Pennsylvania Department of Environmental Protection

Southcentral Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0008150**
Facility Type	**Industrial**	APS ID	**706249**
Major / Minor	**Minor**	Authorization ID	**1477613**

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

Applicant and Facility Information

Applicant Name	**Mount Holly Springs Specialty Paper Inc.**	Facility Name	**Mount Holly Springs Specialty Paper, Inc.**
Applicant Address	1 Mountain Street Mount Holly Springs, PA 17065-1406	Facility Address	1 Mountain Street Mount Holly Springs, PA 17065-1406
Applicant Contact	Sean Beates	Facility Contact	Sean Beates
Applicant Phone	(717) 486-8500	Facility Phone	(717) 486-8500
Client ID	276918	Site ID	248339
SIC Code	2621	Municipality	Mount Holly Springs Borough
SIC Description	Manufacturing - Paper Mills	County	Cumberland
Date Application Received	March 20, 2024	EPA Waived?	Yes
Date Application Accepted	April 3, 2024	If No, Reason	
Purpose of Application	NPDES Renewal.		

Summary of Review

Mount Holly Springs Specialty Paper Inc. has applied to the Pennsylvania Department of Environmental Protection (DEP) for reissuance of its NPDES permit. The permit was last reissued on September 25, 2019 and became effective on October 1, 2019. The permit expired on September 30, 2024.

Based on the review, it is recommended that the permit be drafted.

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		Jinsu Kim Jinsu Kim / Environmental Engineering Specialist	January 13, 2025
		Daniel W. Martin, P.E. / Environmental Engineer Manager	
		Maria D. Bebenek, P.E. / Program Manager	

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	1.5
Latitude	40º 6' 52.00"	Longitude	-77º 11' 6.00"
Quad Name	Mount Holly Springs	Quad Code	1828
Wastewater Description:	IW Process Effluent with ELG		
Receiving Waters	Mountain Creek	Stream Code	63167
NHD Com ID	56408095	RMI	2.14
Drainage Area	45.3 sq.mi.	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	67.642	Q_{7-10} Basis	See comments below
Elevation (ft)		Slope (ft/ft)	
Watershed No.	7-E	Chapter 93 Class.	See comments below
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Attaining Use(s)		
Cause(s) of Impairment			
Source(s) of Impairment			
TMDL Status		Name	
Nearest Downstream Public Water Supply Intake	United Water		
PWS Waters	Yellow Breeches Creek	Flow at Intake (cfs)	80.5
PWS RMI	7.42	Distance from Outfall (mi)	25

Drainage Area
The discharge is to Mountain Creek at RMI 2.14. A drainage area upstream of the point of discharge is estimated to be 45.3 sq.mi. using USGS StreamStats available at https://streamstats.usgs.gov/ss/.

Streamflow
USGS gauge 01571500 on Yellow Breeches Creek 3.1 miles above mouth also measures the hatchery flow and springs at Huntsdale resulting in a greater yield rate in the basin than actually exists. The monthly hatchery discharge is 12.384 MGD during September when a monthly analysis of streamflows for Yellow Breeches Creek indicates Q7-10 flow is most likely to occur and the gage flow should be adjusted by subtracting the hatchery discharge.

Gage flow = 86.8 – 12.384*1.547 = 67.642 cfs
Q7-10 runoff rate = 67.642/ 213 = 0.317 cfs/sq.mi.
Q30-10:Q7-10 = 94/86.8 = 1.083:1
Q1-10:Q7-10 = 81.6/86.8 = .94:1
Q7-10 = 45.3*0.313 = 14.4 cfs

Mountain Creek
Under 25 Pa Code §93.9o, Mountain Creek is designated as High Quality-Cold Water fishes from source to Toland, Cold Water Fishes from Toland to Mt. Holly Springs and Trout Stocking Fishes from Mt. Holly Springs to Mouth. The discharge is located near the point where the designation changes from Cold Water Fishes to Trout Stocking Fishes (overlapping point). Both designations have therefore been considered in developing permit requirements for this facility. Mountain Creek as well as Yellow Breeches Creek (main stem) are considered as both trout stocked and natural reproduction streams; however, are not classified as Class A streams. No Class A Wild Trout Fishery is therefore impacted by this discharge. The discharge is located in a stream segment listed as attaining uses.

Water Quality Network (WQN) Station no. 242 located on the Mountain Creek at Pine Grove Furnace has been inactive since 1987; therefore the data from this station is most likely obsolete. Since there is no active WQN Station available in the vicinity of the discharge, default values of pH (7.0 SU for freestone (WWF & TSF)), hardness (100 mg/L), and temperature (20°C for winter & 25°C for summer) have been used in water quality analysis.

Water Supply Intake
The nearest downstream public water supply intake is United Water Company located on the Yellow Breeches Creek approximately 25 miles from the discharge. Based on the dilution and nature of discharge, the discharge is not expected to impact the water supply intake.

Treatment Facility Summary				
Treatment Facility Name: Mount Holly Springs Specialty Paper Inc.				
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Industrial	Secondary	Activated Sludge/DAF	None	1.5
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
2.304		Not Overloaded	Dewatering	Landfill

Mount Holly Springs Specialty Paper Inc. manufactures unbleached paper products for dielectric industry (SIC Code 2621) by using deionized water and clean raw materials through two (2) fourdrinier type paper machines. These products are fine papers (i.e., ultra clean electronic grade tissue paper) particularly used in electrical applications such as capacitors, transformers, coils, batteries, etc., according to the permit renewal application. The application also states that about 1.0 MGD of groundwater from one deep well as a water source for manufacturing. Water from Mountain Creek is also used for the fire tower water supply. The permittee operates an on-site wastewater treatment plant (IWTP) to treat process wastewater resulting from the manufacturing operations. The treatment plant includes an aeration lagoon, dissolved air floatation (DAF) unit, polishing lagoon, and outfall structure to Mountain Creek. From the DAF unit, treated wastewater is sent to the "In" Tail Race then to the polishing lagoon. From this lagoon, flow is sent to the "Out" Tail Race prior to stream discharge. The treatment plant is designed to accommodate 2.3 MGD. The permittee also utilizes an acid/caustic waste neutralization system. Acid (sulfuric) and caustic (sodium hydroxide) chemicals are used to restore a deionizing mix bed that produces deionized water for paper manufacturing processes. These chemicals once used are separately sent to lined ponds located at the site. From these ponds, wastewater is drained to a valve system where the automated valves mix the acid and caustic to a target pH reading of 7.0 scale. The neutralized chemicals are then sent to the head of the IWTP for further treatment.

Any waste generated during the treatment process is sent to a dewatering filter press unit prior to being landfilled. Sulfuric acid and sodium hydroxide are used for regeneration of deionizing mix beds, Polymin P is a polymer used in paper machine to filter and save fines, Coagulant 2031 is coagulant for the DAF unit, Perlite Filter Aid 1800 is used as filtration aid for the filter press, and Anionic Polyacrylamide 1668 is used as a polymer for the DAF unit.

Stormwater drained from the site is also discharged into Mountain Creek via Outfall 001. Mt. Holly Springs Water Authority provides water supply for sanitary sources; sanitary wastewater is then then to a local municipal wastewater treatment plant.

Compliance History	
Summary of DMRs:	A summary of 12-month DMR is presented on the DMR.
Summary of Inspections:	12/16/2022: DEP conducted a routine inspection and noted that permit violations were identified at the time of inspection.
Other Comments:	Since the last permit reissuance, there are a number of permit violations associated with this permittee or facility. These violations are listed on page 6 of this fact sheet. DEP's database shows that there are two (2) open violations associated with this permittee or facility. A draft permit cover letter will specify that the permit may not be finalized until all pending violations are resolved and closed out.

Effluent Data

DMR Data for Outfall 001 (from October 1, 2023 to September 30, 2024)

Parameter	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23
Flow (MGD) Average Monthly	0.990	1.035		1.053	1.102	1.234	1.055	1.113	0.969	0.865	0.895	0.980
Flow (MGD) Daily Maximum	1.090	1.122		1.163	1.204	1.475	1.188	1.434	1.434	1.055	1.011	1.173
pH (S.U.) Instantaneous Minimum	6.6	6.7		7.0	6.8	6.7	6.7	6.7	6.7	6.6	6.7	6.7
pH (S.U.) Instantaneous Maximum	7.5	7.6		7.7	7.7	7.6	7.4	7.6	7.7	7.6	7.5	7.6
DO (mg/L) Daily Minimum	9.12	8.79		8.82	8.98	9.21	9.14	9.1	8.18	9.21	9.02	8.29
Temperature (Day 1 thru 15) (ºF) Daily Maximum	64.9			69.8	65.6						56.0	57.2
Temperature (Day 16 thru End of Month) (ºF) Daily Maximum	62.3			65.5	64.4						56.5	62.2
Temperature (ºF) Daily Maximum		67.1				63.3	61.3	60.9	57.4	56.7		
BOD5 (lbs/day) Average Monthly	45.77	40.87		47.08	42.73	58.17	62.5	57.04	54.27	52.73	49.83	49.17
BOD5 (lbs/day) Daily Maximum	52.47	41.60		52.74	51.51	68.53	65.06	65.19	62.96	57.18	53.73	52.47
BOD5 (mg/L) Average Monthly	5.15	4.60		5.25	4.35	5.48	6.70	6.0	6.0	6.9	6.25	5.95
TSS (lbs/day) Average Monthly	44.58	53.36		45.35	49.02	52.69	46.63	47.53	48.27	50.12	43.94	41.78
TSS (lbs/day) Daily Maximum	45.43	55.47		48.17	49.53	58.07	47.14	53.43	59.03	58.86	49.59	44.98
TSS (mg/L) Average Monthly	< 5.0	6.0		< 5.0	< 5.0	< 5.0	< 5.0	5.0	5.33	6.50	5.50	< 5.0
Nitrate-Nitrite (mg/L) Daily Maximum	2.5			2.3			2.3			2.4		
Total Nitrogen (mg/L) Daily Maximum	3.51			3.27			3.71			3.47		

Parameter	SEP-24	AUG-24	JUL-24	JUN-24	MAY-24	APR-24	MAR-24	FEB-24	JAN-24	DEC-23	NOV-23	OCT-23
TKN (mg/L) Daily Maximum	< 1.0			< 1.0			1.4			< 1.0		
Total Phosphorus (mg/L) Daily Maximum	< 0.10			< 0.10			< 0.10			< 0.10		
Total Copper (lbs/day) Average Monthly	< 0.0632	0.102		0.089	0.076	< 0.086	0.121	0.129	0.103	0.108	0.096	0.097
Total Copper (lbs/day) Daily Maximum	0.08	0.11		0.10	0.08	0.13	0.13	0.13	0.12	0.13	0.12	0.12
Total Copper (mg/L) Average Monthly	< 0.0071	0.012		0.010	0.008	< 0.0081	0.013	0.014	0.011	0.014	0.012	0.012
Total Copper (mg/L) Daily Maximum	0.009	0.012		0.010	0.008	< 0.011	0.014	0.015	0.012	0.015	0.015	0.015

Compliance History

Permit Violations Since Last Reissuance

Date	Description	Parameter	Results	Limits	Units	SBC
12/1/2019	Violation of permit condition	Copper, Total	0.019	0.018	mg/L	Average Monthly
10/1/2020	Violation of permit condition	Temperature (deg F)	64.6	63.4	ºF	Daily Maximum
9/1/2021	Violation of permit condition	Temperature (deg F)	68.7	67.8	ºF	Daily Maximum
10/1/2021	Violation of permit condition	Temperature (deg F)	64.1	63.4	ºF	Daily Maximum
11/1/2021	Late DMR Submission					
8/1/2022	Violation of permit condition	Copper, Total	0.044	0.036	mg/L	Daily Maximum
10/1/2022	Violation of permit condition	Temperature (deg F)	63.9	63.4	ºF	Daily Maximum
2/1/2024	Late DMR Submission					
10/1/2024	Violation of permit condition	Temperature (deg F)	61.7	59.4	ºF	Daily Maximum
10/1/2024	Violation of permit condition	Temperature (deg F)	65.1	63.4	ºF	Daily Maximum

Existing Effluent Limits and Monitoring Requirements

The table below summarizes effluent limits and monitoring requirements specified in the existing permit.

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	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
Temperature (deg F) (ºF) Jan 1 - 31	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Feb 1 - 28	XXX	XXX	XXX	XXX	103.2 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Mar 1 - 31	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Apr 1 - 30	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) May 1 - 15	XXX	XXX	XXX	XXX	87.6 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) May 16 - 31	XXX	XXX	XXX	XXX	91.6 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Jun 1 - 15	XXX	XXX	XXX	XXX	82.6 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Jun 16 - 30	XXX	XXX	XXX	XXX	86.6 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Jul 1 - 31	XXX	XXX	XXX	XXX	82.5 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Aug 1 - 31	XXX	XXX	XXX	XXX	79.7 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Sep 1 - 15	XXX	XXX	XXX	XXX	73.8 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Sep 16 - 30	XXX	XXX	XXX	XXX	67.8 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Oct 1 - 15	XXX	XXX	XXX	XXX	63.4 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Oct 16 - 31	XXX	XXX	XXX	XXX	59.4 Daily Max	XXX	1/day	I-S

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	Maximum	Instant. Maximum		
Temperature (deg F) (ºF) Nov 1 - 15	XXX	XXX	XXX	XXX	56.8 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Nov 16 - 30	XXX	XXX	XXX	XXX	61.7 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Dec 1 - 31	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/day	I-S
Biochemical Oxygen Demand (BOD5)	214	390	XXX	Report	XXX	42	1/week	24-Hr Composite
Total Suspended Solids	171	351	XXX	Report	XXX	34	1/week	24-Hr Composite
Nitrate-Nitrite as N	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Calculation
Total Kjeldahl Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Copper, Total	0.225	0.45	XXX	0.018	0.036 Daily Max	0.045	1/week	24-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 1.5
Latitude 40º 6' 52.00" **Longitude** -77º 11' 6.00"
Wastewater Description: IW Process Effluent with ELG

Effluent Flow

The application reported 2.3 MGD as a design flow which includes stormwater run-off volume. The application then reported 0.954 MGD and 1.753 MGD for the average and maximum flow, respectively, during production. The previous permit renewal used 1.5 MGD to develop permit requirements. Effluent flow data reported on the DMRs over the past 58 months (January 2019 thru October 2024) have been analyzed as follows:

	30-Day Average (MGD)	Daily Maximum (MGD)
Average	1.04	1.36
Maximum	1.49	2.38
Median	0.99	1.17
90th Percentile	1.31	1.91

Based on this, it is still reasonable to develop permit requirements using 1.5 MGD.

Technology-Based Limitations

Given the facility's SIC code (i.e., 2621), its production type and the material used in production, the facility is subject to the federal effluent limitations and guidelines (ELGs) found in 40 CFR §430 Subpart K – Fine/Lightweight Papers from Purchased Pulp Subcategory, particularly "electrical grade papers subdivision". 40 CFR §430.112 lists BPT limits for TSS, BOD5, and pH and 40 CFR §430.114 lists BAT limits for toxic pollutants including pentachlorophenol and trichlorophenol in which these BAT limits are only applicable to those facilities using chlorophenol-containing biocides. The permittee previously confirmed that the facility is not using such biocides at this time. The published BAT limits are therefore not applicable.

For pH, because the state effluent standards found in 25 Pa Code §95.2(1) are more stringent than those listed in §430, the state effluent standards have been applied to the permit in accordance with 25 Pa Code §92a.12(b). As shown below, BOD5 and TSS loadings have been calculated based on an average daily production rate during the highest annual production year within the past five years (i.e., 4,900,881 lbs/yr. / (21.92 production days/month*12 months/yr.) = **18,632** lbs per production day):

	BAT ELG		NPDES Limits		Existing NPDES Limits	
	Kg/kkg (or pounds per 1,000 lbs.) of product		Daily	30-Day	Daily	30-Day
Parameter	Daily Maximum	30-Day Average	Maximum	Average	Maximum	Average
BOD5	38.0	20.9	708	389	390	214
TSS	34.2	16.7	637	311	351	171

As shown above, the proposed NPDES limits for both CBOD5 and TSS are less stringent than those specified in the current permit renewal as the average production rate during the highest production year has increased over the years. While the increased production rate resulted in less stringent limits in which such relaxation may be warranted under 40 CFR §§122.44(l)(i)(A) or (B)(1), the discharge is to a High-Quality stream. Under 25 Pa Code 93.4a(c), the water quality of High-Quality Waters must be maintained and protected to ensure anti-degradation of High-Quality waters. As a result, existing limits will be included in the permit as opposed to the newly calculated limits unless water quality-based effluent limits or alternate effluent limits developed using the best professional judgement are more stringent and necessary to ensure the protection of water quality standards.

Water Quality-Based Limitations

CBOD5 & Dissolved Oxygen
WQM 7.0 version 1.0b is a water quality model designed to assist DEP to determine appropriate permit requirements for CBOD5, NH3-N and DO. DEP's technical guidance no. 391-2000-007 describes the technical methods contained in the

model for conducting wasteload allocation analyses and for determining recommended limits for point source discharges. First, the above-referenced BOD5 limits have been converted into "assumed" CBOD5 concentration-based effluent limits by using 1.5 MGD and a typical ratio of 1.2 (BOD5) to 1.0 (CBOD5) to compare water quality protection values recommended by instream water quality models. The results are shown below:

	BOD5 Limits (lbs/day)	BOD5 Limits (mg/L)	Converted CBOD5 Limits (mg/L)
30-Day Average	389	31.09	25.9
Daily Maximum	708	56.6	47.2

A multiple discharge analysis is necessary as there are a number of facilities located in the close vicinity of the discharge that have similar effluent characteristics. Accordingly, an upstream discharger, Ahlstrom (PA0008486; 0.569 MGD) and downstream dischargers, Mt. Holly Springs STP (PA0023183; 0.6 MGD), Land O' Lakes (PA0044911; 0.81 MGD) are included in the analysis. All of these facilities are located within 3 RMI. It is noteworthy that ammonia-nitrogen is generally not a pollutant of concern for paper mills like Mount Holly Springs Specialty Paper Inc. in which the facility manufactures paper products from purchased pulp. No ammonia-based chemicals are used at the facility. The application reported an influent ammonia-nitrogen concentration of <2.5 mg/L and effluent ammonia-nitrogen concentration of 0.57 mg/L. This effluent concentration value is lower than the 30-day average criteria listed in DEP's technical guidance no. 391-200-013 (i.e., 1.96 mg/L based on assumed pH of 7 and temperature of 20ºC). The need of water quality-based effluent limits for ammonia-nitrogen has therefore been ruled out. This approach has been consistently applied for the past permit renewals. The model output indicates that existing limits for all above-referenced facilities are still protective of water quality.

Temperature

The facility is subject to 25 Pa Code §96.6 as thermal discharge is expected during production. The current permit renewal contains monthly effluent limits for temperature which were wasteload allocations (WLAs) derived from DEP's Thermal Discharge Limit (TDL) worksheet. For this permit renewal, DEP reutilized the TDL worksheet and the results are as follows:

Months	Existing Limits	Recommended WLAs under each aquatic life use(s)		Most Stringent
		Cold Water Fishes	Trout Stocking Fishes	
Jan 1-31	Report	110.0	110.0	Report
Feb 1-29	Report	103.2	110.0	103.2
Mar 1-31	Report	110.0	110.0	Report
Apr 1-15	Report	110.0	110.0	Report
Apr 16-30	Report	110.0	110.0	Report
May 1-15	Report	87.6	110.0	87.6
May 16-31	Report	91.6	110.0	91.6
Jun 1-15	Report	82.6	110.0	82.6
Jun 16-30	Report	86.6	110.0	86.6
Jul 1-31	Report	82.5	84.5	82.5
Aug 1-15	Report	79.7	110.0	79.7
Aug 16-31	Report	79.7	110.0	79.7
Sep 1-15	73.8	73.8	110.0	73.8
Sep 16-30	67.8	67.8	110.0	67.8
Oct 1-15	63.4	63.4	110.0	63.4
Oct 16-31	59.4	59.4	110.0	59.4
Nov 1-15	56.8	56.9	110.0	56.8
Nov 16-30	61.7	61.9	110.0	61.7
Dec 1-31	Report	110.0	110.0	Report

Because the discharge is to a stream segment that has a stream designation overlapping between cold water fishes and trout stocking fishes, it is reasonable to review WLAs developed under the water quality criteria associated with both cold water fishes and trout stocking fishes critical uses. The most stringent of recommended WLAs and the existing limits will be written in the permit in accordance with 40 CFR 122.44(d). DEP's TDL worksheet confirmed that effluent limits from May through November are required for protection of cold water fishes critical uses. Consequently, effluent limits listed in the table above will be written in the draft permit.

Toxics Pollutants

Effluent sample results for toxic pollutants reported on the renewal application were entered into DEP's Toxics Management Spreadsheet (TMS) to develop appropriate permit requirements for toxic pollutants of concern. TMS output indicates that

effluent limits for Total Copper are still required; and existing limits are still adequate for water quality protection. Therefore, no change is recommended. TMS output also shows there is no new toxic pollutant of concern.

Best Professional Judgment (BPJ) Limitations

Dissolved Oxygen

A minimum of 5.0 mg/L for DO is an existing effluent limit and is a current state water quality criterion found in 25 Pa. Code § 93.7(a). This effluent limit will remain unchanged for the upcoming permit renewal to ensure the protection of water quality standards. This requirement has also been assigned to other facilities throughout the state.

BOD & TSS Instantaneous Maximum Effluent Limitations

The permit contains instantaneous maximum effluent limits (IMAX) for BOD5 and TSS. These limits were developed using a multiplier of 2.5 based on the "assumed" average monthly concentrations converted from the mass load effluent limits. This is consistent with DEP's technical guidance no. 362-0400-001. These IMAX effluent limits are primarily designed to serve as basic reference points for comparing effluent grab samples during compliance inspections. Consequently, existing IMAX limits will remain unchanged for

Additional Considerations

Flow Monitoring

The requirement to monitor the volume of effluent will remain in the draft permit per 40 CFR §122.44(i)(1)(ii).

Chesapeake Bay TMDL

Mount Holly Springs Specialty Paper Inc. is not currently considered a significant discharger that would exceed 75 lbs/day of TN or 25 lbs/day of TP in the effluent. For any non-significant industrial waste facilities, according to DEP's current Supplement to Chesapeake Bay TMDL Phase 2 WIP, monitoring of nutrients would be required when such facility has the potential to introduce a net TN or TP increase to the load contained within the intake water used in processing. This document recommends monthly sampling for any lumber and paper processing facilities. However, given historical data, it appears the facility does not discharge nutrients at levels significant enough to warrant the monthly monitoring requirement. The discharge still occasionally contains detectable levels of nutrients. The existing quarterly monitoring of nutrients will therefore remain in the permit for the next permit term.

Stormwater Requirements

As mentioned before, the facility utilizes an existing outfall for stormwater discharges in which stormwater is introduced at the "In" Trail race and commingled with treated industrial wastewater prior to discharges into the existing polishing lagoon. While the facility can be subject to stormwater requirements in accordance with 40 CFR §122.26(b)(14)(ix), the application indicates that there is no exposure of industrial materials and activities to precipitation. Based on the review, DEP determined that the facility is eligible for an exemption from stormwater permit requirements in accordance with 40 CFR §122.26(g). Consequently, in lieu of standard stormwater conditions in Part C of the permit, it is recommended that the following condition be included in Part C of the permit:

"The permittee has certified that there will be no exposure of industrial activities and materials to stormwater during this permit term. This site condition must be maintained throughout this permit term to remain eligible for an exemption from permit requirements associated with stormwater discharges. If the site condition changes during this permit term, the permittee must notify DEP. For any subsequent permit renewal application, the permittee must complete and submit the No Exposure Certification Form (3850-PM-BCW0083e) available at www.dep.pa.gov along with the permit renewal application".

Chemical Additives

The application lists a number of chemicals used for wastewater treatment but does not report any chemical additives used for cleaning, disinfection or maintenance that haven introduced to any waste stream. No chemical additives have been therefore reviewed for this permit renewal.

Antidegradation Requirements

All effluent limitations and monitoring requirements have been developed to ensure that existing instream water uses and the level of water quality necessary to protect the existing uses are maintained and protected.

Anti-Backsliding Requirements

Unless stated otherwise in this fact sheet, all permit requirements proposed in this fact sheet are at least as stringent as permit requirements specified in the existing permit renewal in accordance with 40 CFR §122.44(l)(1).

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" (386-0400-001), SOPs and/or BPJ.

Outfall 001, Effective Period: Permit Effective Date through Permit Expiration Date.

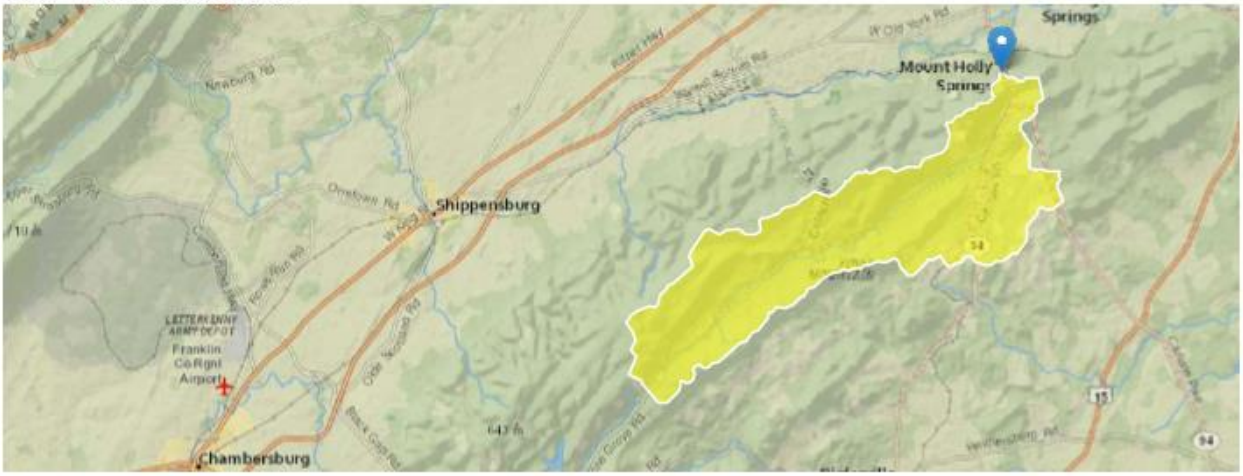
Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Daily Maximum	Minimum	Average Monthly	Maximum	Instant. Maximum		
Flow (MGD)	Report	Report	XXX	XXX	XXX	XXX	1/day	Measured
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	5.0 Daily Min	XXX	XXX	XXX	1/day	Grab
Temperature (deg F) (ºF) Jan 1 - 31	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Feb 1 - 28	XXX	XXX	XXX	XXX	103.2 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Mar 1 - 31	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Apr 1 - 30	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) May 1 - 15	XXX	XXX	XXX	XXX	87.6 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) May 16 - 31	XXX	XXX	XXX	XXX	91.6 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Jun 1 - 15	XXX	XXX	XXX	XXX	82.6 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Jun 16 - 30	XXX	XXX	XXX	XXX	86.6 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Jul 1 - 31	XXX	XXX	XXX	XXX	82.5 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Aug 1 - 31	XXX	XXX	XXX	XXX	79.7 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Sep 1 - 15	XXX	XXX	XXX	XXX	73.8 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Sep 16 - 30	XXX	XXX	XXX	XXX	67.8 Daily Max	XXX	1/day	I-S

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	Maximum	Instant. Maximum		
Temperature (deg F) (ºF) Oct 1 - 15	XXX	XXX	XXX	XXX	63.4 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Oct 16 - 31	XXX	XXX	XXX	XXX	59.4 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Nov 1 - 15	XXX	XXX	XXX	XXX	56.8 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Nov 16 - 30	XXX	XXX	XXX	XXX	61.7 Daily Max	XXX	1/day	I-S
Temperature (deg F) (ºF) Dec 1 - 31	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/day	I-S
Biochemical Oxygen Demand (BOD5)	214	390	XXX	Report	XXX	42	1/week	24-Hr Composite
Total Suspended Solids	171	351	XXX	Report	XXX	34	1/week	24-Hr Composite
Nitrate-Nitrite as N	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Calculation
Total Kjeldahl Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Copper, Total	0.225	0.45	XXX	0.018	0.036 Daily Max	0.045	1/week	24-Hr Composite

Tools and References Used to Develop Permit	
☐	WQM for Windows Model (see Attachment)
☐	Toxics Management Spreadsheet (see Attachment)
☐	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, 386-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 386-2000-019, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 386-2000-018, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 386-2183-001, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 386-2183-002, 12/97.
☐	Pennsylvania CSO Policy, 386-2000-002, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 386-2000-008, 4/97.
☐	Determining Water Quality-Based Effluent Limits, 386-2000-004, 12/97.
☐	Implementation Guidance Design Conditions, 386-2000-007, 9/97.
☐	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 386-2000-016, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 386-2000-012, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 386-2000-009, 3/99.
☐	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 386-2000-015, 5/2004.
☐	Implementation Guidance for Section 93.7 Ammonia Criteria, 386-2000-022, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 386-2000-013, 4/2008.
☐	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 386-2000-011, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 386-2000-001, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 386-2000-021, 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, 386-2000-020, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 386-2000-005, 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, 386-2000-010, 3/1999.
☐	Design Stream Flows, 386-2000-003, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 386-2000-006, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 386-3200-001, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☐	SOP:
☐	Other:

StreamStats Report

Region ID: PA
Workspace ID: PA20241120135950668000
Clicked Point (Latitude, Longitude): 40.11394, -77.18722
Time: 2024-11-20 09:00:15 -0500



Collapse All

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
CARBON	Percentage of area of carbonate rock	13.28	percent
DRNAREA	Area that drains to a point on a stream	45.2	square miles
PRECIP	Mean Annual Precipitation	41	inches
ROCKDEP	Depth to rock	5	feet
STRDEN	Stream Density -- total length of streams divided by drainage area	1.19	miles per square mile

Low-Flow Statistics

Low-Flow Statistics Parameters [Low Flow Region 2]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	45.2	square miles	4.93	1280
PRECIP	Mean Annual Precipitation	41	inches	35	50.4
STRDEN	Stream Density	1.19	miles per square mile	0.51	3.1
ROCKDEP	Depth to Rock	5	feet	3.32	5.65
CARBON	Percent Carbonate	13.28	percent	0	99

Low-Flow Statistics Flow Report [Low Flow Region 2]

PIL: Lower 90% Prediction Interval, PIU: Upper 90% Prediction Interval, ASEp: Average Standard Error of Prediction, SE: Standard Error, PC: Percent Correct, RMSE: Root Mean Squared Error, PseudoR^2: Pseudo R Squared (other -- see report)

Statistic	Value	Unit	SE	ASEp
7 Day 2 Year Low Flow	11.3	ft^3/s	38	38
30 Day 2 Year Low Flow	13.7	ft^3/s	33	33

Statistic	Value	Unit	SE	ASEp
7 Day 10 Year Low Flow	7	ft^3/s	51	51
30 Day 10 Year Low Flow	8.32	ft^3/s	46	46
90 Day 10 Year Low Flow	11.2	ft^3/s	36	36

Low-Flow Statistics Citations

Stuckey, M.H.,2006, Low-flow, base-flow, and mean-flow regression equations for Pennsylvania streams: U.S. Geological Survey Scientific Investigations Report 2006-5130, 84 p. (http://pubs.usgs.gov/sir/2006/5130/)

Application Version: 4.24.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.2.1

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
07E	63167	MOUNTAIN CREEK	3.180	585.00	44.40	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	0.313	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
Ahlstrom	PA0008486	0.5690	0.5690	0.5690	0.000	26.00	7.30

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	18.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	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
07E	63167	MOUNTAIN CREEK	**2.140**	547.00	45.60	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	0.313	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
Specialty Paper	PA0008150	1.5000	1.5000	1.5000	0.000	23.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	23.90	2.00	0.00	1.50
Dissolved Oxygen	5.00	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
07E	63167	MOUNTAIN CREEK	1.780	540.00	46.00	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	0.313	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
Mt. Holly	PA0023183	0.7000	0.7000	0.7000	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	20.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	2.50	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
07E	63167	MOUNTAIN CREEK	**0.750**	514.30	46.20	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	0.313	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
Land O'Lakes	PA00449110	0.9500	0.9500	0.9500	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	10.00	2.00	0.00	1.50
Dissolved Oxygen	5.00	8.24	0.00	0.00
NH3-N	1.50	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
07E	63167	MOUNTAIN CREEK	**0.000**	490.50	47.60	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	0.313	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	0.00	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 D.O.Simulation

SWP Basin	Stream Code	Stream Name
07E	63167	MOUNTAIN CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
3.180	0.569	20.357	7.013
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
45.480	0.768	59.256	0.423
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
2.95	0.506	0.95	0.720
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
8.050	20.162	Tsivoglou	5
Reach Travel Time (days)			
0.150			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.015	2.93	0.94	8.19
0.030	2.91	0.93	8.19
0.045	2.89	0.92	8.19
0.060	2.86	0.91	8.19
0.075	2.84	0.90	8.19
0.090	2.82	0.89	8.19
0.105	2.80	0.88	8.19
0.120	2.78	0.87	8.19
0.135	2.75	0.86	8.19
0.150	2.73	0.85	8.19

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
2.140	2.069	20.701	7.011
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
51.123	0.779	65.614	0.439
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
5.53	1.045	1.92	0.739
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.766	11.209	Tsivoglou	5
Reach Travel Time (days)			
0.050			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.005	5.50	1.91	7.76
0.010	5.47	1.91	7.76
0.015	5.44	1.90	7.75
0.020	5.41	1.89	7.75
0.025	5.38	1.89	7.75
0.030	5.35	1.88	7.74
0.035	5.32	1.87	7.74
0.040	5.29	1.86	7.74
0.045	5.27	1.86	7.74
0.050	5.24	1.85	7.74

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
07E	63167	MOUNTAIN CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
1.780	2.769	20.655	7.010
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
51.311	0.785	65.398	0.464
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
6.07	1.088	1.88	0.736
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.582	15.199	Tsivoglou	5
Reach Travel Time (days)			
0.136			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.014	5.98	1.86	7.65
0.027	5.89	1.84	7.71
0.041	5.80	1.82	7.77
0.054	5.71	1.80	7.81
0.068	5.63	1.78	7.85
0.081	5.54	1.77	7.89
0.095	5.46	1.75	7.92
0.109	5.38	1.73	7.94
0.122	5.29	1.71	7.97
0.136	5.21	1.70	7.99

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.750	3.719	20.606	7.010
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
51.554	0.793	64.992	0.494
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
5.55	1.093	1.68	0.733
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
7.775	20.566	Tsivoglou	5
Reach Travel Time (days)			
0.093			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.009	5.50	1.67	7.87
0.019	5.44	1.66	7.95
0.028	5.38	1.64	8.02
0.037	5.33	1.63	8.08
0.046	5.27	1.62	8.13
0.056	5.22	1.61	8.15
0.065	5.16	1.60	8.15
0.074	5.11	1.59	8.15
0.083	5.06	1.58	8.15
0.093	5.00	1.57	8.15

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Discharge Information

Instructions | Discharge | Stream

Facility: **Mt. Holly Springs Specialty Paper** NPDES Permit No.: **PA0008150** Outfall No.: **001**

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

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
1.5	123	7						

					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		236									
	Chloride (PWS)	mg/L		6.9									
	Bromide	mg/L	<	1									
	Sulfate (PWS)	mg/L		103									
	Fluoride (PWS)	mg/L	<	0.2									
Group 2	Total Aluminum	µg/L		140									
	Total Antimony	µg/L	<	1									
	Total Arsenic	µg/L	<	1.5									
	Total Barium	µg/L		28									
	Total Beryllium	µg/L	<	0.5									
	Total Boron	µg/L	<	50									
	Total Cadmium	µg/L	<	0.2									
	Total Chromium (III)	µg/L		0.44									
	Hexavalent Chromium	µg/L		0.61									
	Total Cobalt	µg/L	<	2.5									
	Total Copper	mg/L		18									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L	<	4									
	Dissolved Iron	µg/L	<	60									
	Total Iron	µg/L		31									
	Total Lead	µg/L	<	1									
	Total Manganese	µg/L		5.1									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L	<	2.5									
	Total Phenols (Phenolics) (PWS)	µg/L	<	5									
	Total Selenium	µg/L	<	2									
	Total Silver	µg/L	<	0.5									
	Total Thallium	µg/L	<	0.5									
	Total Zinc	µg/L		7.6									
	Total Molybdenum	µg/L	<	1									
	Acrolein	µg/L	<	2									
	Acrylamide	µg/L											
	Acrylonitrile	µg/L	<	0.5									
	Benzene	µg/L	<	0.5									
	Bromoform	µg/L	<	1									
	Carbon Tetrachloride	µg/L	<	0.5									

Group 3	Chlorobenzene	µg/L		0.5										
	Chlorodibromomethane	µg/L	<	1										
	Chloroethane	µg/L	<	5										
	2-Chloroethyl Vinyl Ether	µg/L	<	0.5										
	Chloroform	µg/L	<	0.5										
	Dichlorobromomethane	µg/L	<	0.5										
	1,1-Dichloroethane	µg/L	<	0.5										
	1,2-Dichloroethane	µg/L	<	0.5										
	1,1-Dichloroethylene	µg/L	<	0.5										
	1,2-Dichloropropane	µg/L	<	0.5										
	1,3-Dichloropropylene	µg/L	<	1										
	1,4-Dioxane	µg/L		0.67										
	Ethylbenzene	µg/L	<	0.5										
	Methyl Bromide	µg/L	<	1										
	Methyl Chloride	µg/L	<	1										
	Methylene Chloride	µg/L	<	1										
	1,1,2,2-Tetrachloroethane	µg/L	<	0.5										
	Tetrachloroethylene	µg/L	<	0.5										
	Toluene	µg/L	<	0.5										
	1,2-trans-Dichloroethylene	µg/L	<	0.5										
	1,1,1-Trichloroethane	µg/L	<	0.5										
	1,1,2-Trichloroethane	µg/L	<	0.5										
	Trichloroethylene	µg/L	<	0.5										
	Vinyl Chloride	µg/L	<	0.5										
Group 4	2-Chlorophenol	µg/L	<	3										
	2,4-Dichlorophenol	µg/L	<	3										
	2,4-Dimethylphenol	µg/L	<	3										
	4,6-Dinitro-o-Cresol	µg/L	<	6.1										
	2,4-Dinitrophenol	µg/L	<	6.1										
	2-Nitrophenol	µg/L	<	3										
	4-Nitrophenol	µg/L	<	3										
	p-Chloro-m-Cresol	µg/L	<	3										
	Pentachlorophenol	µg/L	<	6.1										
	Phenol	µg/L	<	8.1										
	2,4,6-Trichlorophenol	µg/L	<	3										
Group 5	Acenaphthene	µg/L	<	1.5										
	Acenaphthylene	µg/L	<	1.5										
	Anthracene	µg/L	<	1.5										
	Benzidine	µg/L	<	4.1										
	Benzo(a)Anthracene	µg/L	<	1.5										
	Benzo(a)Pyrene	µg/L	<	1.5										
	3,4-Benzofluoranthene	µg/L	<	1.5										
	Benzo(ghi)Perylene	µg/L	<	1.5										
	Benzo(k)Fluoranthene	µg/L	<	1.5										
	Bis(2-Chloroethoxy)Methane	µg/L	<	3										
	Bis(2-Chloroethyl)Ether	µg/L	<	3										
	Bis(2-Chloroisopropyl)Ether	µg/L	<	3										
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	3										
	4-Bromophenyl Phenyl Ether	µg/L	<	3										
	Butyl Benzyl Phthalate	µg/L	<	3										
	2-Chloronaphthalene	µg/L	<	3										
	4-Chlorophenyl Phenyl Ether	µg/L	<	3										
	Chrysene	µg/L	<	1.5										
	Dibenzo(a,h)Anthrancene	µg/L	<	1.5										
	1,2-Dichlorobenzene	µg/L	<	1										
	1,3-Dichlorobenzene	µg/L	<	1										
	1,4-Dichlorobenzene	µg/L	<	1										
	3,3-Dichlorobenzidine	µg/L	<	3										
	Diethyl Phthalate	µg/L	<	3										
	Dimethyl Phthalate	µg/L	<	3										
	Di-n-Butyl Phthalate	µg/L	<	3										
	2,4-Dinitrotoluene	µg/L	<	3										
	2,6-Dinitrotoluene	µg/L	<	3										
	Di-n-Octyl Phthalate	µg/L	<	3										

	1,2-Diphenylhydrazine	µg/L	<	3										
	Fluoranthene	µg/L	<	1.5										
	Fluorene	µg/L	<	1.5										
	Hexachlorobenzene	µg/L	<	3										
	Hexachlorobutadiene	µg/L	<	0.5										
	Hexachlorocyclopentadiene	µg/L	<	3										
	Hexachloroethane	µg/L	<	3										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	1.5										
	Isophorone	µg/L	<	3										
	Naphthalene	µg/L	<	1.5										
	Nitrobenzene	µg/L	<	3										
	n-Nitrosodimethylamine	µg/L	<	3										
	n-Nitrosodi-n-Propylamine	µg/L	<	3										
	n-Nitrosodiphenylamine	µg/L	<	3										
	Phenanthrene	µg/L	<	1.5										
	Pyrene	µg/L	<	1.5										
	1,2,4-Trichlorobenzene	µg/L	<	0.5										
Group 6	Aldrin	µg/L	<	0.02										
	alpha-BHC	µg/L	<	0.02										
	beta-BHC	µg/L	<	0.02										
	gamma-BHC	µg/L	<	0.02										
	delta BHC	µg/L	<	0.02										
	Chlordane	µg/L	<	0.2										
	4,4-DDT	µg/L	<	0.02										
	4,4-DDE	µg/L	<	0.02										
	4,4-DDD	µg/L	<	0.02										
	Dieldrin	µg/L	<	0.02										
	alpha-Endosulfan	µg/L	<	0.02										
	beta-Endosulfan	µg/L	<	0.02										
	Endosulfan Sulfate	µg/L	<	0.02										
	Endrin	µg/L	<	0.02										
	Endrin Aldehyde	µg/L	<	0.02										
	Heptachlor	µg/L	<	0.02										
	Heptachlor Epoxide	µg/L	<	0.02										
	PCB-1016	µg/L	<	0.5										
	PCB-1221	µg/L	<	0.5										
	PCB-1232	µg/L	<	0.5										
	PCB-1242	µg/L	<	0.5										
	PCB-1248	µg/L	<	0.5										
	PCB-1254	µg/L	<	0.5										
	PCB-1260	µg/L	<	0.5										
	PCBs, Total	µg/L	<											
	Toxaphene	µg/L	<	0.5										
	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												

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Stream / Surface Water Information

Mt. Holly Springs Specialty Paper, NPDES Permit No. PA0008150, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Mountain Creek**

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	063167	2.14	547	45.6			Yes
End of Reach 1	063167	1.78	540	46			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	2.14	0.313										28	7		
End of Reach 1	1.78	0.131													

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	2.14														
End of Reach 1	1.78														

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.4, May 2023

Model Results

Mt. Holly Springs Specialty Paper, NPDES Permit No. PA0008150, Outfall 001

Instructions | Results | RETURN TO INPUTS | SAVE AS PDF | PRINT | All | Inputs | Results | Limits

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.493 Analysis Hardness (mg/l): 51.576 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	750	750	3,022	
Total Antimony	0	0		0	1,100	1,100	4,432	
Total Arsenic	0	0		0	340	340	1,370	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	84,619	
Total Boron	0	0		0	8,100	8,100	32,639	
Total Cadmium	0	0		0	1.057	1.09	4.38	Chem Translator of 0.972 applied
Total Chromium (III)	0	0		0	331.277	1,048	4,224	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	65.7	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	383	
Total Copper	0	0		0	7.202	7.5	30.2	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	31.192	35.1	142	Chem Translator of 0.887 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	6.64	Chem Translator of 0.85 applied
Total Nickel	0	0		0	267.422	268	1,080	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	1.030	1.21	4.88	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	262	
Total Zinc	0	0		0	66.867	68.4	276	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	12.1	
Acrylonitrile	0	0		0	650	650	2,619	
Benzene	0	0		0	640	640	2,579	

Bromoform	0	0		0	1,800	1,800	7,253	
Carbon Tetrachloride	0	0		0	2,800	2,800	11,282	
Chlorobenzene	0	0		0	1,200	1,200	4,835	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	72,530	
Chloroform	0	0		0	1,900	1,900	7,656	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	60,442	
1,1-Dichloroethylene	0	0		0	7,500	7,500	30,221	
1,2-Dichloropropane	0	0		0	11,000	11,000	44,324	
1,3-Dichloropropylene	0	0		0	310	310	1,249	
Ethylbenzene	0	0		0	2,900	2,900	11,685	
Methyl Bromide	0	0		0	550	550	2,216	
Methyl Chloride	0	0		0	28,000	28,000	112,825	
Methylene Chloride	0	0		0	12,000	12,000	48,354	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	4,029	
Tetrachloroethylene	0	0		0	700	700	2,821	
Toluene	0	0		0	1,700	1,700	6,850	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	27,400	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	12,088	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	13,700	
Trichloroethylene	0	0		0	2,300	2,300	9,268	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	2,256	
2,4-Dichlorophenol	0	0		0	1,700	1,700	6,850	
2,4-Dimethylphenol	0	0		0	660	660	2,659	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	322	
2,4-Dinitrophenol	0	0		0	660	660	2,659	
2-Nitrophenol	0	0		0	8,000	8,000	32,236	
4-Nitrophenol	0	0		0	2,300	2,300	9,268	
p-Chloro-m-Cresol	0	0		0	160	160	645	
Pentachlorophenol	0	0		0	8.723	8.72	35.2	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	1,854	
Acenaphthene	0	0		0	83	83.0	334	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	1,209	
Benzo(a)Anthracene	0	0		0	0.5	0.5	2.01	
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	120,884	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	18,133	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	1,088	
Butyl Benzyl Phthalate	0	0		0	140	140	564	
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	3,304		
1,3-Dichlorobenzene	0	0			0	350	350	1,410		
1,4-Dichlorobenzene	0	0			0	730	730	2,942		
3,3-Dichlorobenzidine	0	0			0	N/A	N/A	N/A		
Diethyl Phthalate	0	0			0	4,000	4,000	16,118		
Dimethyl Phthalate	0	0			0	2,500	2,500	10,074		
Di-n-Butyl Phthalate	0	0			0	110	110	443		
2,4-Dinitrotoluene	0	0			0	1,600	1,600	6,447		
2,6-Dinitrotoluene	0	0			0	990	990	3,989		
1,2-Diphenylhydrazine	0	0			0	15	15.0	60.4		
Fluoranthene	0	0			0	200	200	806		
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	40.3		
Hexachlorocyclopentadiene	0	0			0	5	5.0	20.1		
Hexachloroethane	0	0			0	60	60.0	242		
Indeno(1,2,3-cd)Pyrene	0	0			0	N/A	N/A	N/A		
Isophorone	0	0			0	10,000	10,000	40,295		
Naphthalene	0	0			0	140	140	564		
Nitrobenzene	0	0			0	4,000	4,000	16,118		
n-Nitrosodimethylamine	0	0			0	17,000	17,000	68,501		
n-Nitrosodi-n-Propylamine	0	0			0	N/A	N/A	N/A		
n-Nitrosodiphenylamine	0	0			0	300	300	1,209		
Phenanthrene	0	0			0	5	5.0	20.1		
Pyrene	0	0			0	N/A	N/A	N/A		
1,2,4-Trichlorobenzene	0	0			0	130	130	524		
Aldrin	0	0			0	3	3.0	12.1		
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	0.95	0.95	3.83		
Chlordane	0	0			0	2.4	2.4	9.67		
4,4-DDT	0	0			0	1.1	1.1	4.43		
4,4-DDE	0	0			0	1.1	1.1	4.43		
4,4-DDD	0	0			0	1.1	1.1	4.43		
Dieldrin	0	0			0	0.24	0.24	0.97		
alpha-Endosulfan	0	0			0	0.22	0.22	0.89		
beta-Endosulfan	0	0			0	0.22	0.22	0.89		
Endosulfan Sulfate	0	0			0	N/A	N/A	N/A		
Endrin	0	0			0	0.086	0.086	0.35		
Endrin Aldehyde	0	0			0	N/A	N/A	N/A		
Heptachlor	0	0			0	0.52	0.52	2.1		
Heptachlor Epoxide	0	0			0	0.5	0.5	2.01		
Toxaphene	0	0			0	0.73	0.73	2.94		

☑ ***CFC*** CCT (min): 61.832 PMF: 1 Analysis Hardness (mg/l): 41.285 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

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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	1,573	
Total Arsenic	0	0		0	150	150	1,073	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	29,318	
Total Boron	0	0		0	1,600	1,600	11,441	
Total Cadmium	0	0		0	0.133	0.14	1.0	Chem Translator of 0.946 applied
Total Chromium (III)	0	0		0	35.912	41.8	299	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	74.3	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	136	
Total Copper	0	0		0	4.205	4.38	31.3	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	10,726	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	0.949	1.03	7.38	Chem Translator of 0.92 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	6.48	Chem Translator of 0.85 applied
Total Nickel	0	0		0	24.605	24.7	176	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	35.7	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	93.0	
Total Zinc	0	0		0	55.829	56.6	405	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	21.5	
Acrylonitrile	0	0		0	130	130	930	
Benzene	0	0		0	130	130	930	
Bromoform	0	0		0	370	370	2,646	
Carbon Tetrachloride	0	0		0	560	560	4,004	
Chlorobenzene	0	0		0	240	240	1,716	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	25,028	
Chloroform	0	0		0	390	390	2,789	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	22,167	
1,1-Dichloroethylene	0	0		0	1,500	1,500	10,726	
1,2-Dichloropropane	0	0		0	2,200	2,200	15,732	
1,3-Dichloropropylene	0	0		0	61	61.0	436	
Ethylbenzene	0	0		0	580	580	4,147	
Methyl Bromide	0	0		0	110	110	787	
Methyl Chloride	0	0		0	5,500	5,500	39,329	
Methylene Chloride	0	0		0	2,400	2,400	17,162	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	1,502	
Tetrachloroethylene	0	0		0	140	140	1,001	
Toluene	0	0		0	330	330	2,360	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	10,011	

1,1,1-Trichloroethane	0	0		0	610	610	4,362		
1,1,2-Trichloroethane	0	0		0	680	680	4,863		
Trichloroethylene	0	0		0	450	450	3,218		
Vinyl Chloride	0	0		0	N/A	N/A	N/A		
2-Chlorophenol	0	0		0	110	110	787		
2,4-Dichlorophenol	0	0		0	340	340	2,431		
2,4-Dimethylphenol	0	0		0	130	130	930		
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	114		
2,4-Dinitrophenol	0	0		0	130	130	930		
2-Nitrophenol	0	0		0	1,600	1,600	11,441		
4-Nitrophenol	0	0		0	470	470	3,361		
p-Chloro-m-Cresol	0	0		0	500	500	3,575		
Pentachlorophenol	0	0		0	6.693	6.69	47.9		
Phenol	0	0		0	N/A	N/A	N/A		
2,4,6-Trichlorophenol	0	0		0	91	91.0	651		
Acenaphthene	0	0		0	17	17.0	122		
Anthracene	0	0		0	N/A	N/A	N/A		
Benzidine	0	0		0	59	59.0	422		
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.72		
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	42,904		
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A		
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	6,507		
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	386		
Butyl Benzyl Phthalate	0	0		0	35	35.0	250		
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	1,144		
1,3-Dichlorobenzene	0	0		0	69	69.0	493		
1,4-Dichlorobenzene	0	0		0	150	150	1,073		
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A		
Diethyl Phthalate	0	0		0	800	800	5,721		
Dimethyl Phthalate	0	0		0	500	500	3,575		
Di-n-Butyl Phthalate	0	0		0	21	21.0	150		
2,4-Dinitrotoluene	0	0		0	320	320	2,288		
2,6-Dinitrotoluene	0	0		0	200	200	1,430		
1,2-Diphenylhydrazine	0	0		0	3	3.0	21.5		
Fluoranthene	0	0		0	40	40.0	286		
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	14.3		
Hexachlorocyclopentadiene	0	0		0	1	1.0	7.15		
Hexachloroethane	0	0		0	12	12.0	85.8		
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A		

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Isophorone	0	0		0	2,100	2,100	15,017	
Naphthalene	0	0		0	43	43.0	307	
Nitrobenzene	0	0		0	810	810	5,792	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	24,313	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	422	
Phenanthrene	0	0		0	1	1.0	7.15	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	186	
Aldrin	0	0		0	0.1	0.1	0.72	
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	0.031	
4,4-DDT	0	0		0	0.001	0.001	0.007	
4,4-DDE	0	0		0	0.001	0.001	0.007	
4,4-DDD	0	0		0	0.001	0.001	0.007	
Dieldrin	0	0		0	0.056	0.056	0.4	
alpha-Endosulfan	0	0		0	0.056	0.056	0.4	
beta-Endosulfan	0	0		0	0.056	0.056	0.4	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	0.26	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.027	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.027	
Toxaphene	0	0		0	0.0002	0.0002	0.001	

☑ ***THH*** CCT (min): 61.832 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	40.0	
Total Arsenic	0	0		0	10	10.0	71.5	
Total Barium	0	0		0	2,400	2,400	17,162	
Total Boron	0	0		0	3,100	3,100	22,167	
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	2,145	

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	7,151	
Total Mercury	0	0		0	0.050	0.05	0.36	
Total Nickel	0	0		0	610	610	4,362	
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	1.72	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	21.5	
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	715	
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	5.7	5.7	40.8	
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	236	
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	486	
Methyl Bromide	0	0		0	100	100.0	715	
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	408	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	715	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	71,507	
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	215	
2,4-Dichlorophenol	0	0		0	10	10.0	71.5	
2,4-Dimethylphenol	0	0		0	100	100.0	715	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	14.3	
2,4-Dinitrophenol	0	0		0	10	10.0	71.5	
2-Nitrophenol	0	0		0	N/A	N/A	N/A	
4-Nitrophenol	0	0		0	N/A	N/A	N/A	
p-Chloro-m-Cresol	0	0		0	N/A	N/A	N/A	
Pentachlorophenol	0	0		0	N/A	N/A	N/A	
Phenol	0	0		0	4,000	4,000	28,603	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	

Acenaphthene	0	0		0	70	70.0	501	
Anthracene	0	0		0	300	300	2,145	
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	1,430	
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	0.72	
2-Chloronaphthalene	0	0		0	800	800	5,721	
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	7,151	
1,3-Dichlorobenzene	0	0		0	7	7.0	50.1	
1,4-Dichlorobenzene	0	0		0	300	300	2,145	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	4,290	
Dimethyl Phthalate	0	0		0	2,000	2,000	14,301	
Di-n-Butyl Phthalate	0	0		0	20	20.0	143	
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	143	
Fluorene	0	0		0	50	50.0	358	
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	28.6	
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	243	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	71.5	
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	143	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.5	
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	30.0	
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	143	
beta-Endosulfan	0	0		0	20	20.0	143	
Endosulfan Sulfate	0	0		0	20	20.0	143	
Endrin	0	0		0	0.03	0.03	0.21	
Endrin Aldehyde	0	0		0	1	1.0	7.15	
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): 28.287 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	2.02	
Benzene	0	0		0	0.58	0.58	19.5	
Bromoform	0	0		0	7	7.0	236	
Carbon Tetrachloride	0	0		0	0.4	0.4	13.5	

Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	27.0	
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	0.95	0.95	32.0	
1,2-Dichloroethane	0	0		0	9.9	9.9	334	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	30.3	
1,3-Dichloropropylene	0	0		0	0.27	0.27	9.1	
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	674	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	6.74	
Tetrachloroethylene	0	0		0	10	10.0	337	
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	18.5	
Trichloroethylene	0	0		0	0.6	0.6	20.2	
Vinyl Chloride	0	0		0	0.02	0.02	0.67	
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	1.01	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	50.5	
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	0.003	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.034	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.003	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.034	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.34	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	1.01	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	10.8	
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	4.04	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.003	

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	1.68	
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	1.68	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	1.68	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	1.01	
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	0.003	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.34	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	3.37	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.034	
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	0.024	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.17	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	111	
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	0.00003	
alpha-BHC	0	0		0	0.0004	0.0004	0.013	
beta-BHC	0	0		0	0.008	0.008	0.27	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0003	0.0003	0.01	
4,4-DDT	0	0		0	0.00003	0.00003	0.001	
4,4-DDE	0	0		0	0.00002	0.00002	0.0007	
4,4-DDD	0	0		0	0.0001	0.0001	0.003	
Dieldrin	0	0		0	0.000001	0.000001	0.00003	
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	0.0002	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.001	
Toxaphene	0	0		0	0.0007	0.0007	0.024	

☑ ***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			
Total Copper	0.24	0.38	0.019	0.03	0.048	mg/L	0.019	AFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Silver	Report	Report	Report	Report	Report	µg/L	3.13	AFC	Discharge Conc > 10% WQBEL (no RP)

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Fluoride (PWS)	N/A	N/A	Discharge Conc < TQL
Total Aluminum	1,937	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	17,162	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	11,441	µg/L	Discharge Conc < TQL
Total Cadmium	1.0	µg/L	Discharge Conc < TQL
Total Chromium (III)	299	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	42.1	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	136	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	2,145	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	10,726	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	7.38	µg/L	Discharge Conc < TQL
Total Manganese	7,151	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.36	µg/L	Discharge Conc < TQL
Total Nickel	176	µg/L	Discharge Conc < TQL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	35.7	µg/L	Discharge Conc < TQL
Total Thallium	1.72	µg/L	Discharge Conc < TQL
Total Zinc	177	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	7.75	µg/L	Discharge Conc < TQL

Acrylonitrile	2.02	µg/L	Discharge Conc < TQL
Benzene	19.5	µg/L	Discharge Conc < TQL
Bromoform	236	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	13.5	µg/L	Discharge Conc < TQL
Chlorobenzene	715	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	27.0	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	25,028	µg/L	Discharge Conc < TQL
Chloroform	40.8	µg/L	Discharge Conc < TQL
Dichlorobromomethane	32.0	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	334	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	236	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	30.3	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	9.1	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	486	µg/L	Discharge Conc < TQL
Methyl Bromide	715	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	39,329	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	674	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	6.74	µg/L	Discharge Conc < TQL
Tetrachloroethylene	337	µg/L	Discharge Conc < TQL
Toluene	408	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	715	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	4,362	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	18.5	µg/L	Discharge Conc < TQL
Trichloroethylene	20.2	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.67	µg/L	Discharge Conc < TQL
2-Chlorophenol	215	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	71.5	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	715	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	14.3	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	71.5	µg/L	Discharge Conc < TQL
2-Nitrophenol	11,441	µg/L	Discharge Conc < TQL
4-Nitrophenol	3,361	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	413	µg/L	Discharge Conc < TQL
Pentachlorophenol	1.01	µg/L	Discharge Conc < TQL
Phenol	28,603	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	50.5	µg/L	Discharge Conc < TQL
Acenaphthene	122	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	2,145	µg/L	Discharge Conc < TQL
Benzidine	0.003	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.034	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.003	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.034	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS

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Benzo(k)Fluoranthene	0.34	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	1.01	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	1,430	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	10.8	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	386	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.72	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	5,721	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	4.04	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.003	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	1,144	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	50.1	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	1,073	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	1.68	µg/L	Discharge Conc < TQL
Diethyl Phthalate	4,290	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	3,575	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	143	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	1.68	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	1.68	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	1.01	µg/L	Discharge Conc < TQL
Fluoranthene	143	µg/L	Discharge Conc < TQL
Fluorene	358	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.003	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.34	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	7.15	µg/L	Discharge Conc < TQL
Hexachloroethane	3.37	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.034	µg/L	Discharge Conc < TQL
Isophorone	243	µg/L	Discharge Conc < TQL
Naphthalene	307	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	71.5	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.024	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.17	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	111	µg/L	Discharge Conc < TQL
Phenanthrene	7.15	µg/L	Discharge Conc < TQL
Pyrene	143	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.5	µg/L	Discharge Conc < TQL
Aldrin	0.00003	µg/L	Discharge Conc < TQL
alpha-BHC	0.013	µg/L	Discharge Conc < TQL
beta-BHC	0.27	µg/L	Discharge Conc < TQL
gamma-BHC	2.45	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.01	µg/L	Discharge Conc < TQL
4,4-DDT	0.001	µg/L	Discharge Conc < TQL
4,4-DDE	0.0007	µg/L	Discharge Conc < TQL
4,4-DDD	0.003	µg/L	Discharge Conc < TQL

Dieldrin	0.00003	µg/L	Discharge Conc < TQL
alpha-Endosulfan	0.4	µg/L	Discharge Conc < TQL
beta-Endosulfan	0.4	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	143	µg/L	Discharge Conc < TQL
Endrin	0.21	µg/L	Discharge Conc < TQL
Endrin Aldehyde	7.15	µg/L	Discharge Conc < TQL
Heptachlor	0.0002	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.001	µg/L	Discharge Conc < TQL
PCB-1016	N/A	N/A	No WQS
PCB-1221	N/A	N/A	No WQS
PCB-1232	N/A	N/A	No WQS
PCB-1242	N/A	N/A	No WQS
PCB-1248	N/A	N/A	No WQS
PCB-1254	N/A	N/A	No WQS
PCB-1260	N/A	N/A	No WQS
Toxaphene	0.001	µg/L	Discharge Conc < TQL

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