

Application Type Renewal
Facility Type Sewage
Major / Minor Major

**NPDES PERMIT FACT SHEET
ADDENDUM No. 1**

Application No. PA0027057
APS ID 1033318
Authorization ID 1344918

Applicant and Facility Information

Applicant Name	<u>Williamsport Sanitary Authority</u>	Facility Name	<u>Central Plant</u>
Applicant Address	<u>253 W 4th Street</u> <u>Williamsport, PA 17701-6113</u>	Facility Address	<u>601 Jefferson Lane</u> <u>Williamsport, PA 17701-5340</u>
Applicant Contact	<u>Michael Miller</u>	Facility Contact	<u>Steven Benner</u>
Applicant Phone	<u>(570) 323-6148</u>	Facility Phone	<u>(570) 337-8588</u>
Client ID	<u>70278</u>	Site ID	<u>261565</u>
SIC Code	<u>4952</u>	Municipality	<u>City of Williamsport</u>
SIC Description	<u>Trans. & Utilities - Sewerage Systems</u>	County	<u>Lycoming</u>
Date Published in PA Bulletin	<u>December 11, 2021</u>	EPA Waived?	<u>No</u>
Comment Period End Date	<u>January 9, 2021</u>	If No, Reason	<u>Major Facility, Pretreatment, Significant CB Discharge</u>
Purpose of Application	<u>Renewal of an existing NPDES permit for discharge of treated sewage.</u>		

Internal Review and Recommendations

Comments/Responses

The Williamsport Sanitary Authority ("WSA") submitted comments dated December 22, 2021. The comments and DEP's responses are as follows:

- Comment: UPCM Plan, cover letter** - The cover letter indicates that "UPCM Plan Annual Reports are no longer required and that related water quality monitoring may be discontinued." Please confirm that this statement applies to both the WSA Central and West Plants, so that all monitoring and reporting can cease.

Response: DEP originally intended for WSA to cease water quality monitoring and the annual reporting associated with the UPCM Plan. However, to address comments submitted by the U.S. EPA regarding the new E. coli standards, DEP has proposed a three-year schedule under the LTCP Implementation Schedule condition Part C.IV.C.3. The three-year schedule will allow for WSA to develop and implement an E. coli sampling plan to verify compliance with the new seasonal standard. Upon end of the three-year development and implementation window, WSA will once again be required to conduct water quality monitoring and submit UPCM Plan Annual Reports.

Approve	Return	Deny	Signatures	Date
X			<i>Derek S. Garner</i> Derek S. Garner / Project Manager	February 4, 2022
X			<i>Nicholas W. Hartranft</i> Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	February 7, 2022
X			<i>Thomas M. Randis</i> Thomas M. Randis / Program Manager	February 7, 2022

Internal Review and Recommendations

2. **Comment: CBOD5, TSS, and TDS Monitoring Frequency, page 2** - The WSA requests reduced monitoring and reporting for effluent CBOD5 and TSS from one per day to the current five per week and for TDS from the one per day to the current one per week. The maximum reported monthly average CBOD5 concentration for 2019 to 2021 (excluding November and December 2021) has been <5 mg/L and for TSS the concentration has been < 6 mg/L. For the same time period the range of monthly average effluent TDS concentration has been 211 mg/L to 608 mg/L with an average of 322 mg/L. Based on the magnitude of the currently reported values, increased monitoring frequency does not seem justified. The current frequencies are adequate to characterize the effluent wastewater.

Response: DEP agrees that based on historic compliance the existing monitoring frequency of 5/week for CBOD5 and TSS and 1/week for TDS remains acceptable. Accordingly, the permit no longer proposes increases to 1/day for CBOD5, TSS, and TDS.

3. **Comment: Fecal Coliform Monitoring Frequency, pages 2 and 3** - The WSA requests reduced monitoring and reporting for effluent fecal coliforms for both periods October 1 - April 30 and May 1 - September 30 from one per day to the current two per week. Increasing the frequency of fecal coliform sampling will place an undue burden on the WSA to be required (based on our union agreement) to staff the laboratory seven days each week. In the event that the WSA is unable (due to absenteeism or staff shortage) to conduct daily fecal coliform testing or chooses to only use contract laboratory services, the closest contract laboratory was contacted to determine if they could accommodate the seven day a week testing schedule that is required due to the short fecal coliform holding time. They have indicated that they only staff their facility Monday through Friday and would not accommodate a seven day fecal coliform testing schedule, especially in this difficult employment atmosphere.

In addition, as indicated in the cover letter, the conclusions of the WSA UPCM plan have been accepted and no further monitoring is required. The report "continues to indicate average fecal coliform concentrations in the West Branch Susquehanna River generally well below baseline data collected from 2006 to 2013. Additionally, the West Branch Susquehanna River has no listed impairment for fecal coliform." This statement does not support the need to increase the frequency of fecal coliform monitoring.

Response: DEP does not view 2/week fecal coliform monitoring frequency as an appropriate frequency for a treatment plant and discharge the size and magnitude of WSA's Central Plant. However, to help satisfy WSA's concerns and to match other parameters in the permit DEP is no longer proposing a 1/day frequency and is instead proposing a 5/week frequency.

4. **Comment: Copper Monitoring Frequency, page 3** - The WSA requests that DEP use its permitting discretion to reduce the frequency from one per week to one per month since it is a monitor only parameter.

Response: DEP generally assigns a weekly monitoring frequency for newly established toxic pollutants to sewage discharges the magnitude of WSA's Central Plant. In this situation, it does not appear that a deviation from standard operating procedures is warranted.

5. **Comment: Zinc Monitoring Frequency, page 3** - The WSA requests that DEP use its permitting discretion to reduce the frequency from one per week to one per quarter since it is a monitor only parameter and the maximum percent of the Governing WQBEL is only 18%.

Response: DEP generally assigns a weekly monitoring frequency for newly established toxic pollutants to sewage discharges the magnitude of WSA's Central Plant. In this situation, it does not appear that a deviation from standard operating procedures is warranted.

6. **Comment: Butyl Benzyl Phthalate Limitations, page 3** - Eight sample results for this parameter were included in the permit application. Of those eight, seven were reported as non-detected. Since submission of the permit application, four additional samples have been collected and analyzed. All of these additional samples were reported as non-detected, with results below the DEP required target quantitation limit (see attachment). Only one of the twelve samples for this parameter, just over 8% and the first sample collected, had a detectable level of the pollutant. The WSA requests that the single detected sample be considered an outlier and not be used in the DEP Toxic Management Spreadsheet (TMS). If this sample was excluded, the TMS program would not return a monitoring or limitation result, removing this parameter from the draft permit.

Internal Review and Recommendations

Additionally, if it is not possible to exclude the outlier sample as requested above, the WSA requests that DEP reconsider the instantaneous maximum concentration limitation. The proposed instantaneous maximum concentration limitation in the draft permit is 2.7 µg/L, which is below the DEP-required target quantitation limit of 5.0 µg/L as listed in DEP's Permit Application Instructions "Target Quantitation Limits (QLs) for Effluent Analysis of Pollutant Groups, 8/2021". While some laboratories report MDLs lower than this target, the MDL varies significantly from laboratory to laboratory and can be affected by method interferences, making it very difficult to consistently and accurately test against the proposed limit.

The WSA requests that this parameter be removed from the draft permit. If not removed, the WSA requests that monitoring be reduced to quarterly with no limits imposed.

Response: Since WSA increased the sample size for butyl benzyl phthalate and provided DEP with the discrete sample results, it is appropriate to recalculate the average monthly effluent concentration and coefficient of variation using the statistical analysis outlined in the *EPA Technical Support Document (TSD) for Water Quality-based Toxics Control, Appendix E*. DEP does not view the January 2019 sample result as an outlier; accordingly, all sample results were entered into the TOXCONC spreadsheet (attached) and the revised average monthly effluent concentration and coefficient of variation were then entered into the revised TMS (attached). The TMS recommends establishing limits for butyl benzyl phthalate. However, DEP agrees with WSA that based on the sample results and limited timeframe in which the samples have been collected that a quarterly monitoring requirement is more appropriate. A quarterly monitoring report will allow WSA to collect more data throughout the permit term so that DEP can determine if the January 2019 sample result is truly an outlier or representative of the discharge.

7. **Comment: N-Nitrosodi-N-Propylamine Limitations, page 3** - Eight sample results for this parameter were included in the permit application. Of those eight, seven were reported as non-detected. Since submission of the permit application, four additional samples have been collected and analyzed. All of these additional samples were reported as non-detected, with results below the DEP required target quantitation limit (see attachment). Only one of the twelve samples for this parameter, just over 8% and the first sample collected, had a detectable level of the pollutant. The WSA requests that the single detected sample be considered an outlier and not used in the TMS. If this sample was excluded, the TMS program would not return a monitoring or limitation result, removing this parameter from the draft permit.

Additionally, if it is not possible to exclude the outlier sample as requested above, the WSA requests that DEP reconsider the instantaneous maximum concentration limitation. The proposed instantaneous maximum concentration limitation in the draft permit is 0.61 µg/L, which is an order of magnitude below the DEP-required target quantitation limit of 5.0 µg/L as listed in DEP's Permit Application Instructions "Target Quantitation Limits (QLs) for Effluent Analysis of Pollutant Groups, 8/2021". While some laboratories report MD Ls lower than this target, the MDL varies significantly from laboratory to laboratory and can be affected by method interferences, making it very difficult to consistently and accurately test against the proposed limit. To illustrate, seven of the eight non-detected sample results included in the permit application utilized a test method with an MDL that was 10% of the DEP-required quantitation limit. Even so, the WSA would have been in violation of the proposed monthly average mass limitation for 50% of the reported results if these sample results would have been utilized for compliance reporting as proposed in the draft permit. Further, seven non-detected sample results included in the permit application and all four sample results after the application was submitted would have yielded violations of the average concentration limitations proposed in the draft permit if these samples would have been utilized for compliance reporting.

The WSA requests that this parameter be removed from the draft permit. If not removed, the WSA requests that monitoring be reduced to quarterly with no limits imposed.

Response: Since WSA increased the sample size for n-nitrosodi-n-propylamine and provided DEP with the discrete sample results, it is appropriate to recalculate the average monthly effluent concentration and coefficient of variation using the statistical analysis outlined in the *EPA Technical Support Document (TSD) for Water Quality-based Toxics Control, Appendix E*. DEP does not view the January 2019 sample result as an outlier; accordingly, all sample results were entered into the TOXCONC spreadsheet (attached) and the revised average monthly effluent concentration and coefficient of variation were then entered into the revised TMS (attached). The TMS recommends establishing limits for n-nitrosodi-n-propylamine. However, DEP agrees with WSA that based on the sample results and limited timeframe in which the samples have been collected that a quarterly monitoring requirement is more appropriate. A quarterly monitoring report will allow WSA to collect more data throughout the permit term so that DEP can determine if the January 2019 sample result is truly an outlier or representative of the discharge.

Internal Review and Recommendations

8. **Comment:** Annual Fee, page 16 - Please clarify if the due date for the annual fee payment will be the permit effective date. Also, the existing permit states "Throughout a five year permit term, permittees will pay four annual fees followed by a permit renewal application fee in the last year of permit coverage." For WSA budgeting purposes, please confirm or clarify if this is the same schedule or if the WSA will be required to pay an annual fee and a permit renewal fee in the same year.

Response: Annual fees are due on the same date until the NPDES Permit is terminated. For existing Individual NPDES Permits, the due date for annual fees is based on the anniversary of the effective date of the latest new or renewed permit as of August 28, 2021. If a permit is renewed, amended, or transferred during the permit term, the due date does not change. Fees will be invoiced three months before the due date; however, the fee is due regardless of whether the invoice was received. NPDES Permit application renewal fees have been eliminated.

The U.S. EPA submitted comments dated December 21, 2021. The comments and DEP's responses are as follows:

1. **Comment:** We would like to note that EPA's review of the CSO portion of this permit reflects the recent understanding between the EPA Region III Water Director and PADEP Deputy Secretary for Water Programs regarding how to proceed with reissuance of permits with CSOs and LTCPs consistent with Section 402(q) of the CWA and EPA's 1994 CSO Policy. As you know, consistent with that understanding, PADEP has committed to making changes to its CSO program as noted in the June 9, 2020 letter to EPA and its April 15, 2020 memo (see attached). PADEP's memo documents its commitment to initiate the regulatory revisions process for modifying its compliance schedule regulations at 25 Pa. Code § 92a.51(a), so that schedules for LTCP implementation can be placed in an NPDES permit. PADEP will draft CSO permits using the template language agreed upon by PADEP and EPA. EPA notes that once PADEP's compliance schedule regulations are revised and final, the template language will need to be modified to incorporate a CSO compliance schedule that meets the requirements of 40 CFR 122.47 and includes the final compliance date for LTCP implementation. EPA's Phase 2 e-Reporting rule requires electronic reporting of Sewer Overflow/Bypass Events, and PADEP will need to make modifications to this template that will be necessary to address the requirements of the e-Reporting rule that is effective at the time that the permit is issued.

In addition, consistent with the understanding between EPA and PADEP, since PADEP's proposed seasonal E. coli standard became effective in March 2021, PADEP will begin to incorporate E. coli monitoring in subsequently reissued NPDES permits and ensure it is included in CSO post-construction compliance monitoring (PCCM) plans to verify compliance with water quality standards and designated uses. Consistent with the CSO Policy, EPA notes that there will also need to be a requirement added to implement a PCCM plan with an established schedule in NPDES permits once a facility begins to implement its approved plan.

Response: DEP has addressed E. coli in Response No. 2 below.

2. **Comment:** The draft factsheet indicates that the UPCM Plan Annual Reports are no longer required and related water quality monitoring may be discontinued due to the lack of an impairment designation for fecal coliform and the successful implementation of the CSO control measures. As discussed in the previous comment, PADEP's E. coli standard became effective in March 2021. E. coli monitoring should be included in the PCCM to verify compliance with the new seasonal standard.

Response: To address the new E. coli standards, DEP has proposed a three-year schedule under the LTCP Implementation Schedule condition Part C.IV.C.3. The three-year schedule will allow for WSA to develop and implement an E. coli monitoring plan to verify compliance with the new seasonal standard. Upon end of the three-year development/implementation window, WSA will once again be required to submit UPCM Plan Annual Reports.

3. **Comment:** The permit describes the design conditions as being "developed using National Oceanic and Atmospheric Administration (NOAA)'s Climatology of the United States No. 81, Monthly Station Normals of Temperature, Precipitation and Heating and Cooling Degree Days data as outlined in the LTCP", Part C.IV.C.2. Although the permit does include the statement referenced above, it is hard to determine the average conditions (such as the typical year rainfall) upon which the CSO controls were based. We would recommend the permit more clearly define the design conditions outlined in the LTCP.

Internal Review and Recommendations

Response: DEP believes the existing language at C.IV.C.2 is appropriate since it is taken directly from the approved LTCP.

No comments were received from the public. An internal review of the draft permit did not yield any comments.

Summary of Proposed Changes

A summary of changes based on WSA and U.S. EPA comments is as follows:

1. The monitoring frequencies for CBOD5, TSS, and TDS have been reverted to existing frequencies (5/week CBOD5 and TSS, 1/week TDS) from proposed increases to 1/day.
2. Fecal coliform has been decreased from the proposed 1/day frequency to 5/week. The 5/week frequency is an increase from the existing permit's requirement of 2/week.
3. Butyl benzyl phthalate and n-nitrosodi-n-propylamine effluent limits have been replaced with quarterly monitoring requirements in order to collect more data to determine if the January 2019 sample results are outliers or representative of the discharge. The revised modeling data is attached to this addendum.
4. A requirement to develop and implement E. coli sampling as part of the UPCM Plan within three years has been added to the proposed LTCP implementation schedule at Part C.IV.C.3.

Recommendation

Based on the above proposed changes to the draft permit, DEP recommends that the permit is redrafted and published again in the PA Bulletin.

Discharge Information

Instructions

Discharge

Stream

Facility: **WSA Central Plant**

NPDES Permit No.: **PA0027057**

Outfall No.: **001**

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

Wastewater Description: **Sewage**

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
8.4	101	7						

Discharge Pollutant	Units	Max Discharge Conc	0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
			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	468								
	Chloride (PWS)	mg/L	460								
	Bromide	mg/L	0.52								
	Sulfate (PWS)	mg/L	39								
	Fluoride (PWS)	µg/L	400								
Group 2	Total Aluminum	µg/L	24.7								
	Total Antimony	µg/L	0.48								
	Total Arsenic	µg/L	0.83								
	Total Barium	µg/L	35.9								
	Total Beryllium	µg/L	< 0.1								
	Total Boron	µg/L	150								
	Total Cadmium	µg/L	< 0.16								
	Total Chromium (III)	µg/L	1.39								
	Hexavalent Chromium	µg/L	0.063								
	Total Cobalt	µg/L	< 0.83								
	Total Copper	µg/L	6.8								
	Free Cyanide	µg/L	3.3								
	Total Cyanide	µg/L	5.3								
	Dissolved Iron	µg/L	79								
	Total Iron	µg/L	420								
	Total Lead	µg/L	< 2.4								
	Total Manganese	µg/L	103								
	Total Mercury	µg/L	< 0.2								
	Total Nickel	µg/L	4.4								
	Total Phenols (Phenolics) (PWS)	µg/L	5.4								
	Total Selenium	µg/L	< 3.8								
	Total Silver	µg/L	< 0.33								
Total Thallium	µg/L	< 0.16									
Total Zinc	µg/L	34									
Total Molybdenum	µg/L	1.6									
Acrolein	µg/L	< 2									
Acrylamide	µg/L	<									
Acrylonitrile	µg/L	< 2									
Benzene	µg/L	< 0.24									
Bromoform	µg/L	< 0.37									

Stream / Surface Water Information

WSA Central Plant, NPDES Permit No. PA0027057, Outfall 001

Instructions **Discharge** Stream

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

No. Reaches to Model: **1**

- Statewide Criteria
 Great Lakes Criteria
 ORSANCO Criteria

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi ²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	018668	38.3	497	5680			Yes
End of Reach 1	018668	10.66	436	6680			Yes

Q₇₋₁₀

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	38.3	0.1										100	7		
End of Reach 1	10.66	0.1													

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	38.3														
End of Reach 1	10.66														

Model Results

WSA Central Plant, NPDES Permit No. PA0027057, Outfall 001

Instructions

Results

RETURN TO INPUTS

SAVE AS PDF

PRINT

All

Inputs

Results

Limits

Hydrodynamics

Wasteload Allocations

AFC

CCT (min):

PMF:

Analysis Hardness (mg/l):

Analysis pH:

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	1,927	
Total Antimony	0	0		0	1,100	1,100	2,826	
Total Arsenic	0	0		0	340	340	874	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	53,954	
Total Boron	0	0		0	8,100	8,100	20,811	
Total Cadmium	0	0		0	2.021	2.14	5.5	Chem Translator of 0.944 applied
Total Chromium (III)	0	0		0	571.579	1,809	4,647	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	41.9	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	244	
Total Copper	0	0		0	13.488	14.1	36.1	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	56.5	
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	64.855	82.0	211	Chem Translator of 0.79 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	4.23	Chem Translator of 0.85 applied
Total Nickel	0	0		0	469.777	471	1,209	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	3.238	3.81	9.79	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	167	
Total Zinc	0	0		0	117.567	120	309	Chem Translator of 0.978 applied

Acrolein	0	0		0	3	3.0	7.71	
Acrylonitrile	0	0		0	650	650	1,670	
Benzene	0	0		0	640	640	1,644	
Bromoform	0	0		0	1,800	1,800	4,625	
Carbon Tetrachloride	0	0		0	2,800	2,800	7,194	
Chlorobenzene	0	0		0	1,200	1,200	3,083	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	46,246	
Chloroform	0	0		0	1,900	1,900	4,882	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	38,539	
1,1-Dichloroethylene	0	0		0	7,500	7,500	19,269	
1,2-Dichloropropane	0	0		0	11,000	11,000	28,262	
1,3-Dichloropropylene	0	0		0	310	310	796	
Ethylbenzene	0	0		0	2,900	2,900	7,451	
Methyl Bromide	0	0		0	550	550	1,413	
Methyl Chloride	0	0		0	28,000	28,000	71,939	
Methylene Chloride	0	0		0	12,000	12,000	30,831	
1,1,1,2-Tetrachloroethane	0	0		0	1,000	1,000	2,569	
Tetrachloroethylene	0	0		0	700	700	1,798	
Toluene	0	0		0	1,700	1,700	4,368	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	17,471	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	7,708	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	8,735	
Trichloroethylene	0	0		0	2,300	2,300	5,909	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	1,439	
2,4-Dichlorophenol	0	0		0	1,700	1,700	4,368	
2,4-Dimethylphenol	0	0		0	660	660	1,696	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	206	
2,4-Dinitrophenol	0	0		0	660	660	1,696	
2-Nitrophenol	0	0		0	8,000	8,000	20,554	
4-Nitrophenol	0	0		0	2,300	2,300	5,909	
p-Chloro-m-Cresol	0	0		0	160	160	411	
Pentachlorophenol	0	0		0	8.723	8.72	22.4	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	1,182	
Acenaphthene	0	0		0	83	83.0	213	
Anthracene	0	0		0	N/A	N/A	N/A	
Benidine	0	0		0	300	300	771	
Benzo(a)Anthracene	0	0		0	0.5	0.5	1.28	
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	77,077	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	11,562	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	694	

Butyl Benzyl Phthalate	0	0		0	140	140	360
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A
Chrysene	0	0		0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0		0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0		0	820	820	2,107
1,3-Dichlorobenzene	0	0		0	350	350	899
1,4-Dichlorobenzene	0	0		0	730	730	1,876
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A
Diethyl Phthalate	0	0		0	4,000	4,000	10,277
Dimethyl Phthalate	0	0		0	2,500	2,500	6,423
Di-n-Butyl Phthalate	0	0		0	110	110	283
2,4-Dinitrotoluene	0	0		0	1,600	1,600	4,111
2,6-Dinitrotoluene	0	0		0	990	990	2,544
1,2-Diphenylhydrazine	0	0		0	15	15.0	38.5
Fluoranthene	0	0		0	200	200	514
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	25.7
Hexachlorocyclopentadiene	0	0		0	5	5.0	12.8
Hexachloroethane	0	0		0	60	60.0	154
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A
Isophorone	0	0		0	10,000	10,000	25,692
Naphthalene	0	0		0	140	140	360
Nitrobenzene	0	0		0	4,000	4,000	10,277
n-Nitrosodimethylamine	0	0		0	17,000	17,000	43,677
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A
n-Nitrosodiphenylamine	0	0		0	300	300	771
Phenanthrene	0	0		0	5	5.0	12.8
Pyrene	0	0		0	N/A	N/A	N/A
1,2,4-Trichlorobenzene	0	0		0	130	130	334
Aldrin	0	0		0	3	3.0	7.71
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	2.44
Chlordane	0	0		0	2.4	2.4	6.17
4,4-DDT	0	0		0	1.1	1.1	2.83
4,4-DDE	0	0		0	1.1	1.1	2.83
4,4-DDD	0	0		0	1.1	1.1	2.83
Dieldrin	0	0		0	0.24	0.24	0.62
alpha-Endosulfan	0	0		0	0.22	0.22	0.57
beta-Endosulfan	0	0		0	0.22	0.22	0.57
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A
Endrin	0	0		0	0.086	0.086	0.22
Endrin Aldehyde	0	0		0	N/A	N/A	N/A
Heptachlor	0	0		0	0.52	0.52	1.34
Heptachlor Epoxide	0	0		0	0.5	0.5	1.28
Toxaphene	0	0		0	0.73	0.73	1.88
Total Strontium	0	0		0	N/A	N/A	N/A

CFC

 CCT (min):

 PMF:

 Analysis Hardness (mg/l):

 Analysis pH:

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	2,612	
Total Arsenic	0	0		0	150	150	1,781	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	48,676	
Total Boron	0	0		0	1,600	1,600	18,995	
Total Cadmium	0	0		0	0.246	0.27	3.21	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.166	86.2	1,024	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	123	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	226	
Total Copper	0	0		0	8.962	9.34	111	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	61.7	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	67,065	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.519	3.19	37.8	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	10.8	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.044	52.2	620	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	59.2	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	154	
Total Zinc	0	0		0	118.223	120	1,423	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	35.6	
Acrylonitrile	0	0		0	130	130	1,543	
Benzene	0	0		0	130	130	1,543	
Bromoform	0	0		0	370	370	4,393	
Carbon Tetrachloride	0	0		0	560	560	6,648	
Chlorobenzene	0	0		0	240	240	2,849	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	41,552	
Chloroform	0	0		0	390	390	4,630	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	36,803	
1,1-Dichloroethylene	0	0		0	1,500	1,500	17,808	
1,2-Dichloropropane	0	0		0	2,200	2,200	26,119	
1,3-Dichloropropylene	0	0		0	61	61.0	724	

Ethylbenzene	0	0		0	580	580	6,886
Methyl Bromide	0	0		0	110	110	1,306
Methyl Chloride	0	0		0	5,500	5,500	65,296
Methylene Chloride	0	0		0	2,400	2,400	28,493
1,1,2,2-Tetrachloroethane	0	0		0	210	210	2,493
Tetrachloroethylene	0	0		0	140	140	1,662
Toluene	0	0		0	330	330	3,918
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	16,621
1,1,1-Trichloroethane	0	0		0	610	610	7,242
1,1,2-Trichloroethane	0	0		0	680	680	8,073
Trichloroethylene	0	0		0	450	450	5,342
Vinyl Chloride	0	0		0	N/A	N/A	N/A
2-Chlorophenol	0	0		0	110	110	1,306
2,4-Dichlorophenol	0	0		0	340	340	4,037
2,4-Dimethylphenol	0	0		0	130	130	1,543
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	190
2,4-Dinitrophenol	0	0		0	130	130	1,543
2-Nitrophenol	0	0		0	1,600	1,600	18,995
4-Nitrophenol	0	0		0	470	470	5,580
p-Chloro-m-Cresol	0	0		0	500	500	5,936
Pentachlorophenol	0	0		0	6.693	6.69	79.5
Phenol	0	0		0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0		0	91	91.0	1,080
Acenaphthene	0	0		0	17	17.0	202
Anthracene	0	0		0	N/A	N/A	N/A
Benzidine	0	0		0	59	59.0	700
Benzo(a)Anthracene	0	0		0	0.1	0.1	1.19
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	71,232
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	10,804
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	641
Butyl Benzyl Phthalate	0	0		0	35	35.0	416
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A
Chrysene	0	0		0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0		0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0		0	160	160	1,900
1,3-Dichlorobenzene	0	0		0	69	69.0	819
1,4-Dichlorobenzene	0	0		0	150	150	1,781
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A
Diethyl Phthalate	0	0		0	800	800	9,498
Dimethyl Phthalate	0	0		0	500	500	5,936
Di-n-Butyl Phthalate	0	0		0	21	21.0	249

2,4-Dinitrotoluene	0	0		0	320	320	3,799	
2,6-Dinitrotoluene	0	0		0	200	200	2,374	
1,2-Diphenylhydrazine	0	0		0	3	3.0	35.6	
Fluoranthene	0	0		0	40	40.0	475	
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	23.7	
Hexachlorocyclopentadiene	0	0		0	1	1.0	11.9	
Hexachloroethane	0	0		0	12	12.0	142	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	24,931	
Naphthalene	0	0		0	43	43.0	510	
Nitrobenzene	0	0		0	810	810	9,616	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	40,365	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	700	
Phenanthrene	0	0		0	1	1.0	11.9	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	309	
Aldrin	0	0		0	0.1	0.1	1.19	
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	0.051	
4,4-DDT	0	0		0	0.001	0.001	0.012	
4,4-DDE	0	0		0	0.001	0.001	0.012	
4,4-DDD	0	0		0	0.001	0.001	0.012	
Dieldrin	0	0		0	0.056	0.056	0.66	
alpha-Endosulfan	0	0		0	0.056	0.056	0.66	
beta-Endosulfan	0	0		0	0.056	0.056	0.66	
Endosulfan Sulfate	0	0		0	N/A	N/A	N/A	
Endrin	0	0		0	0.036	0.036	0.43	
Endrin Aldehyde	0	0		0	N/A	N/A	N/A	
Heptachlor	0	0		0	0.0038	0.004	0.045	
Heptachlor Epoxide	0	0		0	0.0038	0.004	0.045	
Toxaphene	0	0		0	0.0002	0.0002	0.002	
Total Strontium	0	0		0	N/A	N/A	N/A	

 THH

 CCT (min):

 PMF:

 Analysis Hardness (mg/l):

 Analysis pH:

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	66.5
Total Arsenic	0	0		0	10	10.0	119
Total Barium	0	0		0	2,400	2,400	28,493
Total Boron	0	0		0	3,100	3,100	36,803
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
Free Cyanide	0	0		0	4	4.0	47.5
Dissolved Iron	0	0		0	300	300	3,562
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	11,872
Total Mercury	0	0		0	0.050	0.05	0.59
Total Nickel	0	0		0	610	610	7,242
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	2.85
Total Zinc	0	0		0	N/A	N/A	N/A
Acrolein	0	0		0	3	3.0	35.6
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	1,187
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	392
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	807
Methyl Bromide	0	0		0	100	100.0	1,187
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	677
1,2-trans-Dichloroethylene	0	0		0	100	100.0	1,187

1,1,1-Trichloroethane	0	0		0	10,000	10,000	118,721
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	356
2,4-Dichlorophenol	0	0		0	10	10.0	119
2,4-Dimethylphenol	0	0		0	100	100.0	1,187
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	23.7
2,4-Dinitrophenol	0	0		0	10	10.0	119
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	47,488
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A
Acenaphthene	0	0		0	70	70.0	831
Anthracene	0	0		0	300	300	3,562
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	2,374
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	1.19
2-Chloronaphthalene	0	0		0	800	800	9,498
Chrysene	0	0		0	N/A	N/A	N/A
Dibenzo(a,h)Anthracene	0	0		0	N/A	N/A	N/A
1,2-Dichlorobenzene	0	0		0	1,000	1,000	11,872
1,3-Dichlorobenzene	0	0		0	7	7.0	83.1
1,4-Dichlorobenzene	0	0		0	300	300	3,562
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A
Diethyl Phthalate	0	0		0	600	600	7,123
Dimethyl Phthalate	0	0		0	2,000	2,000	23,744
Di-n-Butyl Phthalate	0	0		0	20	20.0	237
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	237
Fluorene	0	0		0	50	50.0	594
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	47.5

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	404	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	119	
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	237	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.83	
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	49.9	
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	237	
beta-Endosulfan	0	0		0	20	20.0	237	
Endosulfan Sulfate	0	0		0	20	20.0	237	
Endrin	0	0		0	0.03	0.03	0.36	
Endrin Aldehyde	0	0		0	1	1.0	11.9	
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	
Total Strontium	0	0		0	4,000	4,000	47,488	

 CRL

 CCT (min):

 PMF:

 Analysis Hardness (mg/l):

 Analysis pH:

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
Free Cyanide	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	3.24
Benzene	0	0		0	0.58	0.58	31.3
Bromoform	0	0		0	7	7.0	378
Carbon Tetrachloride	0	0		0	0.4	0.4	21.6
Chlorobenzene	0	0		0	N/A	N/A	N/A
Chlorodibromomethane	0	0		0	0.8	0.8	43.2
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A
Chloroform	0	0		0	5.7	5.7	308
Dichlorobromomethane	0	0		0	0.95	0.95	51.3
1,2-Dichloroethane	0	0		0	9.9	9.9	534
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A
1,2-Dichloropropane	0	0		0	0.9	0.9	48.6
1,3-Dichloropropylene	0	0		0	0.27	0.27	14.6
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	1,079
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	10.8
Tetrachloroethylene	0	0		0	10	10.0	540
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	29.7
Trichloroethylene	0	0		0	0.6	0.6	32.4
Vinyl Chloride	0	0		0	0.02	0.02	1.08
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	1.62
Phenol	0	0		0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	81.0
Acenaphthene	0	0		0	N/A	N/A	N/A
Anthracene	0	0		0	N/A	N/A	N/A
Benzdine	0	0		0	0.0001	0.0001	0.005
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.054
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.005
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.054
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.54
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	1.62
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	17.3
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	6.48
Dibenzo(a,h)Anthracene	0	0		0	0.0001	0.0001	0.005
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	2.7
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	2.7
2,6-Dinitrotoluene	0	0		0	0.05	0.05	2.7
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	1.62
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	0.004
Hexachlorobutadiene	0	0		0	0.01	0.01	0.54
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A
Hexachloroethane	0	0		0	0.1	0.1	5.4
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.054
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	0.038
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.27
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	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	0.00004	
alpha-BHC	0	0		0	0.0004	0.0004	0.022	
beta-BHC	0	0		0	0.008	0.008	0.43	
gamma-BHC	0	0		0	N/A	N/A	N/A	
Chlordane	0	0		0	0.0003	0.0003	0.016	
4,4-DDT	0	0		0	0.00003	0.00003	0.002	
4,4-DDE	0	0		0	0.00002	0.00002	0.001	
4,4-DDD	0	0		0	0.0001	0.0001	0.005	
Dieldrin	0	0		0	0.000001	0.000001	0.00005	
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	0.0003	
Heptachlor Epoxide	0	0		0	0.00003	0.00003	0.002	
Toxaphene	0	0		0	0.0007	0.0007	0.038	
Total Strontium	0	0		0	N/A	N/A	N/A	

Recommended WQBELs & Monitoring Requirements

No. Samples/Month: 4

Pollutants	Mass Limits		Concentration Limits				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			
Total Copper	Report	Report	Report	Report	Report	µg/L	23.1	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	198	AFC	Discharge Conc > 10% WQBEL (no RP)
Butyl Benzyl Phthalate	0.083	0.12	1.19	1.66	2.97	µg/L	1.19	THH	Discharge Conc ≥ 50% WQBEL (RP)
n-Nitrosodi-n-Propylamine	0.019	0.026	0.27	0.37	0.67	µg/L	0.27	CRL	Discharge Conc ≥ 50% WQBEL (RP)

Other Pollutants without Limits or Monitoring

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Fluoride (PWS)	N/A	N/A	PWS Not Applicable

Total Aluminum	1,235	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	66.5	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	119	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	28,493	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	13,339	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	3.21	µg/L	Discharge Conc < TQL
Total Chromium (III)	1,024	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	26.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	156	µg/L	Discharge Conc < TQL
Free Cyanide	36.2	µg/L	Discharge Conc ≤ 25% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	3,562	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	67,065	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	37.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Manganese	11,872	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.59	µg/L	Discharge Conc < TQL
Total Nickel	620	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	59.2	µg/L	Discharge Conc < TQL
Total Silver	6.27	µg/L	Discharge Conc < TQL
Total Thallium	2.85	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	4.94	µg/L	Discharge Conc < TQL
Acrylonitrile	3.24	µg/L	Discharge Conc < TQL
Benzene	31.3	µg/L	Discharge Conc < TQL
Bromoform	378	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	21.6	µg/L	Discharge Conc < TQL
Chlorobenzene	1,187	µg/L	Discharge Conc < TQL
Chlorodibromomethane	43.2	µg/L	Discharge Conc ≤ 25% WQBEL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	29,642	µg/L	Discharge Conc < TQL
Chloroform	308	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	51.3	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	534	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	392	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	48.6	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	14.6	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	807	µg/L	Discharge Conc < TQL
Methyl Bromide	906	µg/L	Discharge Conc < TQL
Methyl Chloride	46,110	µg/L	Discharge Conc ≤ 25% WQBEL
Methylene Chloride	1,079	µg/L	Discharge Conc ≤ 25% WQBEL
1,1,2,2-Tetrachloroethane	10.8	µg/L	Discharge Conc < TQL

Tetrachloroethylene	540	µg/L	Discharge Conc < TQL
Toluene	677	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	1,187	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	4,940	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	29.7	µg/L	Discharge Conc < TQL
Trichloroethylene	32.4	µg/L	Discharge Conc < TQL
Vinyl Chloride	1.08	µg/L	Discharge Conc < TQL
2-Chlorophenol	356	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	119	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	1,087	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	23.7	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	119	µg/L	Discharge Conc < TQL
2-Nitrophenol	13,174	µg/L	Discharge Conc < TQL
4-Nitrophenol	3,788	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	263	µg/L	Discharge Conc < TQL
Pentachlorophenol	1.62	µg/L	Discharge Conc < TQL
Phenol	47,488	µg/L	Discharge Conc ≤ 25% WQBEL
2,4,6-Trichlorophenol	81.0	µg/L	Discharge Conc ≤ 25% WQBEL
Acenaphthene	137	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	3,562	µg/L	Discharge Conc < TQL
Benzidine	0.005	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.054	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.005	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.054	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.54	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	1.62	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	2,374	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	17.3	µg/L	Discharge Conc ≤ 25% WQBEL
4-Bromophenyl Phenyl Ether	445	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	9,498	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	6.48	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthracene	0.005	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	1,350	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	83.1	µg/L	Discharge Conc < TQL
1,4-Dichlorobenzene	1,202	µg/L	Discharge Conc < TQL
3,3-Dichlorobenzidine	2.7	µg/L	Discharge Conc < TQL
Diethyl Phthalate	6,587	µg/L	Discharge Conc ≤ 25% WQBEL
Dimethyl Phthalate	4,117	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	181	µg/L	Discharge Conc ≤ 25% WQBEL
2,4-Dinitrotoluene	2.7	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	2.7	µg/L	Discharge Conc < TQL

Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	1.62	µg/L	Discharge Conc < TQL
Fluoranthene	237	µg/L	Discharge Conc < TQL
Fluorene	594	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.004	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.54	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	8.23	µg/L	Discharge Conc < TQL
Hexachloroethane	5.4	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.054	µg/L	Discharge Conc < TQL
Isophorone	404	µg/L	Discharge Conc < TQL
Naphthalene	231	µg/L	Discharge Conc < TQL
Nitrobenzene	119	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.038	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	178	µg/L	Discharge Conc < TQL
Phenanthrene	8.23	µg/L	Discharge Conc < TQL
Pyrene	237	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.83	µg/L	Discharge Conc < TQL
Aldrin	0.00004	µg/L	Discharge Conc < TQL
alpha-BHC	0.022	µg/L	Discharge Conc < TQL
beta-BHC	0.43	µg/L	Discharge Conc < TQL
gamma-BHC	1.56	µg/L	Discharge Conc < TQL
delta BHC	N/A	N/A	No WQS
Chlordane	0.016	µg/L	Discharge Conc < TQL
4,4-DDT	0.002	µg/L	Discharge Conc < TQL
4,4-DDE	0.001	µg/L	Discharge Conc < TQL
4,4-DDD	0.005	µg/L	Discharge Conc < TQL
Dieldrin	0.00005	µg/L	Discharge Conc < TQL
alpha-Endosulfan	0.36	µg/L	Discharge Conc < TQL
beta-Endosulfan	0.36	µg/L	Discharge Conc < TQL
Endosulfan Sulfate	237	µg/L	Discharge Conc < TQL
Endrin	0.14	µg/L	Discharge Conc < TQL
Endrin Aldehyde	11.9	µg/L	Discharge Conc < TQL
Heptachlor	0.0003	µg/L	Discharge Conc < TQL
Heptachlor Epoxide	0.002	µg/L	Discharge Conc < TQL
Toxaphene	0.002	µg/L	Discharge Conc < TQL
Gross Alpha	N/A	N/A	No WQS
Total Beta	N/A	N/A	No WQS
Radium 226/228	N/A	N/A	No WQS
Total Strontium	47,488	µg/L	Discharge Conc ≤ 10% WQBEL
Total Uranium	N/A	N/A	No WQS