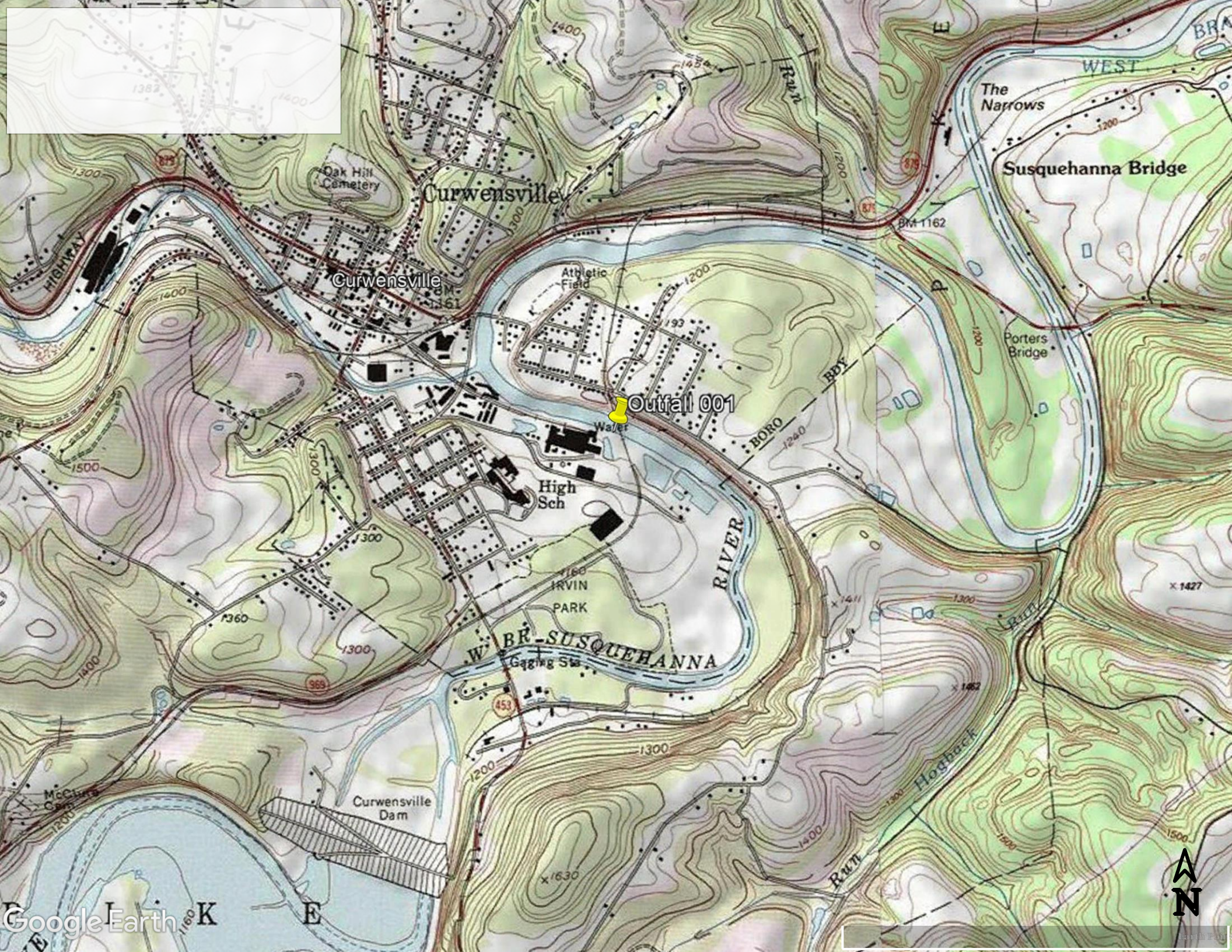
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum		
pH (S.U.)	XXX	XXX	XXX	XXX	Report	XXX	1/6 months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

Compliance Sampling Location: Outfall 004

	Tools and References Used to Develop Permit
☒	WQM for Windows Model (see Attachment **C**)
☒	Toxics Management Spreadsheet (see Attachment **D**)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model 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. Text of 40 CFR 425 Subpart C
C. WQM7.0 Model
D. Toxics Management Spreadsheet
E. TSS/BOD Memo


Outfall 001
Curwensville
Oak Hill Cemetery
Curwensville
Athletic Field
Water
High Sch
IRVIN PARK
W BR-SUSQUEHANNA RIVER
Gaging Sta
Curwensville Dam
McClure Cem
Run
Hogback
Run
BORO BDY
The Narrows
WEST
Susquehanna Bridge
Porters Bridge
BM 1162
HIGHWAY
Google Earth

ELECTRONIC CODE OF FEDERAL REGULATIONS

e-CFR data is current as of August 30, 2021

Title 40 → Chapter I → Subchapter N → Part 425 → Subpart C

Title 40: Protection of Environment
PART 425—LEATHER TANNING AND FINISHING POINT SOURCE CATEGORY

Subpart C—Hair Save or Pulp, Non-Chrome Tan, Retan-Wet Finish Subcategory

Contents

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§425.30 Applicability; description of the hair save or pulp, non-chrome tan, retan-wet finish subcategory.

The provisions of this subpart are applicable to process wastewater discharges resulting from any tannery which processes raw or cured cattle or cattle-like hides into finished leather by hair save or pulp unhairing, vegetable tanning or alum, syntans, oils and other agents for tanning, and retan-wet finishing.

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

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

Pollutant or pollutant property	BPT limitations	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pounds per 1,000 pounds) of raw material	
BOD_5	6.7	3.0
TSS	9.7	4.4
Oil & Grease	2.8	1.3
Total Chromium	0.17	0.06
pH	[1]	[1]

[1]Within the range of 6.0 to 9.0

[47 FR 52870, Nov. 23, 1982, as amended at 53 FR 9182, Mar. 21, 1988]

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The effluent limitations are those for BOD_5, TSS, Oil and Grease, and pH contained in §425.31.

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

Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best available technology economically achievable (BAT): The effluent limitations are those for Total Chromium contained in §425.31.

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§425.34 New source performance standards (NSPS).

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

Pollutant or pollutant property	NSPS	
	Maximum for any 1 day	Maximum for monthly average
	Kg/kkg (or pound per 1,000 lb) of raw material	
BOD_5	5.9	2.7
TSS	8.5	3.9
Oil and grease	2.4	1.1
Total chromium	0.15	0.06
pH	(1)	(1)

[1]Within the range 6.0 to 9.0.

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§425.35 Pretreatment standards for existing sources (PSES).

(a) Except as provided in §425.04 and 40 CFR 403.7 and §403.13, any existing sources subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the following pretreatment standards:

Pollutant or pollutant property	PSES limitations	
	Maximum for any 1 day	Maximum for monthly average
	Milligrams per liter (mg/l)	
Sulfide	24	—
Total Chromium	12	8
pH	(1)	(1)

[1]Not less than 7.0.

(b) Any existing source subject to this subpart which processes less than 350 hides/day shall comply with §425.35(a), except that the Total Chromium limitations contained in §425.35(a) do not apply.

[47 FR 52870, Nov. 23, 1982; 48 FR 36116, June 30, 1983, as amended at 53 FR 9182, Mar. 21, 1988]

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§425.36 Pretreatment standards for new sources (PSNS).

Except as provided in 40 CFR 403.7 and §425.04, any new source subject to this subpart that introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR part 403, and achieve the pretreatment standards contained in §425.35.

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Need assistance?

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
10D	18668	WEST BRANCH SUSQUEHANNA RI	**183.000**	1121.00	368.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.123	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Wickett&Craig	PA0208779	0.1330	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	40.10	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
10D	18668	WEST BRANCH SUSQUEHANNA RI	**177.200**	1100.00	460.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.123	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
		0.0000	0.0000	0.0000	0.000	25.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	25.00	2.00	0.00	1.50
Dissolved Oxygen	3.00	8.24	0.00	0.00
NH3-N	25.00	0.00	0.00	0.70

WQM 7.0 Modeling Specifications

Parameters	Both	Use Inputted Q1-10 and Q30-10 Flows	☑
WLA Method	EMPR	Use Inputted W/D Ratio	☐
Q1-10/Q7-10 Ratio	0.64	Use Inputted Reach Travel Times	☐
Q30-10/Q7-10 Ratio	1.36	Temperature Adjust Kr	☑
D.O. Saturation	90.00%	Use Balanced Technology	☑
D.O. Goal	6		

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA RIVER

RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (ºC)	Analysis pH
Q7-10 Flow												
183.000	45.26	0.00	45.26	.2058	0.00069	.993	111.19	111.96	0.41	0.861	20.02	7.00
Q1-10 Flow												
183.000	28.97	0.00	28.97	.2058	0.00069	NA	NA	NA	0.32	1.104	20.04	7.00
Q30-10 Flow												
183.000	61.56	0.00	61.56	.2058	0.00069	NA	NA	NA	0.49	0.725	20.02	7.00

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA RIVER

RMI	Total Discharge Flow (mgd)	Analysis Temperature (ºC)	Analysis pH
183.000	0.133	20.023	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
111.191	0.993	111.959	0.412
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.17	0.073	0.11	0.701
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.219	1.318	Tsivoglou	6
Reach Travel Time (days)			
0.861			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.086	2.16	0.11	8.24
0.172	2.15	0.10	8.24
0.258	2.13	0.09	8.24
0.344	2.12	0.09	8.24
0.430	2.11	0.08	8.24
0.516	2.09	0.08	8.24
0.603	2.08	0.07	8.24
0.689	2.07	0.07	8.24
0.775	2.05	0.07	8.24
0.861	2.04	0.06	8.24

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA RIVER

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
183.000	Wickett&Craig	16.71	50	16.71	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
183.000	Wickett&Craig	1.88	25	1.88	25	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
183.00	Wickett&Craig	40.1	40.1	25	25	3	3	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
10D	18668	WEST BRANCH SUSQUEHANNA RIVER

RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
183.000	Wickett&Craig	PA0208779	0.133	CBOD5	40.1		
				NH3-N	25	50	
				Dissolved Oxygen			3

Discharge Information

Instructions | Discharge | Stream

Facility: **Wickett & Craig** NPDES Permit No.: **PA0208779** Outfall No.: **001**

Evaluation Type **Major Sewage / Industrial Waste** Wastewater Description: **Leather Tanning and Finishing Wastewater**

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
0.133	100	7.54						

					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		4444									
	Chloride (PWS)	mg/L		1436									
	Bromide	mg/L		2									
	Sulfate (PWS)	mg/L		1062									
	Fluoride (PWS)	mg/L		0.2									
Group 2	Total Aluminum	µg/L		2250									
	Total Antimony	µg/L		1									
	Total Arsenic	µg/L		1.6									
	Total Barium	µg/L		9.7									
	Total Beryllium	µg/L		0.2									
	Total Boron	µg/L		11370									
	Total Cadmium	µg/L		0.2									
	Total Chromium (III)	µg/L		8									
	Hexavalent Chromium	µg/L	<	100									
	Total Cobalt	µg/L		1									
	Total Copper	µg/L		6									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L		8									
	Dissolved Iron	µg/L		20									
	Total Iron	µg/L		12									
	Total Lead	µg/L		1									
	Total Manganese	µg/L		4.8									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		3.1									
	Total Phenols (Phenolics) (PWS)	µg/L		50									
	Total Selenium	µg/L		25									
	Total Silver	µg/L		0.2									
	Total Thallium	µg/L		0.2									
	Total Zinc	µg/L		12									
	Total Molybdenum	µg/L		2									
	Acrolein	µg/L	<	2									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	0.5									
	Benzene	µg/L	<	0.2									
	Bromoform	µg/L	<	0.5									
	Carbon Tetrachloride	µg/L	<	0.2									

Group 3	Chlorobenzene	µg/L		0.2									
	Chlorodibromomethane	µg/L	<	0.4									
	Chloroethane	µg/L	<	0.2									
	2-Chloroethyl Vinyl Ether	µg/L	<	4									
	Chloroform	µg/L	<	0.2									
	Dichlorobromomethane	µg/L	<	0.2									
	1,1-Dichloroethane	µg/L	<	0.2									
	1,2-Dichloroethane	µg/L	<	0.2									
	1,1-Dichloroethylene	µg/L	<	0.2									
	1,2-Dichloropropane	µg/L	<	0.2									
	1,3-Dichloropropylene	µg/L	<	0.2									
	1,4-Dioxane	µg/L	<	20									
	Ethylbenzene	µg/L	<	0.2									
	Methyl Bromide	µg/L	<	1.8									
	Methyl Chloride	µg/L	<	0.9									
	Methylene Chloride	µg/L	<	3.3									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.2									
	Tetrachloroethylene	µg/L	<	0.4									
	Toluene	µg/L	<	0.2									
	1,2-trans-Dichloroethylene	µg/L	<	0.5									
	1,1,1-Trichloroethane	µg/L	<	0.2									
	1,1,2-Trichloroethane	µg/L	<	0.5									
	Trichloroethylene	µg/L	<	0.2									
	Vinyl Chloride	µg/L	<	0.2									
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	<	25									
	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	<	25									
	Phenol	µg/L	<	5									
	2,4,6-Trichlorophenol	µg/L	<	5									
Group 5	Acenaphthene	µg/L	<	5									
	Acenaphthylene	µg/L	<	5									
	Anthracene	µg/L	<	5									
	Benzidine	µg/L	<	25									
	Benzo(a)Anthracene	µg/L	<	5									
	Benzo(a)Pyrene	µg/L	<	5									
	3,4-Benzofluoranthene	µg/L	<	5									
	Benzo(ghi)Perylene	µg/L	<	5									
	Benzo(k)Fluoranthene	µg/L	<	5									
	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	<	5									
	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	<	5									
	Hexachlorocyclopentadiene	µg/L	<	5									
	Hexachloroethane	µg/L	<	5									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	5									
	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	<	5									
Group 6	Aldrin	µg/L	<	0.0035									
	alpha-BHC	µg/L	<	0.0061									
	beta-BHC	µg/L	<	0.011									
	gamma-BHC	µg/L	<	0.0027									
	delta BHC	µg/L	<	0.0061									
	Chlordane	µg/L	<	0.13									
	4,4-DDT	µg/L	<	0.0049									
	4,4-DDE	µg/L	<	0.0049									
	4,4-DDD	µg/L	<	0.0033									
	Dieldrin	µg/L	<	0.0036									
	alpha-Endosulfan	µg/L	<	0.017									
	beta-Endosulfan	µg/L	<	0.0017									
	Endosulfan Sulfate	µg/L	<	0.0037									
	Endrin	µg/L	<	0.0062									
	Endrin Aldehyde	µg/L	<	0.013									
	Heptachlor	µg/L	<	0.0056									
	Heptachlor Epoxide	µg/L	<	0.0027									
	PCB-1016	µg/L	<	0.088									
	PCB-1221	µg/L	<	0.046									
	PCB-1232	µg/L	<	0.048									
	PCB-1242	µg/L	<	0.021									
	PCB-1248	µg/L	<	0.03									
	PCB-1254	µg/L	<	0.067									
	PCB-1260	µg/L	<	0.052									
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<	0.21									
	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

Wickett & Craig, NPDES Permit No. PA0208779, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **West Branch Susquehanna River**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	018668	183	1121	368			Yes
End of Reach 1	018668	177.2	1100	460			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	183	0.123										100	7		
End of Reach 1	177.2	0.123													

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	183														
End of Reach 1	177.2														

Model Results

Wickett & Craig, NPDES Permit No. PA0208779, Outfall 001

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

☑ ***Hydrodynamics***

Q 7-10

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)
183	45.26		45.26	0.206	0.00069	0.993	111.191	111.959	0.412	0.861	647.934
177.2	56.58		56.58								

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)
183	208.03		208.03	0.206	0.00069	1.94	111.191	57.319	0.965	0.367	239.038
177.2	252.823		252.82								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.152 Analysis Hardness (mg/l): 100 Analysis pH: 7.01

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	25,855	
Total Antimony	0	0		0	1,100	1,100	37,920	
Total Arsenic	0	0		0	340	340	11,721	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	723,928	
Total Boron	0	0		0	8,100	8,100	279,229	
Total Cadmium	0	0		0	2.014	2.13	73.5	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	569.763	1,803	62,156	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	562	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	3,275	
Total Copper	0	0		0	13.439	14.0	483	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	64.581	81.6	2,815	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	56.8	Chem Translator of 0.85 applied
Total Nickel	0	0		0	468.236	469	16,174	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	3.217	3.78	130	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	2,241	
Total Zinc	0	0		0	117.180	120	4,130	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	103	
Acrylonitrile	0	0		0	650	650	22,407	
Benzene	0	0		0	640	640	22,063	
Bromoform	0	0		0	1,800	1,800	62,051	
Carbon Tetrachloride	0	0		0	2,800	2,800	96,524	
Chlorobenzene	0	0		0	1,200	1,200	41,367	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	620,509	
Chloroform	0	0		0	1,900	1,900	65,498	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	517,091	
1,1-Dichloroethylene	0	0		0	7,500	7,500	258,546	
1,2-Dichloropropane	0	0		0	11,000	11,000	379,200	
1,3-Dichloropropylene	0	0		0	310	310	10,687	
Ethylbenzene	0	0		0	2,900	2,900	99,971	
Methyl Bromide	0	0		0	550	550	18,960	
Methyl Chloride	0	0		0	28,000	28,000	965,237	
Methylene Chloride	0	0		0	12,000	12,000	413,673	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	34,473	
Tetrachloroethylene	0	0		0	700	700	24,131	
Toluene	0	0		0	1,700	1,700	58,604	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	234,415	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	103,418	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	117,207	
Trichloroethylene	0	0		0	2,300	2,300	79,287	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	19,305	
2,4-Dichlorophenol	0	0		0	1,700	1,700	58,604	
2,4-Dimethylphenol	0	0		0	660	660	22,752	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	2,758	
2,4-Dinitrophenol	0	0		0	660	660	22,752	
2-Nitrophenol	0	0		0	8,000	8,000	275,782	
4-Nitrophenol	0	0		0	2,300	2,300	79,287	
p-Chloro-m-Cresol	0	0		0	160	160	5,516	
Pentachlorophenol	0	0		0	8.803	8.8	303	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	15,857	

Acenaphthene	0	0		0	83	83.0	2,861	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	10,342	
Benzo(a)Anthracene	0	0		0	0.5	0.5	17.2	
Benzo(a)Pyrene	0	0		0	N/A	N/A	N/A	
3,4-Benzofluoranthene	0	0		0	N/A	N/A	N/A	
Benzo(k)Fluoranthene	0	0		0	N/A	N/A	N/A	
Bis(2-Chloroethyl)Ether	0	0		0	30,000	30,000	1,034,182	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	155,127	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	9,308	
Butyl Benzyl Phthalate	0	0		0	140	140	4,826	
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	28,268	
1,3-Dichlorobenzene	0	0		0	350	350	12,065	
1,4-Dichlorobenzene	0	0		0	730	730	25,165	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	137,891	
Dimethyl Phthalate	0	0		0	2,500	2,500	86,182	
Di-n-Butyl Phthalate	0	0		0	110	110	3,792	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	55,156	
2,6-Dinitrotoluene	0	0		0	990	990	34,128	
1,2-Diphenylhydrazine	0	0		0	15	15.0	517	
Fluoranthene	0	0		0	200	200	6,895	
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	345	
Hexachlorocyclopentadiene	0	0		0	5	5.0	172	
Hexachloroethane	0	0		0	60	60.0	2,068	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	344,727	
Naphthalene	0	0		0	140	140	4,826	
Nitrobenzene	0	0		0	4,000	4,000	137,891	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	586,037	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	10,342	
Phenanthrene	0	0		0	5	5.0	172	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	4,481	
Aldrin	0	0		0	3	3.0	103	
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	32.7	
Chlordane	0	0		0	2.4	2.4	82.7	
4,4-DDT	0	0		0	1.1	1.1	37.9	
4,4-DDE	0	0		0	1.1	1.1	37.9	

4,4-DDD	0	0		0	1.1	1.1	37.9	
Dieldrin	0	0		0	0.24	0.24	8.27	
alpha-Endosulfan	0	0		0	0.22	0.22	7.58	
beta-Endosulfan	0	0		0	0.22	0.22	7.58	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.086	0.086	2.96	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.52	0.52	17.9	
Heptachlor Epoxide	0	0		0	0.5	0.5	17.2	
Toxaphene	0	0		0	0.73	0.73	25.2	

☑ ***CFC*** CCT (min): ###### PMF: 1 Analysis Hardness (mg/l): 100 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
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	48,619	
Total Arsenic	0	0		0	150	150	33,149	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	906,076	
Total Boron	0	0		0	1,600	1,600	353,591	
Total Cadmium	0	0		0	0.246	0.27	59.8	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.115	86.2	19,045	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	2,297	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	4,199	
Total Copper	0	0		0	8.956	9.33	2,062	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	331,491	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.517	3.18	703	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	200	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.007	52.2	11,528	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	1,103	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	2,873	
Total Zinc	0	0		0	118.139	120	26,479	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	663	
Acrylonitrile	0	0		0	130	130	28,729	
Benzene	0	0		0	130	130	28,729	
Bromoform	0	0		0	370	370	81,768	
Carbon Tetrachloride	0	0		0	560	560	123,757	
Chlorobenzene	0	0		0	240	240	53,039	

Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	773,479	
Chloroform	0	0		0	390	390	86,188	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	685,082	
1,1-Dichloroethylene	0	0		0	1,500	1,500	331,491	
1,2-Dichloropropane	0	0		0	2,200	2,200	486,187	
1,3-Dichloropropylene	0	0		0	61	61.0	13,481	
Ethylbenzene	0	0		0	580	580	128,177	
Methyl Bromide	0	0		0	110	110	24,309	
Methyl Chloride	0	0		0	5,500	5,500	1,215,467	
Methylene Chloride	0	0		0	2,400	2,400	530,386	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	46,409	
Tetrachloroethylene	0	0		0	140	140	30,939	
Toluene	0	0		0	330	330	72,928	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	309,392	
1,1,1-Trichloroethane	0	0		0	610	610	134,806	
1,1,2-Trichloroethane	0	0		0	680	680	150,276	
Trichloroethylene	0	0		0	450	450	99,447	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	24,309	
2,4-Dichlorophenol	0	0		0	340	340	75,138	
2,4-Dimethylphenol	0	0		0	130	130	28,729	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	3,536	
2,4-Dinitrophenol	0	0		0	130	130	28,729	
2-Nitrophenol	0	0		0	1,600	1,600	353,591	
4-Nitrophenol	0	0		0	470	470	103,867	
p-Chloro-m-Cresol	0	0		0	500	500	110,497	
Pentachlorophenol	0	0		0	6.754	6.75	1,493	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	20,110	
Acenaphthene	0	0		0	17	17.0	3,757	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	13,039	
Benzo(a)Anthracene	0	0		0	0.1	0.1	22.1	
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	1,325,964	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	201,105	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	11,934	
Butyl Benzyl Phthalate	0	0		0	35	35.0	7,735	
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	35,359	
1,3-Dichlorobenzene	0	0		0	69	69.0	15,249	
1,4-Dichlorobenzene	0	0		0	150	150	33,149	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	176,795	
Dimethyl Phthalate	0	0		0	500	500	110,497	
Di-n-Butyl Phthalate	0	0		0	21	21.0	4,641	
2,4-Dinitrotoluene	0	0		0	320	320	70,718	
2,6-Dinitrotoluene	0	0		0	200	200	44,199	
1,2-Diphenylhydrazine	0	0		0	3	3.0	663	
Fluoranthene	0	0		0	40	40.0	8,840	
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	442	
Hexachlorocyclopentadiene	0	0		0	1	1.0	221	
Hexachloroethane	0	0		0	12	12.0	2,652	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	464,088	
Naphthalene	0	0		0	43	43.0	9,503	
Nitrobenzene	0	0		0	810	810	179,005	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	751,380	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	13,039	
Phenanthrene	0	0		0	1	1.0	221	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	5,746	
Aldrin	0	0		0	0.1	0.1	22.1	
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	0.95	
4,4-DDT	0	0		0	0.001	0.001	0.22	
4,4-DDE	0	0		0	0.001	0.001	0.22	
4,4-DDD	0	0		0	0.001	0.001	0.22	
Dieldrin	0	0		0	0.056	0.056	12.4	
alpha-Endosulfan	0	0		0	0.056	0.056	12.4	
beta-Endosulfan	0	0		0	0.056	0.056	12.4	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	7.96	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.84	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.84	
Toxaphene	0	0		0	0.0002	0.0002	0.044	

☑ ***THH*** CCT (min): ###### 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	1,238	
Total Arsenic	0	0		0	10	10.0	2,210	
Total Barium	0	0		0	2,400	2,400	530,386	
Total Boron	0	0		0	3,100	3,100	685,082	
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	66,298	
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	220,994	
Total Mercury	0	0		0	0.050	0.05	11.0	
Total Nickel	0	0		0	610	610	134,806	
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	53.0	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	663	
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	22,099	
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	7,293	
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	15,028	
Methyl Bromide	0	0		0	100	100.0	22,099	

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	12,597	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	22,099	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	2,209,941	
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	6,630	
2,4-Dichlorophenol	0	0		0	10	10.0	2,210	
2,4-Dimethylphenol	0	0		0	100	100.0	22,099	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	442	
2,4-Dinitrophenol	0	0		0	10	10.0	2,210	
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	883,976	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	15,470	
Anthracene	0	0		0	300	300	66,298	
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	44,199	
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	22.1	
2-Chloronaphthalene	0	0		0	800	800	176,795	
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	220,994	
1,3-Dichlorobenzene	0	0		0	7	7.0	1,547	
1,4-Dichlorobenzene	0	0		0	300	300	66,298	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	132,596	
Dimethyl Phthalate	0	0		0	2,000	2,000	441,988	
Di-n-Butyl Phthalate	0	0		0	20	20.0	4,420	
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	4,420	
Fluorene	0	0		0	50	50.0	11,050	
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	884	
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	7,514	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	2,210	
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	4,420	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	15.5	
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	4.2	4.2	928	
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	20	20.0	4,420	
beta-Endosulfan	0	0		0	20	20.0	4,420	
Endosulfan Sulfate	0	0		0	20	20.0	4,420	
Endrin	0	0		0	0.03	0.03	6.63	
Endrin Aldehyde	0	0		0	1	1.0	221	
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	N/A	N/A	N/A	

☑ ***CRL*** CCT (min): ###### 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	
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	
Acrylonitrile	0	0		0	0.06	0.06	60.7	
Benzene	0	0		0	0.58	0.58	587	
Bromoform	0	0		0	7	7.0	7,084	
Carbon Tetrachloride	0	0		0	0.4	0.4	405	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	810	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	5,769	
Dichlorobromomethane	0	0		0	0.95	0.95	961	
1,2-Dichloroethane	0	0		0	9.9	9.9	10,019	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	911	
1,3-Dichloropropylene	0	0		0	0.27	0.27	273	
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	20,241	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	202	
Tetrachloroethylene	0	0		0	10	10.0	10,121	
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	557	
Trichloroethylene	0	0		0	0.6	0.6	607	
Vinyl Chloride	0	0		0	0.02	0.02	20.2	

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	30.4	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	1,518	
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	0.1	
Benzo(a)Anthracene	0	0		0	0.001	0.001	1.01	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.1	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	1.01	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	10.1	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	30.4	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	324	
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	121	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.1	
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	50.6	
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	50.6	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	50.6	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	30.4	
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	0.081	
Hexachlorobutadiene	0	0		0	0.01	0.01	10.1	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	101	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	1.01	
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	0.71	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	5.06	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	3,340	
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	0.0000008	8.00E-07	0.0008	
alpha-BHC	0	0		0	0.0004	0.0004	0.4	
beta-BHC	0	0		0	0.008	0.008	8.1	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0003	0.0003	0.3	
4,4-DDT	0	0		0	0.00003	0.00003	0.03	
4,4-DDE	0	0		0	0.00002	0.00002	0.02	
4,4-DDD	0	0		0	0.0001	0.0001	0.1	
Dieldrin	0	0		0	0.000001	0.000001	0.001	
alpha-Endosulfan	0	0		0	N/A	N/A	N/A	
beta-Endosulfan	0	0		0	N/A	N/A	N/A	
Endosulfan Sulfate	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	0.000006	0.000006	0.006	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.03	
Toxaphene	0	0		0	0.0007	0.0007	0.71	

☑ ***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	Report	Report	Report	Report	Report	µg/L	16,572	AFC	Discharge Conc > 10% WQBEL (no RP)
Hexavalent Chromium	Report	Report	Report	Report	Report	µg/L	360	AFC	Discharge Conc > 10% WQBEL (no RP)
Pentachlorophenol	0.034	0.053	30.4	47.4	75.9	µg/L	30.4	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Benzo(a)Anthracene	0.001	0.002	1.01	1.58	2.53	µg/L	1.01	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Benzo(a)Pyrene	0.0001	0.0002	0.1	0.16	0.25	µg/L	0.1	CRL	Discharge Conc ≥ 50% WQBEL (RP)
3,4-Benzofluoranthene	0.001	0.002	1.01	1.58	2.53	µg/L	1.01	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Benzo(k)Fluoranthene	Report	Report	Report	Report	Report	µg/L	10.1	CRL	Discharge Conc > 25% WQBEL (no RP)
Dibenzo(a,h)Anthrancene	0.0001	0.0002	0.1	0.16	0.25	µg/L	0.1	CRL	Discharge Conc ≥ 50% WQBEL (RP)
Hexachlorobutadiene	Report	Report	Report	Report	Report	µg/L	10.1	CRL	Discharge Conc > 25% WQBEL (no RP)
Indeno(1,2,3-cd)Pyrene	0.001	0.002	1.01	1.58	2.53	µg/L	1.01	CRL	Discharge Conc ≥ 50% WQBEL (RP)
1,2,4-Trichlorobenzene	Report	Report	Report	Report	Report	µg/L	15.5	THH	Discharge Conc > 25% WQBEL (no RP)

☐ ***Other Pollutants without Limits or Monitoring***

COMMONWEALTH-OF PENNSYLVANIA
March 10, 1988

SUBJECT: Effluent' Limitations..
Industrial. Waste - NPDES Permits ·

TO: L.' Richard Adams
Chief Permits & Grants
Bureau of Water Quality Management
Williamsport Regional O ffi ce

FROM: William P. Parsohsl11Pf· . ·.
Regional Water Qua-Yity Manager
Bureau of Water Qustl ity Management
Williamsport Regional Office

I am concerned with the concentration limits we are establishing fcir BOD and· suspended solids on some NPDEs· permits for industrial wastewater. ·

The Div·i s·{on· of Water Quality has been saying for some time they· are unable to substantiate a l!/ater Qual,jty based suspended solids concent ration 1imit for our di chargers •. Wear obligated·to protect stream use.u.ng . . Chapter 93 which includes the ics•. It is my ,opinion a l¥a1 ..u..s.JW.a l T .Jl. WJ'j J Ol) g"lllfFrom a point source in a large· s!i'ailov, "'r'i'tiit\West iiraifcl'i, Nortn· 'rarictr; -ma in stem Susquehanna) is aesthetically displeasing. W_e can also substantiate that a- . con.cent,.,atr;Lo,Jl.,.,.,axcess"'of,.,.,.,>QQ•.,rng J.,l,,; " li>-:G1J!!i""e·. ·1s ..·. ·•M11"1l'fr 'v migrf 's' 1""l' h 's"g'li§'t: '{ f1i€'J'lifWltt "f"iFiro 'es:'•'Hl'e ref re,' eff ec 1 ve -c,;i.1.,J · i ll!ne:rat e],¥,1 l i Jil il_.:im.u 1 $i d1Pl£ %Jt'q:ail'3 nf!"li®e_ma®insc I'aa;t:ane:oln\ill!'. ·] ; ;-: ,c1n = e ;'t r 1- .,, tech no) ogy-based poundage 1imits which should reflect a treatment· pl ant which would routinely meet a concentration limit less than the i nstantane6us maximum. · '

· On ·streams smaller than the th'ree rivers I mentioned,· I believe the · _aesthetic impact of a-discharge is more significant. Therefore, for these cases ir:i the region,. the instantaneous maximum suspended solid . concentration should not ·exceed 100 mg/1· for aesthetic reasons. In all cases,· the instantaneous max.imum BOD concentration should also· be ·1ess than 200· mg/l, however, this decision should be b'ased upon the characterJstics of .the stream most notably mi-xing arid modeling results·•

It is· quite. possible we.may receive ·a proposal from .those-we regulate to install outfall dispersion dev.ices to mitigate the aesthetic impact, Such proposals from dischargers .have merit and if after revie1 are acceptable will result in. concentration limits in excess of the .above.

WPP/skb
cc:. Aldenderfer
Alters '
Division of Water Quality
Reg. WQ J ngrs;·