pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

SOUTHWEST REGIONAL OFFICE
CLEAN WATER PROGRAM

NPDES PERMIT FACT SHEET ADDENDUM

Application Type	**Renewal**	Application No.	**PA0004979**
Facility Type	**Industrial**	APS ID	**543699**
Major / Minor	**Major**	Authorization ID	**1395314**

Applicant and Facility Information

Applicant Name	**Neville Chemicals Co.**	Facility Name	**Neville Chemicals Co.**
Applicant Address	2800 Neville Road	Facility Address	2800 Neville Road
	Pittsburgh, PA 15225-1496		Pittsburgh, PA 15225-1496
Applicant Contact	Daniel Kokoski	Facility Contact	Jeffrey Milhoan
Applicant Phone	(412) 777-4201	Facility Phone	(412) 777-4265
Client ID	82064	Site ID	242020
SIC Code	2821	Municipality	Neville Township
SIC Description	Manufacturing - Plastics Materials And Resins	County	Allegheny
Date Published in PA Bulletin	February 18, 2023	EPA Waived?	No
Comment Period End Date	March 20, 2023	If No, Reason	

Purpose of Application: Renewal of NPDES Permit Major Facility <250 MGD with ELG.

Internal Review and Recommendations

On February 3, 2023, the 2nd Draft NPDES permit PA00004979 for The Neville Chemical Company Facility was sent via electronic mail to Daniel Kokoski and Jeffrey Milhoan. Public notice of the Draft permit was published in the PA Bulletin on February 18, 2023. The 30-day public comment period expired on March 20, 2023.

On March 20, 2023, Jeffrey Milhoan submitted Neville Chemical's comments via OnBase upload regarding the 2nd Draft NPDES Permit PA00004979.

Facility Comment 1:
Part A I.C – Outfall 005 – Neville Chemical would prefer that limits for benzene remain as proposed in the draft permit. There was a discussion about using the limits in the Temporary Discharge Authorization because of EPA's anti-backsliding regulation. After additional internal discussion, Neville believes that it should not be penalized for an incorrect application of the regulations on a previous permit, and just be subject to the proposed BAT limitations.

Department Response:
Outfall 005 has been authorized to discharge via a Temporary Discharge Authorization (TDA) with Benzene effluent limitations of 0.010 $^{mg}/_{L}$ Average Monthly and 0.020 $^{mg}/_{L}$ Instantaneous Maximum.

The permit effluent limitations are developed by evaluating the technology-based and water quality-based limits and imposing the most stringent effluent limitations. The 2nd Draft Permit imposed Benzene effluent limitations based on Best Available Technology (BAT) (Average Monthly of 0.146 $^{mg}/_{L}$ and Instantaneous Maximum of 0.292 $^{mg}/_{L}$). The water quality-based limit is calculated to protect human health and aquatic life from potential impact the discharge has on the receiving

Approve	Return	Deny	Signatures	Date
X			Curtis Holes, P.E. / Environmental Engineer	July 7, 2023
X			Michael E. Fifth, P.E. / Environmental Engineer Manager	August 4, 2023

Internal Review and Recommendations

stream. Technology-based limits are calculated based on the minimum level of effluent quality that is attainable using demonstrated technologies for reducing discharge pollutant concentrations. The BAT evaluation referenced Treatability Manuals to determine the typical removal efficiency for the existing Calgon Carbon Corporation Modular Model 10 Granular Activated Carbon treatment system. One additional step in the analysis was required; comparing the estimated removal efficiency to the actual removal efficiency for the site-specific treatment system. The existing treatment system has historically achieved the existing TDA effluent limitations for Benzene (Average Monthly of 0.010 $^{mg}/_{L}$ and Instantaneous Maximum of 0.020 $^{mg}/_{L}$), therefore, the actual technology-based limitations for Benzene should be based on the existing treatment system which is proven to achieve the Average Monthly limit of 0.010 $^{mg}/_{L}$ and Instantaneous Maximum limit of 0.020 $^{mg}/_{L}$.

In accordance with the anti-backsliding regulations at 40 CFR 122.44, the threshold to revise effluent limitations to be less stringent than previously imposed has not been met. Imposing the current and achievable technology-based effluent limitation for Benzene at Outfall 005 is required.

Two (2) changes to the 2nd Draft Permit pertaining to this comment. The Outfall 005 Benzene effluent limitation (Average Monthly of 0.010 $^{mg}/_{L}$ and Instantaneous Maximum of 0.020 $^{mg}/_{L}$) are imposed.

Facility Comment 2:
Part A I.D. – Outfall 101 – 2,4-Dichlorophenol on Quarterly Outfall 101 testing appears to have the average lbs/day and max lbs./day limits switched.

Department Response:
The typos pertaining to Outfall 101 self-monitoring for 2,4-Dichlorophenol has been corrected to properly reflect the Mass Load Monitoring Average Monthly (0.018 $^{lbs}/_{day}$) and Daily Maximum (0.052 $^{lbs}/_{day}$) limits.

Two (2) changes to the 2nd Draft Permit were completed pertaining to this comment. The typos pertaining to Outfall 101's self-monitoring for 2,4-Dichlorophenol Mass Load Monitoring Average Monthly (0.018 $^{lbs}/_{day}$) and Daily Maximum (0.052 $^{lbs}/_{day}$) limits were corrected.

Facility Comment 3:
Part A I.D. – Outfall 101 – Neville Chemical has a concern that the significant reduction in the quarterly limits could cause a number of violations if the sampling results are reported with a dilution factor. Should the lab report result with a dilution factor, a number of the parameters reported as non-detect would be above the proposed permit limits. Neville has an extensive history of quarterly parameters being reported as non-detect at one dilution. On occasion, however, these same parameters being reported as non-detect with a dilution factor, increasing the reporting limit by a multiple of this factor.

Department Response:
Quarterly effluent limitations became more stringent due to the multiple other wastewater sources that also get treated by the treatment system. The ELG does not apply to these other wastewater sources, and thus must be accounted for while imposing the ELG limitations. This is completed using mass-balance approach, reducing the ELG Effluent Limitation Concentration by approximately 1/3 based on wastewater flowrates.

The Department reviewed the self-monitoring effluent limitations of Outfall 101 down to the Department's Target QLs and noticed that the effluent limitations for Phenol (Average Monthly – 0.005 $^{mg}/_{L}$, Daily Maximum – 0.009 $^{mg}/_{L}$) are lower than the Target QL is 0.010 $^{mg}/_{L}$. 40 CFR Part 414.91 lists the average monthly effluent limitation for Phenol as 0.015 $^{mg}/_{L}$. Due to the other wastewater sources, the effluent limitation was reduced following mass balance analysis. The reduction accounting for mass-balance of the other wastewater sources lowers the Phenol Average Monthly and Daily Maximum limits to below the Department's Target QL. For the facility to demonstrate compliance for Phenol Effluent limitations, a statistical value reported on the DMR that is less than the QL (i.e., "non-detect") will be considered in compliance for both Average Monthly and Daily Maximum.

Permit Condition V. Effluent Limitations Below Quantitation Limits was added to Part C of the 2nd Draft NPDES Permit.

One change to the 2nd Draft Permit pertaining to this comment, adding Permit Condition V. Effluent Limitation Below Quantitation Limits was added.

Internal Review and Recommendations

On March 8, 2023, Jennifer Fulton submitted EPA's comments via electronic mail in response to publication of the 2nd Draft NPDES Permit PA00004979 for the Neville Chemical Company Facility.

EPA Comment 1: Page 3 of the Fact Sheet Addendum, states that the updated TMS model for Outfall 101 did not recommend WQBELs for Total Boron at Outfall 101. Please provide the updated TMS spreadsheet for EPA review, which should be also included as part of the fact sheet documentation.

Department Response:
The updated TMS Model is contained in Attachment A of this Fact Sheet Addendum. The updated TMS model revised the Total Boron concentration from 35 mg/L to 240 mg/L. The Total Boron concentration was the only revision completed to the original TMS Model for Outfall 101. No WQBEL is recommended in the Total Boron concentration TMS model. Total Boron does not have reasonable potential to exceed water quality criteria.

No changes to the 2nd Draft NPDES Permit were made pertaining to this comment. The updated TMS model data are attached.

EPA Comment 2: As discussed on the 3/2/23 call, the Fact Sheet Addendum explains that the TDA applied the most stringent water quality criterion for Benzene with no consideration for dilution, but the value was higher than the Benzene criterion. It was discussed that this may not have been the basis for the TDA value and PADEP is going to determine whether any clarifying information can be provided on this.

Department Response:
Refer to Facility Comment 1, Department Response. Neville Chemicals Co. currently operates a treatment system that achieves a lower benzene effluent limit than those calculated to protect water quality. Accordingly, the technology limits will remain in effect.

No changes made to the 2nd Draft Permit pertaining to this comment.

EPA Comment 3: EPA has requested, and PADEP indicated that it would provide an electronic copy of the previous permit for this facility.

Department Response:
The Department acknowledges the comment and **no change** to the 2nd Draft Permit pertaining to this comment. The existing administratively extended NPDES Permit was emailed to EPA on June 21, 2023.

EPA Comment 4: The fact sheet addendum did not fully address EPA's comment about the ELG requirement to determine the mass limits for metal bearing and cyanide bearing waste streams at outfall 101. The fact sheet will need to document whether there are metal and/or cyanide bearing waste streams as listed in Appendix A to 40 CFR Part 414, which would require separate consideration per 40 CFR 414.91(b).

Department Response:
On March 3, 2023, the Department asked Neville Chemical if the facility has any of the waste streams identified in Appendix A to Part 414 – Non-Complexed Metal-Bearing Waste Streams and Cyanide-Bearing Waste Streams. On March 9, 2023, Jeffrey Milhoan of Neville Chemical, confirmed that the facility does not use metal catalysts in any of their processes so none of the Appendix A Waste Streams are generated at the facility.

No changes to the 2nd Draft NPDES Permit were made pertaining to this comment.

EPA Comment 5: The original fact sheet provided the RP analysis in the TMS for outfall 101, and the Department fact sheet addendum recalculated the appropriate TBELs using the process wastewater flow, but there was no apparent documentation that a comparison of the TBELs and WQBELs was conducted to ensure that the most stringent limitations

Internal Review and Recommendations

were applied in the permit. PADEP may have performed this evaluation, but it is unclear. The fact sheet addendum should provide a discussion to address this.

Department Response:
The Fact Sheet to the 1st Draft Permit evaluated water quality-based limitations for Outfall 101. Attachment A of the Fact Sheet contained the TMS model summary, which only recommended monitoring and report for Fluoride. Monitor and report of Fluoride was imposed in the monitoring requirements of Outfall 101.

No changes to the 2nd Draft NPDES Permit were made pertaining to this comment.

Due to the significant changes proposed in response to the Draft Permit comments, the Department will publish a 2nd Draft of the NPDES Permit in the PA Bulletin.

Attachment A – TMS Model with Total Boron Update (240 $^{mg}/_{L}$)

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.3, March 2021

Discharge Information

Instructions | Discharge | Stream

Facility: **Neville Chemical** NPDES Permit No.: **PA0004979** Outfall No.: **101**

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

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
0.157	133	7.3					2365	

					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		2580									
	Chloride (PWS)	mg/L		524									
	Bromide	mg/L	<	50									
	Sulfate (PWS)	mg/L		154									
	Fluoride (PWS)	mg/L		282									
Group 2	Total Aluminum	µg/L		220									
	Total Antimony	µg/L		1.9									
	Total Arsenic	µg/L		1.8									
	Total Barium	µg/L		72.8									
	Total Beryllium	µg/L		0.38									
	Total Boron	µg/L		240000									
	Total Cadmium	µg/L	<	1									
	Total Chromium (III)	µg/L	<	0.04									
	Hexavalent Chromium	µg/L	<	10									
	Total Cobalt	µg/L	<	2									
	Total Copper	µg/L	<	5.6									
	Free Cyanide	µg/L											
	Total Cyanide	µg/L		12									
	Dissolved Iron	µg/L		24									
	Total Iron	µg/L		64.2									
	Total Lead	µg/L		1.9									
	Total Manganese	µg/L		179									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		6.9									
	Total Phenols (Phenolics) (PWS)	µg/L		87									
	Total Selenium	µg/L		1									
	Total Silver	µg/L		1									
	Total Thallium	µg/L	<	0.3									
	Total Zinc	µg/L		26									
	Total Molybdenum	µg/L		19.8									
	Acrolein	µg/L	<	4									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	4									
	Benzene	µg/L	<	1									
	Bromoform	µg/L	<	1									

Group 3	Carbon Tetrachloride	µg/L	<	1									
	Chlorobenzene	µg/L	<	1									
	Chlorodibromomethane	µg/L	<	1									
	Chloroethane	µg/L	<	1									
	2-Chloroethyl Vinyl Ether	µg/L	<	2									
	Chloroform	µg/L	<	1									
	Dichlorobromomethane	µg/L	<	1									
	1,1-Dichloroethane	µg/L	<	1									
	1,2-Dichloroethane	µg/L	<	1									
	1,1-Dichloroethylene	µg/L	<	1									
	1,2-Dichloropropane	µg/L	<	1									
	1,3-Dichloropropylene	µg/L	<	1									
	1,4-Dioxane	µg/L	<	3									
	Ethylbenzene	µg/L	<	1									
	Methyl Bromide	µg/L	<	1									
	Methyl Chloride	µg/L	<	1									
	Methylene Chloride	µg/L	<	1									
	1,1,2,2-Tetrachloroethane	µg/L	<	1									
	Tetrachloroethylene	µg/L	<	1									
	Toluene	µg/L		3.6									
	1,2-trans-Dichloroethylene	µg/L	<	1									
	1,1,1-Trichloroethane	µg/L	<	1									
	1,1,2-Trichloroethane	µg/L	<	1									
	Trichloroethylene	µg/L	<	1									
	Vinyl Chloride	µg/L	<	1									
Group 4	2-Chlorophenol	µg/L	<	9.9									
	2,4-Dichlorophenol	µg/L	<	9.9									
	2,4-Dimethylphenol	µg/L	<	9.9									
	4,6-Dinitro-o-Cresol	µg/L	<	24.8									
	2,4-Dinitrophenol	µg/L	<	24.8									
	2-Nitrophenol	µg/L	<	9.9									
	4-Nitrophenol	µg/L	<	9.9									
	p-Chloro-m-Cresol	µg/L	<	19.8									
	Pentachlorophenol	µg/L	<	24.8									
	Phenol	µg/L	<	9.9									
	2,4,6-Trichlorophenol	µg/L	<	9.9									
Group 5	Acenaphthene	µg/L	<	9.9									
	Acenaphthylene	µg/L	<	9.9									
	Anthracene	µg/L	<	9.9									
	Benzidine	µg/L	<	17.9									
	Benzo(a)Anthracene	µg/L	<	1.2									
	Benzo(a)Pyrene	µg/L	<	1.2									
	3,4-Benzofluoranthene	µg/L	<	1.2									
	Benzo(ghi)Perylene	µg/L	<	9.9									
	Benzo(k)Fluoranthene	µg/L	<	1.2									
	Bis(2-Chloroethoxy)Methane	µg/L	<	9.9									
	Bis(2-Chloroethyl)Ether	µg/L	<	9.9									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	9.9									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	9.9									
	4-Bromophenyl Phenyl Ether	µg/L	<	9.9									
	Butyl Benzyl Phthalate	µg/L	<	9.9									
	2-Chloronaphthalene	µg/L	<	9.9									
	4-Chlorophenyl Phenyl Ether	µg/L	<	9.9									
	Chrysene	µg/L	<	1.2									
	Dibenzo(a,h)Anthrancene	µg/L	<	1.2									
	1,2-Dichlorobenzene	µg/L	<	9.9									
	1,3-Dichlorobenzene	µg/L	<	9.9									
	1,4-Dichlorobenzene	µg/L	<	9.9									
	3,3-Dichlorobenzidine	µg/L	<	9.9									
	Diethyl Phthalate	µg/L	<	9.9									
	Dimethyl Phthalate	µg/L	<	9.9									
	Di-n-Butyl Phthalate	µg/L	<	9.9									
	2,4-Dinitrotoluene	µg/L	<	9.9									

	2,6-Dinitrotoluene	µg/L	<	9.9										
	Di-n-Octyl Phthalate	µg/L	<	9.9										
	1,2-Diphenylhydrazine	µg/L	<	9.9										
	Fluoranthene	µg/L	<	9.9										
	Fluorene	µg/L	<	9.9										
	Hexachlorobenzene	µg/L	<	1.2										
	Hexachlorobutadiene	µg/L	<	0.5										
	Hexachlorocyclopentadiene	µg/L	<	1.2										
	Hexachloroethane	µg/L	<	9.9										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	1.2										
	Isophorone	µg/L	<	9.9										
	Naphthalene	µg/L	<	9.9										
	Nitrobenzene	µg/L	<	9.9										
	n-Nitrosodimethylamine	µg/L	<	1.2										
	n-Nitrosodi-n-Propylamine	µg/L	<	1.2										
	n-Nitrosodiphenylamine	µg/L	<	1.2										
	Phenanthrene	µg/L	<	9.9										
	Pyrene	µg/L	<	9.9										
	1,2,4-Trichlorobenzene	µg/L	<	9.9										
Group 6	Aldrin	µg/L	<	0.025										
	alpha-BHC	µg/L	<	0.25										
	beta-BHC	µg/L	<	0.25										
	gamma-BHC	µg/L	<	0.025										
	delta BHC	µg/L	<	0.25										
	Chlordane	µg/L	<	0.25										
	4,4-DDT	µg/L	<	0.05										
	4,4-DDE	µg/L	<	0.05										
	4,4-DDD	µg/L	<	0.05										
	Dieldrin	µg/L	<	0.05										
	alpha-Endosulfan	µg/L	<	0.25										
	beta-Endosulfan	µg/L	<	0.5										
	Endosulfan Sulfate	µg/L	<	0.5										
	Endrin	µg/L	<	0.5										
	Endrin Aldehyde	µg/L	<	0.5										
	Heptachlor	µg/L	<	0.025										
	Heptachlor Epoxide	µg/L	<	0.025										
	PCB-1016	µg/L	<	1.2										
	PCB-1221	µg/L	<	1.2										
	PCB-1232	µg/L	<	1.2										
	PCB-1242	µg/L	<	1.2										
	PCB-1248	µg/L	<	1.2										
	PCB-1254	µg/L	<	1.2										
	PCB-1260	µg/L	<	1.2										
	PCBs, Total	µg/L	<	1.2										
	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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Toxics Management Spreadsheet
Version 1.3, March 2021

Stream / Surface Water Information

Neville Chemical, NPDES Permit No. PA0004979, Outfall 101

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Ohio River (Back Channel)**

No. Reaches to Model: **1**

- ○ Statewide Criteria
- ○ Great Lakes Criteria
- ◉ ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	032317	974.6	710	19,100			Yes
End of Reach 1	032317	973	690	19,500		6	Yes

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

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	974.6	0.1	2,365									100	7		
End of Reach 1	973	0.1	4,730												

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	974.6														
End of Reach 1	973														

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Toxics Management Spreadsheet
Version 1.3, March 2021

Model Results

Neville Chemical, NPDES Permit No. PA0004979, Outfall 101

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

☐ ***Hydrodynamics***

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.080 Analysis Hardness (mg/l): 100.04 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	582,361	
Total Antimony	0	0		0	1,100	1,100	854,129	
Total Arsenic	0	0		0	340	340	264,004	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	16,306,104	
Total Boron	0	0		0	8,100	8,100	6,289,497	
Total Cadmium	0	0		0	2.015	2.13	1,657	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	569.962	1,804	1,400,521	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	12,651	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	73,766	
Total Copper	0	0		0	13.444	14.0	10,874	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	64.611	81.7	63,430	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	1,279	Chem Translator of 0.85 applied
Total Nickel	0	0		0	468.404	469	364,436	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	3.219	3.79	2,941	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	50,471	
Total Zinc	0	0		0	117.223	120	93,069	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	2,329	

Acrylonitrile	0	0		0	650	650	504,713	
Benzene	0	0		0	640	640	496,948	
Bromoform	0	0		0	1,800	1,800	1,397,666	
Carbon Tetrachloride	0	0		0	2,800	2,800	2,174,147	
Chlorobenzene	0	0		0	1,200	1,200	931,777	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	13,976,660	
Chloroform	0	0		0	1,900	1,900	1,475,314	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	11,647,217	
1,1-Dichloroethylene	0	0		0	7,500	7,500	5,823,608	
1,2-Dichloropropane	0	0		0	11,000	11,000	8,541,292	
1,3-Dichloropropylene	0	0		0	310	310	240,709	
Ethylbenzene	0	0		0	2,900	2,900	2,251,795	
Methyl Bromide	0	0		0	550	550	427,065	
Methyl Chloride	0	0		0	28,000	28,000	21,741,472	
Methylene Chloride	0	0		0	12,000	12,000	9,317,774	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	776,481	
Tetrachloroethylene	0	0		0	700	700	543,537	
Toluene	0	0		0	1,700	1,700	1,320,018	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	5,280,072	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	2,329,443	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	2,640,036	
Trichloroethylene	0	0		0	2,300	2,300	1,785,907	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	434,829	
2,4-Dichlorophenol	0	0		0	1,700	1,700	1,320,018	
2,4-Dimethylphenol	0	0		0	660	660	512,478	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	62,118	
2,4-Dinitrophenol	0	0		0	660	660	512,478	
2-Nitrophenol	0	0		0	8,000	8,000	6,211,849	
4-Nitrophenol	0	0		0	2,300	2,300	1,785,907	
p-Chloro-m-Cresol	0	0		0	160	160	124,237	
Pentachlorophenol	0	0		0	8.726	8.73	6,775	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	357,181	
Acenaphthene	0	0		0	83	83.0	64,448	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	232,944	
Benzo(a)Anthracene	0	0		0	0.5	0.5	388	
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	23,294,434	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	3,494,165	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	209,650	
Butyl Benzyl Phthalate	0	0		0	140	140	108,707	

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	636,715	
1,3-Dichlorobenzene	0	0		0	350	350	271,768	
1,4-Dichlorobenzene	0	0		0	730	730	566,831	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	3,105,925	
Dimethyl Phthalate	0	0		0	2,500	2,500	1,941,203	
Di-n-Butyl Phthalate	0	0		0	110	110	85,413	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	1,242,370	
2,6-Dinitrotoluene	0	0		0	990	990	768,716	
1,2-Diphenylhydrazine	0	0		0	15	15.0	11,647	
Fluoranthene	0	0		0	200	200	155,296	
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	7,765	
Hexachlorocyclopentadiene	0	0		0	5	5.0	3,882	
Hexachloroethane	0	0		0	60	60.0	46,589	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	7,764,811	
Naphthalene	0	0		0	140	140	108,707	
Nitrobenzene	0	0		0	4,000	4,000	3,105,925	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	13,200,179	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	232,944	
Phenanthrene	0	0		0	5	5.0	3,882	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	100,943	
Aldrin	0	0		0	3	3.0	2,329	
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	738	
Chlordane	0	0		0	2.4	2.4	1,864	
4,4-DDT	0	0		0	1.1	1.1	854	
4,4-DDE	0	0		0	1.1	1.1	854	
4,4-DDD	0	0		0	1.1	1.1	854	
Dieldrin	0	0		0	0.24	0.24	186	
alpha-Endosulfan	0	0		0	0.22	0.22	171	
beta-Endosulfan	0	0		0	0.22	0.22	171	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.086	0.086	66.8	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.52	0.52	404	
Heptachlor Epoxide	0	0		0	0.5	0.5	388	
PCBs, Total	0	0		0	N/A	N/A	N/A	
Toxaphene	0	0		0	0.73	0.73	567	

☑ *CFC* CCT (min): 720 PMF: 0.552 Analysis Hardness (mg/l): 100.01 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	1,182,212	
Total Arsenic	0	0		0	150	150	806,054	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	22,032,133	
Total Boron	0	0		0	1,600	1,600	8,597,905	
Total Cadmium	0	0		0	0.246	0.27	1,454	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.118	86.2	463,126	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	55,860	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	102,100	
Total Copper	0	0		0	8.956	9.33	50,133	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	14,607,538	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.517	3.18	17,098	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	4,868	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.009	52.2	280,323	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	26,810	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	69,858	
Total Zinc	0	0		0	118.145	120	643,890	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	16,121	
Acrylonitrile	0	0		0	130	130	698,580	
Benzene	0	0		0	130	130	698,580	
Bromoform	0	0		0	370	370	1,988,266	
Carbon Tetrachloride	0	0		0	560	560	3,009,267	
Chlorobenzene	0	0		0	240	240	1,289,686	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	18,807,918	
Chloroform	0	0		0	390	390	2,095,739	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	16,658,442	
1,1-Dichloroethylene	0	0		0	1,500	1,500	8,060,536	
1,2-Dichloropropane	0	0		0	2,200	2,200	11,822,120	
1,3-Dichloropropylene	0	0		0	61	61.0	327,795	
Ethylbenzene	0	0		0	580	580	3,116,741	

Methyl Bromide	0	0		0	110	110	591,106	
Methyl Chloride	0	0		0	5,500	5,500	29,555,300	
Methylene Chloride	0	0		0	2,400	2,400	12,896,858	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	1,128,475	
Tetrachloroethylene	0	0		0	140	140	752,317	
Toluene	0	0		0	330	330	1,773,318	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	7,523,167	
1,1,1-Trichloroethane	0	0		0	610	610	3,277,951	
1,1,2-Trichloroethane	0	0		0	680	680	3,654,110	
Trichloroethylene	0	0		0	450	450	2,418,161	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	591,106	
2,4-Dichlorophenol	0	0		0	340	340	1,827,055	
2,4-Dimethylphenol	0	0		0	130	130	698,580	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	85,979	
2,4-Dinitrophenol	0	0		0	130	130	698,580	
2-Nitrophenol	0	0		0	1,600	1,600	8,597,905	
4-Nitrophenol	0	0		0	470	470	2,525,635	
p-Chloro-m-Cresol	0	0		0	500	500	2,686,845	
Pentachlorophenol	0	0		0	6.694	6.69	35,974	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	489,006	
Acenaphthene	0	0		0	17	17.0	91,353	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	317,048	
Benzo(a)Anthracene	0	0		0	0.1	0.1	537	
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	32,242,145	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	4,890,059	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	290,179	
Butyl Benzyl Phthalate	0	0		0	35	35.0	188,079	
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	859,791	
1,3-Dichlorobenzene	0	0		0	69	69.0	370,785	
1,4-Dichlorobenzene	0	0		0	150	150	806,054	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	4,298,953	
Dimethyl Phthalate	0	0		0	500	500	2,686,845	
Di-n-Butyl Phthalate	0	0		0	21	21.0	112,848	
2,4-Dinitrotoluene	0	0		0	320	320	1,719,581	

2,6-Dinitrotoluene	0	0		0	200	200	1,074,738	
1,2-Diphenylhydrazine	0	0		0	3	3.0	16,121	
Fluoranthene	0	0		0	40	40.0	214,948	
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	10,747	
Hexachlorocyclopentadiene	0	0		0	1	1.0	5,374	
Hexachloroethane	0	0		0	12	12.0	64,484	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	11,284,751	
Naphthalene	0	0		0	43	43.0	231,069	
Nitrobenzene	0	0		0	810	810	4,352,690	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	18,270,549	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	317,048	
Phenanthrene	0	0		0	1	1.0	5,374	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	139,716	
Aldrin	0	0		0	0.1	0.1	537	
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	23.1	
4,4-DDT	0	0		0	0.001	0.001	5.37	
4,4-DDE	0	0		0	0.001	0.001	5.37	
4,4-DDD	0	0		0	0.001	0.001	5.37	
Dieldrin	0	0		0	0.056	0.056	301	
alpha-Endosulfan	0	0		0	0.056	0.056	301	
beta-Endosulfan	0	0		0	0.056	0.056	301	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	193	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	20.4	
Heptachlor Epoxide	0	0		0	0.0038	0.004	20.4	
PCBs, Total	0	0		0	0.014	0.014	75.2	
Toxaphene	0	0		0	0.0002	0.0002	1.07	

☑ ***THH*** CCT (min): 69.198 THH PMF: 0.552 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 0.1711

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	##########	WQC applied at RMI 973 with a design stream flow of 4730 cfs
Chloride (PWS)	0	0		0	250,000	250,000	##########	WQC applied at RMI 973 with a design stream flow of 4730 cfs
Sulfate (PWS)	0	0		0	250,000	250,000	##########	WQC applied at RMI 973 with a design stream flow of 4730 cfs

Fluoride (PWS)	0	0		0	1,000	1,000	1,666,604	THH WQC applied at PWS at RMI 973
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	9,333	THH WQC applied at PWS at RMI 973
Total Arsenic	0	0		0	10	10.0	16,666	THH WQC applied at PWS at RMI 973
Total Barium	0	0		0	1,000	1,000	1,666,604	THH WQC applied at PWS at RMI 973
Total Boron	0	0		0	3,100	3,100	5,166,472	THH WQC applied at PWS at RMI 973
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	1,300	1,300	2,166,585	THH WQC applied at PWS at RMI 973
Dissolved Iron	0	0		0	300	300	499,981	THH WQC applied at PWS at RMI 973
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	1,666,604	THH WQC applied at PWS at RMI 973
Total Mercury	0	0		0	0.012	0.012	20.0	THH WQC applied at PWS at RMI 973
Total Nickel	0	0		0	610	610	1,016,628	THH WQC applied at PWS at RMI 973
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	16,661	WQC applied at RMI 973 with a design stream flow of 4730 cfs
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	400	THH WQC applied at PWS at RMI 973
Total Zinc	0	0		0	7,400	7,400	12,332,868	THH WQC applied at PWS at RMI 973
Acrolein	0	0		0	3	3.0	5,000	THH WQC applied at PWS at RMI 973
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	166,660	THH WQC applied at PWS at RMI 973
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	54,998	THH WQC applied at PWS at RMI 973
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	113,329	THH WQC applied at PWS at RMI 973
Methyl Bromide	0	0		0	47	47.0	78,330	THH WQC applied at PWS at RMI 973
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	94,996	THH WQC applied at PWS at RMI 973
1,2-trans-Dichloroethylene	0	0		0	100	100.0	166,660	THH WQC applied at PWS at RMI 973
1,1,1-Trichloroethane	0	0		0	10,000	10,000	16,666,038	THH WQC applied at PWS at RMI 973

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	49,998	THH WQC applied at PWS at RMI 973
2,4-Dichlorophenol	0	0		0	10	10.0	16,666	THH WQC applied at PWS at RMI 973
2,4-Dimethylphenol	0	0		0	100	100.0	166,660	THH WQC applied at PWS at RMI 973
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	3,333	THH WQC applied at PWS at RMI 973
2,4-Dinitrophenol	0	0		0	10	10.0	16,666	THH WQC applied at PWS at RMI 973
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	6,666,415	THH WQC applied at PWS at RMI 973
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	116,662	THH WQC applied at PWS at RMI 973
Anthracene	0	0		0	300	300	499,981	THH WQC applied at PWS at RMI 973
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	333,321	THH WQC applied at PWS at RMI 973
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	167	THH WQC applied at PWS at RMI 973
2-Chloronaphthalene	0	0		0	800	800	1,333,283	THH WQC applied at PWS at RMI 973
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	420	420	699,974	THH WQC applied at PWS at RMI 973
1,3-Dichlorobenzene	0	0		0	7	7.0	11,666	THH WQC applied at PWS at RMI 973
1,4-Dichlorobenzene	0	0		0	63	63.0	104,996	THH WQC applied at PWS at RMI 973
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	999,962	THH WQC applied at PWS at RMI 973
Dimethyl Phthalate	0	0		0	2,000	2,000	3,333,208	THH WQC applied at PWS at RMI 973
Di-n-Butyl Phthalate	0	0		0	20	20.0	33,332	THH WQC applied at PWS at RMI 973
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	33,332	THH WQC applied at PWS at RMI 973
Fluorene	0	0		0	50	50.0	83,330	THH WQC applied at PWS at RMI 973
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	6,666	THH WQC applied at PWS at RMI 973
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	56,665	THH WQC applied at PWS at RMI 973
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	16,666	THH WQC applied at PWS at RMI 973
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	33,332	THH WQC applied at PWS at RMI 973
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	117	THH WQC applied at PWS at RMI 973
Aldrin	0	0		0	N/A	N/A	N/A	
alpha-BHC	0	0		0	N/A	N/A	N/A	
beta-BHC	0	0		0	N/A	N/A	N/A	
gamma-BHC	0	0		0	0.98	0.98	1,633	THH WQC applied at PWS at RMI 973
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	33,332	THH WQC applied at PWS at RMI 973
beta-Endosulfan	0	0		0	20	20.0	33,332	THH WQC applied at PWS at RMI 973
Endosulfan Sulfate	0	0		0	20	20.0	33,332	THH WQC applied at PWS at RMI 973
Endrin	0	0		0	0.03	0.03	50.0	THH WQC applied at PWS at RMI 973
Endrin Aldehyde	0	0		0	0.29	0.29	483	THH WQC applied at PWS at RMI 973
Heptachlor	0	0		0	N/A	N/A	N/A	
Heptachlor Epoxide	0	0		0	N/A	N/A	N/A	
PCBs, Total	0	0		0	N/A	N/A	N/A	
Toxaphene	0	0		0	N/A	N/A	N/A	

☑ *CRL* CCT (min): 720 PMF: 0.180 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	50	50.0	245,124	
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	0.051	0.051	250	
Benzene	0	0		0	0.58	0.58	2,843	
Bromoform	0	0		0	4.3	4.3	21,081	
Carbon Tetrachloride	0	0		0	0.4	0.4	1,961	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.4	0.4	1,961	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	27,944	
Dichlorobromomethane	0	0		0	0.55	0.55	2,696	
1,2-Dichloroethane	0	0		0	0.38	0.38	1,863	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.5	0.5	2,451	
1,3-Dichloropropylene	0	0		0	0.27	0.27	1,324	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Methyl Bromide	0	0		0	N/A	N/A	N/A	
Methyl Chloride	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	4.6	4.6	22,551	
1,1,2,2-Tetrachloroethane	0	0		0	0.17	0.17	833	
Tetrachloroethylene	0	0		0	0.69	0.69	3,383	
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	2,696	
Trichloroethylene	0	0		0	0.6	0.6	2,941	
Vinyl Chloride	0	0		0	0.02	0.02	98.0	
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	147	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.4	1.4	6,863	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.000086	0.00009	0.42	
Benzo(a)Anthracene	0	0		0	0.001	0.001	4.9	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.49	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	4.9	
Benzo(k)Fluoranthene	0	0		0	0.0038	0.004	18.6	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	147	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	1,569	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	
Butyl Benzyl Phthalate	0	0		0	N/A	N/A	N/A	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	0.0038	0.004	18.6	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.49	
1,2-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,3-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
1,4-Dichlorobenzene	0	0		0	N/A	N/A	N/A	
3,3-Dichlorobenzidine	0	0		0	0.021	0.021	103	
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	245	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	245	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	147	
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	0.39	
Hexachlorobutadiene	0	0		0	0.01	0.01	49.0	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	490	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	4.9	
Isophorone	0	0		0	N/A	N/A	N/A	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	N/A	N/A	N/A	
n-Nitrosodimethylamine	0	0		0	0.00069	0.0007	3.38	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	24.5	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	16,178	
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	0.004	
alpha-BHC	0	0	0	0.0004	0.0004	1.96	
beta-BHC	0	0	0	0.008	0.008	39.2	
gamma-BHC	0	0	0	N/A	N/A	N/A	
Chlordane	0	0	0	0.0003	0.0003	1.47	
4,4-DDT	0	0	0	0.00003	0.00003	0.15	
4,4-DDE	0	0	0	0.00002	0.00002	0.098	
4,4-DDD	0	0	0	0.0001	0.0001	0.49	
Dieldrin	0	0	0	0.000001	0.000001	0.005	
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	0.029	
Heptachlor Epoxide	0	0	0	0.00003	0.00003	0.15	
PCBs, Total	0	0	0	0.000064	0.00006	0.31	
Toxaphene	0	0	0	0.00028	0.0003	1.37	

☑ ***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
Fluoride (PWS)	Report	Report	Report	Report	Report	mg/L	1.667	THH	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)	1,666,104	mg/L	Discharge Conc ≤ 10% WQBEL
Chloride (PWS)	833,052	mg/L	Discharge Conc ≤ 10% WQBEL
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	833,052	mg/L	Discharge Conc ≤ 10% WQBEL
Total Aluminum	373,270	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	9,333	µg/L	Discharge Conc ≤ 10% WQBEL

Total Arsenic	16,666	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	1,666,604	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	4,031,314	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	1,062	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	463,126	µg/L	Discharge Conc < TQL
Hexavalent Chromium	8,109	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	47,281	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	6,970	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	499,981	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	14,607,538	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	17,098	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	1,666,604	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.012	µg/L	Discharge Conc < TQL
Total Nickel	233,589	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)	16,661	µg/L	Discharge Conc ≤ 10% WQBEL
Total Selenium	26,810	µg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	1,885	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	400	µg/L	Discharge Conc < TQL
Total Zinc	59,653	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	1,493	µg/L	Discharge Conc ≤ 25% WQBEL
Acrylonitrile	250	µg/L	Discharge Conc < TQL
Benzene	2,843	µg/L	Discharge Conc ≤ 25% WQBEL
Bromoform	21,081	µg/L	Discharge Conc ≤ 25% WQBEL
Carbon Tetrachloride	1,961	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorobenzene	166,660	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	1,961	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	8,958,475	µg/L	Discharge Conc < TQL
Chloroform	27,944	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	2,696	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	1,863	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethylene	54,998	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-Dichloropropane	2,451	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichloropropylene	1,324	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	113,329	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Bromide	78,330	µg/L	Discharge Conc ≤ 25% WQBEL
Methyl Chloride	13,935,406	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	22,551	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	833	µg/L	Discharge Conc ≤ 25% WQBEL
Tetrachloroethylene	3,383	µg/L	Discharge Conc ≤ 25% WQBEL

Toluene	94,996	µg/L	Discharge Conc ≤ 25% WQBEL
1,2-trans-Dichloroethylene	166,660	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,1-Trichloroethane	1,493,079	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2-Trichloroethane	2,696	µg/L	Discharge Conc ≤ 25% WQBEL
Trichloroethylene	2,941	µg/L	Discharge Conc ≤ 25% WQBEL
Vinyl Chloride	98.0	µg/L	Discharge Conc ≤ 25% WQBEL
2-Chlorophenol	49,998	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	16,666	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	166,660	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	3,333	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrophenol	16,666	µg/L	Discharge Conc ≤ 25% WQBEL
2-Nitrophenol	3,981,544	µg/L	Discharge Conc < TQL
4-Nitrophenol	1,144,694	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	79,631	µg/L	Discharge Conc ≤ 25% WQBEL
Pentachlorophenol	147	µg/L	Discharge Conc ≤ 25% WQBEL
Phenol	6,666,415	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	6,863	µg/L	Discharge Conc < TQL
Acenaphthene	41,309	µg/L	Discharge Conc ≤ 25% WQBEL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	499,981	µg/L	Discharge Conc ≤ 25% WQBEL
Benzidine	0.42	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	4.9	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.49	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	4.9	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	18.6	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	147	µg/L	Discharge Conc ≤ 25% WQBEL
Bis(2-Chloroisopropyl)Ether	333,321	µg/L	Discharge Conc ≤ 25% WQBEL
Bis(2-Ethylhexyl)Phthalate	1,569	µg/L	Discharge Conc ≤ 25% WQBEL
4-Bromophenyl Phenyl Ether	134,377	µg/L	Discharge Conc ≤ 25% WQBEL
Butyl Benzyl Phthalate	167	µg/L	Discharge Conc ≤ 25% WQBEL
2-Chloronaphthalene	1,333,283	µg/L	Discharge Conc ≤ 25% WQBEL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	18.6	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.49	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	408,108	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	11,666	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	104,996	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	103	µg/L	Discharge Conc ≤ 25% WQBEL
Diethyl Phthalate	999,962	µg/L	Discharge Conc ≤ 25% WQBEL
Dimethyl Phthalate	1,244,233	µg/L	Discharge Conc ≤ 25% WQBEL
Di-n-Butyl Phthalate	33,332	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	245	µg/L	Discharge Conc ≤ 25% WQBEL
2,6-Dinitrotoluene	245	µg/L	Discharge Conc ≤ 25% WQBEL

Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	147	µg/L	Discharge Conc < TQL
Fluoranthene	33,332	µg/L	Discharge Conc ≤ 25% WQBEL
Fluorene	83,330	µg/L	Discharge Conc ≤ 25% WQBEL
Hexachlorobenzene	0.00008	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.01	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	2,488	µg/L	Discharge Conc < TQL
Hexachloroethane	490	µg/L	Discharge Conc ≤ 25% WQBEL
Indeno(1,2,3-cd)Pyrene	4.9	µg/L	Discharge Conc < TQL
Isophorone	56,665	µg/L	Discharge Conc ≤ 25% WQBEL
Naphthalene	69,677	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	16,666	µg/L	Discharge Conc ≤ 25% WQBEL
n-Nitrosodimethylamine	3.38	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	24.5	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	16,178	µg/L	Discharge Conc < TQL
Phenanthrene	2,488	µg/L	Discharge Conc ≤ 25% WQBEL
Pyrene	33,332	µg/L	Discharge Conc ≤ 25% WQBEL
1,2,4-Trichlorobenzene	117	µg/L	Discharge Conc ≤ 25% WQBEL
Aldrin	0.004	µg/L	Discharge Conc < TQL
alpha-BHC	1.96	µg/L	Discharge Conc ≤ 25% WQBEL
beta-BHC	39.2	µg/L	Discharge Conc ≤ 25% WQBEL
gamma-BHC	0.95	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.0003	µg/L	Discharge Conc < TQL
4,4-DDT	0.00003	µg/L	Discharge Conc < TQL
4,4-DDE	0.00002	µg/L	Discharge Conc < TQL
4,4-DDD	0.0001	µg/L	Discharge Conc < TQL
Dieldrin	0.000001	µg/L	Discharge Conc < TQL
alpha-Endosulfan	109	µg/L	Discharge Conc ≤ 25% WQBEL
beta-Endosulfan	109	µg/L	Discharge Conc ≤ 25% WQBEL
Endosulfan Sulfate	33,332	µg/L	Discharge Conc ≤ 25% WQBEL
Endrin	42.8	µg/L	Discharge Conc ≤ 25% WQBEL
Endrin Aldehyde	483	µg/L	Discharge Conc ≤ 25% WQBEL
Heptachlor	0.029	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.15	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
PCBs, Total	0.00006	µg/L	Discharge Conc < TQL
Toxaphene	0.0002	µg/L	Discharge Conc < TQL