

Application Type Renewal
Facility Type Municipal
Major / Minor Major

**NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE**

Application No. PA0026328
APS ID 736726
Authorization ID 1210097

Applicant and Facility Information

Applicant Name	<u>Hopewell Township</u>	Facility Name	<u>Raccoon Creek STP</u>
Applicant Address	<u>1700 Clark Boulevard</u> <u>Aliquippa, PA 15001-4205</u>	Facility Address	<u>103 Pollack Lane</u> <u>Aliquippa, PA 15001</u>
Applicant Contact	<u>Harry Thompson</u>	Facility Contact	<u></u>
Applicant Phone	<u>(724) 378-4875</u>	Facility Phone	<u></u>
Client ID	<u>110590</u>	Site ID	<u>237440</u>
Ch 94 Load Status	<u>Not Overloaded</u>	Municipality	<u>Hopewell Township</u>
Connection Status	<u>No Limitations</u>	County	<u>Beaver</u>
Date Application Received	<u>November 1, 2017</u>	EPA Waived?	<u>No</u>
Date Application Accepted	<u>December 13, 2017</u>	If No, Reason	<u>Major Facility</u>
Purpose of Application	<u>Renewal application to discharge treated sewage</u>		

Summary of Review

This review is in response to a renewal application received on November 1, 2017. Hopewell Township owns and operates the Raccoon Creek Sewage Treatment Plant in Hopewell Township, Beaver County. Sewage from Hopewell Township is collected and treated with activated sludge and sequencing batch reactors, settling and chlorination before discharging to Raccoon Creek through outfall 011.

Public Participation

DEP will publish notice of the receipt of the NPDES permit application and a tentative decision to issue the individual NPDES permit in the *Pennsylvania Bulletin* in accordance with 25 Pa. Code § 92a.82. Upon publication in the *Pennsylvania Bulletin*, DEP will accept written comments from interested persons for a 30-day period (which may be extended for one additional 15-day period at DEP's discretion), which will be considered in making a final decision on the application. Any person may request or petition for a public hearing with respect to the application. A public hearing may be held if DEP determines that there is significant public interest in holding a hearing. If a hearing is held, notice of the hearing will be published in the *Pennsylvania Bulletin* at least 30 days prior to the hearing and in at least one newspaper of general circulation within the geographical area of the discharge.

Approve	Deny	Signatures	Date
X		James M. Vanek James M. Vanek, P.E. / Environmental Engineer	February 9, 2021
X		Donald J. Leone Donald J. Leone, P.E. / Environmental Engineer Manager	February 10, 2021

Discharge, Receiving Waters and Water Supply Information

Outfall No.	<u>011</u>	Design Flow (MGD)	<u>2.5</u>
Latitude	<u>40° 36' 24.84"</u>	Longitude	<u>80° 18' 6.48"</u>
Quad Name	<u>Aliquippa</u>	Quad Code	<u>1403</u>
Wastewater Description: <u>Sewage Effluent</u>			

Receiving Waters	<u>Raccoon Creek (WWF)</u>	Stream Code	<u>33564</u>
NHD Com ID	<u>99681726</u>	RMI	<u>11.14</u>
Drainage Area	<u>172 mi²</u>	Yield (cfs/mi ²)	<u>0.034</u>
Q ₇₋₁₀ Flow (cfs)	<u>5.85</u>	Q ₇₋₁₀ Basis	<u>Previous pollution report</u>
Elevation (ft)	<u>760</u>	Slope (ft/ft)	<u>0.0012</u>
Watershed No.	<u>20-D</u>	Chapter 93 Class.	<u>WWF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u>none</u>	Exceptions to Criteria	<u>none</u>
Assessment Status	<u>Attaining Use(s)</u>		

Cause(s) of Impairment

Source(s) of Impairment

TMDL Status Final Name Raccoon Creek Watershed

Background/Ambient Data	Data Source
pH (SU)	<u></u>
Temperature (°F)	<u></u>
Hardness (mg/L)	<u></u>
Other:	<u></u>

Nearest Downstream Public Water Supply Intake	<u>Midland Borough</u>
PWS Waters	<u>Ohio River</u>
PWS RMI	<u></u>
Flow at Intake (cfs)	<u>5400</u>
Distance from Outfall (mi)	<u>16</u>

Changes Since Last Permit Issuance: none

Other Comments:

Discharge, Receiving Waters and Water Supply Information

Outfall No.	<u>012</u>	Design Flow (MGD)	<u>0</u>
Latitude	<u>40° 36' 32.04"</u>	Longitude	<u>-80° 18' 21.41"</u>
Quad Name	_____	Quad Code	<u>1403</u>
Wastewater Description: <u>Storm water</u>			

Receiving Waters	<u>Raccoon Creek (WWF)</u>	Stream Code	<u>33564</u>
NHD Com ID	<u>99681726</u>	RMI	_____
Drainage Area	_____	Yield (cfs/mi ²)	_____
Q ₇₋₁₀ Flow (cfs)	_____	Q ₇₋₁₀ Basis	_____
Elevation (ft)	_____	Slope (ft/ft)	_____
Watershed No.	<u>20-D</u>	Chapter 93 Class.	<u>WWF</u>
Existing Use	_____	Existing Use Qualifier	_____
Exceptions to Use	_____	Exceptions to Criteria	_____
Assessment Status	<u>Attaining Use(s)</u>		
Cause(s) of Impairment	_____		
Source(s) of Impairment	_____		
TMDL Status	<u>Final</u>	Name	<u>Raccoon Creek Watershed</u>

Background/Ambient Data	Data Source
pH (SU)	_____
Temperature (°F)	_____
Hardness (mg/L)	_____
Other:	_____

Nearest Downstream Public Water Supply Intake	
PWS Waters	_____
PWS RMI	_____
Flow at Intake (cfs)	_____
Distance from Outfall (mi)	_____

Changes Since Last Permit Issuance:

Other Comments:

Discharge, Receiving Waters and Water Supply Information

Outfall No.	<u>013</u>	Design Flow (MGD)	<u>0</u>
Latitude	<u>40° 36' 24.84"</u>	Longitude	<u>-80° 18' 6.48"</u>
Quad Name	<u>Aliquippa</u>	Quad Code	<u>1403</u>
Wastewater Description: <u>Storm water</u>			

Receiving Waters	<u>Raccoon Creek (WWF)</u>	Stream Code	<u>33564</u>
NHD Com ID	<u>99681726</u>	RMI	<u></u>
Drainage Area	<u></u>	Yield (cfs/mi ²)	<u></u>
Q ₇₋₁₀ Flow (cfs)	<u></u>	Q ₇₋₁₀ Basis	<u></u>
Elevation (ft)	<u></u>	Slope (ft/ft)	<u></u>
Watershed No.	<u>20-D</u>	Chapter 93 Class.	<u>WWF</u>
Existing Use	<u></u>	Existing Use Qualifier	<u></u>
Exceptions to Use	<u></u>	Exceptions to Criteria	<u></u>
Assessment Status	<u>Attaining Use(s)</u>		
Cause(s) of Impairment	<u></u>		
Source(s) of Impairment	<u></u>		
TMDL Status	<u>Final</u>	Name	<u>Raccoon Creek Watershed</u>

Background/Ambient Data	Data Source
pH (SU)	<u></u>
Temperature (°F)	<u></u>
Hardness (mg/L)	<u></u>
Other:	<u></u>

Nearest Downstream Public Water Supply Intake	
PWS Waters	<u></u> Flow at Intake (cfs) <u></u>
PWS RMI	<u></u> Distance from Outfall (mi) <u></u>

Changes Since Last Permit Issuance:

Other Comments:

Treatment Facility Summary				
Treatment Facility Name: Raccoon Creek STP				
WQM Permit No.		Issuance Date		
0471408		6/2/1971		
0471408 A-2		10/16/2002		
0407402		3/6/2008		
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary with NH ₃ N Reduction	Activated Sludge	Chlorine gas	1.23
Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
2.5	4250	Not Overloaded	Aerobic Digestion	Landfill

Changes Since Last Permit Issuance:

Other Comments:

Compliance History

DMR Data for Outfall 011 (from July 1, 2019 to June 30, 2020)

Parameter	JUN-20	MAY-20	APR-20	MAR-20	FEB-20	JAN-20	DEC-19	NOV-19	OCT-19	SEP-19	AUG-19	JUL-19
Flow (MGD) Average Monthly	0.84	1.21	1.87	2.66	2.16	2.05	1.76	1.38	1.35	1.20	0.91	1.75
Flow (MGD) Daily Maximum	1.05	2.82	5.03	10.6	5.1	4.80	3.51	2.88	6.85	5.81	1.46	6.84
pH (S.U.) Minimum	6.68	6.66	6.73	6.75	6.98	6.69	6.73	6.71	6.66	6.65	6.78	6.62
pH (S.U.) Maximum	6.95	6.95	7.08	6.97	6.72	6.81	7.11	7.01	6.92	6.99	6.90	6.98
DO (mg/L) Minimum	5.7	5.5	6.7	6.3	7.4	6.2	6.4	5.6	5.7	5.7	5.3	5.5
TRC (mg/L) Average Monthly	0.174	0.193	0.173	0.181	0.182	0.087	0.156	0.176	0.169	0.203	0.190	0.157
TRC (mg/L) Instantaneous Maximum	0.28	0.28	0.29	0.29	0.28	0.16	0.28	0.27	0.29	0.28	0.28	0.26
CBOD5 (lbs/day) Average Monthly	18	26	36	42	52	35	51	30	29	18	18	29
CBOD5 (lbs/day) Weekly Average	21	32	44	68	107	46	70	34	55	28	22	49
CBOD5 (mg/L) Average Monthly	2	3	2	3	3	2	3	3	3	2	2.0	2.0
CBOD5 (mg/L) Weekly Average	3.0	3.0	2	4	3	3	4	3	4.0	2.0	3.0	3.0
BOD5 (lbs/day) Raw Sewage Influent Average Monthly	1246	1320	1601	1407	1184	1032	1470	1342	1194	1099	1446	973
BOD5 (lbs/day) Raw Sewage Influent Daily Maximum	1672	1839	2709	2060	4846	1576	5006	1797	2381	1374	1821	1597
BOD5 (mg/L) Raw Sewage Influent Average Monthly	176	142	106.3	95	51.8	77	79	126	129	140	185	79.64
TSS (lbs/day) Average Monthly	14	20	31	40	44	29	48	24	28	18	17	30

**NPDES Permit Fact Sheet
Raccoon Creek STP**

NPDES Permit No. PA0026328

TSS (lbs/day) Raw Sewage Influent Average Monthly	1363	1398	1832	1451	1523	1167	1815	1557	1482	1290	1651	1630
TSS (lbs/day) Raw Sewage Influent Daily Maximum	2004	1673	3370	2774	2088	1417	6557	2507	2966	1491	2094	3251
TSS (lbs/day) Weekly Average	16	24	38	50	95	37	72	31	56	29	20	60
TSS (mg/L) Average Monthly	2	2	2	2	2	2	3	2	3	2	2	2
TSS (mg/L) Raw Sewage Influent Average Monthly	191	147	122	101	108	87	96	144	156	162	210	135
TSS (mg/L) Weekly Average	2	2	2	3	3	3	4	2	4	2	3	3
Fecal Coliform (CFU/100 ml) Geometric Mean	29	24	39	24	48	75	36	35	36	21	38	48
Fecal Coliform (CFU/100 ml) Instantaneous Maximum	59	64	120	120	130	140	110	110	69	46	67	97
Ammonia (lbs/day) Average Monthly	2	2	5	5	8	5	5	6	3	2	2	2
Ammonia (lbs/day) Weekly Average	6	4	12	13	12	9	12	15	6	2	5	3
Ammonia (mg/L) Average Monthly	0.264	0.252	0.308	0.296	1	0.360	0.316	1	0.285	0.237	0.241	0.195
Ammonia (mg/L) Weekly Average	1	0.496	1	1	1	0.613	0.541	1	0.478	0.485	0.456	0.356

Development of Effluent Limitations

Outfall No. 011
 Latitude 40° 36' 26.00"
 Wastewater Description: Sewage Effluent

Design Flow (MGD) 2.5
 Longitude -80° 18' 10.00"

Technology-Based Limitations

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

Pollutant	Limit (mg/l)	SBC	Federal Regulation	State Regulation
CBOD ₅	25	Average Monthly	133.102(a)(4)(i)	92a.47(a)(1)
	40	Average Weekly	133.102(a)(4)(ii)	92a.47(a)(2)
Total Suspended Solids	30	Average Monthly	133.102(b)(1)	92a.47(a)(1)
	45	Average Weekly	133.102(b)(2)	92a.47(a)(2)
pH	6.0 – 9.0 S.U.	Min – Max	133.102(c)	95.2(1)
Fecal Coliform (5/1 – 9/30)	200 / 100 ml	Geo Mean	-	92a.47(a)(4)
Fecal Coliform (5/1 – 9/30)	1,000 / 100 ml	IMAX	-	92a.47(a)(4)
Fecal Coliform (10/1 – 4/30)	2,000 / 100 ml	Geo Mean	-	92a.47(a)(5)
Fecal Coliform (10/1 – 4/30)	10,000 / 100 ml	IMAX	-	92a.47(a)(5)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments:

Water Quality-Based Limitations

The following limitations were determined through water quality modeling (output files attached):

Parameter	Limit (mg/l)	SBC	Model
Copper, total	M/R	Average Monthly	Toxics Management Spreadsheet
Free Available Cyanide	M/R	Average Monthly	Toxics Management Spreadsheet
NH ₃ N	4.0	Average Monthly	WQM7.0
CBOD ₅	15.0	Average Monthly	WQM7.0
Dissolved oxygen	5.0	Instantaneous Min	WQM7.0
Total Residual Chlorine	0.311	Average Monthly	TRC Spreadsheet

The discharge was modeled using WQM 7.0 to evaluate the CBOD₅, Ammonia Nitrogen and Dissolved Oxygen parameters. The results are attached to this fact sheet. The modeling results require CBOD₅ limitations that more stringent than technology to meet the streams dissolved oxygen criterion. The modeling results also confirm that Ammonia-Nitrogen and Dissolved Oxygen limitations are necessary to meet in-stream water quality criterion.

The Toxics Management Spreadsheet was used to evaluate the need for water quality-based limits for toxic pollutants. The effluent data included with the renewal application were set as discharge concentrations for the Toxics Management Spreadsheet. The model calculates water quality-based effluent limits and compares those WQBEL's to the discharge concentrations. If the discharge concentration is greater than or equal to 50% of the WQBEL, the numeric WQBEL will be placed into the permit. For conservative pollutants, the model recommends monitoring if the discharge concentration is greater than 10% of the recommended WQBEL. For non-conservative pollutants, the model recommends monitoring if the discharge concentration is greater than 25% of the WQBEL. For this sewage plant, the model recommends monitoring for free available cyanide and total copper. Free available cyanide is a non-conservative pollutant. The reported discharge concentration of 5.2 is greater than 25% of the WQBEL of 13.1 ug/l. Total copper is a conservative pollutant. The discharge concentration of 27 ug/l is greater than 10% of the WQBEL of 134 ug/l.

Best Professional Judgment (BPJ) Limitations

The BPJ limit of 4.0 mg/l for dissolved oxygen was less stringent than the water quality based limit of 5.0 mg/l.

Anti-Backsliding

The average weekly limits for NH₃N will remain in the permit due to anti-backsliding.

Disinfection

The Average Monthly and Instantaneous Maximum Total Residual Chlorine (TRC) effluent limitations imposed in the previous NPDES permit were 0.311 mg/l and 0.5 mg/l, respectively. Those water quality-based values were considered BAT limitations for the TRC spreadsheet because the plant has shown the capability of achieving the limit throughout the permit cycle. The limit of 0.311 mg/l is more restrictive than the recommended water quality-based effluent limit of 0.4 mg/l. The technology limit of 0.311 will remain in the permit.

Mass Loadings

Mass loading limits are applicable for publicly owned treatment works. Current policy requires average monthly mass loading limits be established for CBOD₅ and TSS, and average weekly mass loading limits be established for CBOD₅ and TSS.

Average monthly mass loading limits (lbs/day) are based on the formula: design flow (MGD) x concentration limit (mg/L) x conversion factor (8.34).

Total Dissolved Solids (TDS) and its Major Constituents

Total Dissolved Solids (TDS) and its major constituents including sulfate, chloride, and bromide have emerged as pollutants of concern in several major watersheds in the Commonwealth. The conservative nature of these solids allows them to accumulate in surface waters and they may remain a concern even if the immediate downstream public water supply is not directly impacted. Bromide has been linked to formation of disinfection byproducts at increased levels in public water systems. As a consequence of actions associated with Triennial Review 13, the Environmental Quality Board has directed DEP to collect additional data. Facilities with design flows greater than or equal to 0.1 mgd are required to report at least one sample analyzed for these parameters. Furthermore, in an August 2013 letter from Jon Capacasa of the Region III Water Protection Program to DEP, EPA has expressed concern related to bromide and the importance of monitoring all point sources for bromide when it may be present.

The permit does not include a monitor and report requirement for TDS, sulfate, chloride, and bromide because the concentration of TDS in the discharge does not exceed 1,000 mg/l and the concentration of bromide is less than 1 mg/l.

Total Nitrogen and Total Phosphorus Monitoring

Nutrient monitoring is required to establish the nutrient load from the wastewater treatment facility and the impacts that load may have on the quality of the receiving stream(s). Sewage discharges with design flows > 2,000 gpd require monitoring, at a minimum, for Total Nitrogen and Total Phosphorus in new and reissued permits. Quarterly monitoring is imposed for discharges with an average design flow that exceeds 1.0 MGD.

Monitoring Frequency Considerations

For pH, Dissolved Oxygen (DO) and Total Residual Chlorine (TRC), a monitoring frequency of 1/day has been imposed. The daily monitoring frequencies are consistent with current policy and Table 6-3 of DEP's Technical Guidance for the Development and Specification of Effluent Limitations. An explanation why increase monitoring is imposed is explained in the draft cover letter. The remaining monitoring frequencies are consistent with Table 6-3.

Sample Types

The permit previously required 8-hour composite sample types. That is not consistent with table 6-3. So the sample types for free available cyanide, total copper, CBOD, BOD, NH₃N, TSS, nitrogen and phosphorus will be changed to 24-hour composite sample types. Fecal coliform, TRC, DO and pH are grab sample types. Flow remains as continuous recorded sample type.

Influent Monitoring

For POTWs with design flows greater than 2,000 GPD, influent BOD₅ and TSS monitoring must be established in the permit, and the monitoring should be consistent with the same frequency and sample type as is used for other effluent parameters.

Industrial Users

The application indicates that this sewage treatment plant does not have any industrial users contributing wastewater to the collection system.

Whole Effluent Toxicity (WET)

For Outfall 011, Acute Chronic WET Testing was completed:

- For the permit renewal application (4 tests).
- Quarterly throughout the permit term.
- Quarterly throughout the permit term and a TIE/TRE was conducted.
- Other:

The dilution series used for the tests was: 100%, 60%, 30%, 5%, and 2%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 40%.

Summary of Four Most Recent Test Results

(NOTE – Enter results into one table, depending on which data analysis method was used).

NOEC/LC50 Data Analysis

Test Date	Ceriodaphnia Results (% Effluent)			Pimephales Results (% Effluent)			Pass? *
	NOEC Survival	NOEC Reproduction	LC50	NOEC Survival	NOEC Growth	LC50	
10/14/2013	100%	100%	>100%	100%	100%	>100%	yes
10/28/2015	100%	100%	>100%	100%	100%	>100%	yes
10/20/2016	100%	100%	>100%	100%	100%	>100%	yes
9/24/2017	100%	100%	>100%	100%	100%	>100%	yes

* A "passing" result is that which is greater than or equal to the TIWC value.

Is there reasonable potential for an excursion above water quality standards based on the results of these tests? (NOTE – In general, reasonable potential is determined anytime there is at least one test failure in the previous four tests).

YES NO

Comments: The WET testing will be performed annually. The applicant only submitted the cover page of the WET tests as part of the application.

Evaluation of Test Type, IWC and Dilution Series for Renewed Permit

Acute Partial Mix Factor (PMFa): **0.81**

Chronic Partial Mix Factor (PMFc): **1.0**

1. Determine IWC – Acute (IWCa):

$$(Q_d \times 1.547) / ((Q_{7-10} \times PMFa) + (Q_d \times 1.547))$$

$$[(2.5 \text{ MGD} \times 1.547) / ((5.85 \text{ cfs} \times 0.81) + (2.5 \text{ MGD} \times 1.547))] \times 100 = \mathbf{44.94\%}$$

Is IWCa < 1%? YES NO

Type of Test for Permit Renewal: Chronic

2. Determine Target IWCc (If Chronic Tests Required)

$$(Q_d \times 1.547) / (Q_{7-10} \times PMFc) + (Q_d \times 1.547)$$

$$[(2.5 \text{ MGD} \times 1.547) / ((5.85 \text{ cfs} \times 1.0) + (2.5 \text{ MGD} \times 1.547))] \times 100 = \mathbf{39.79\%}$$

3. Determine Dilution Series

(NOTE – check Attachment C of WET SOP for dilution series based on TIWCa or TIWCc, whichever applies).

Dilution Series = 100%, 70%, 39%, 20%, and 10%.

WET Limits

Has reasonable potential been determined? YES NO

Will WET limits be established in the permit? YES NO

Proposed Effluent Limitations and Monitoring Requirements

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

Outfall 011, Effective Period: Permit Effective Date through Permit Expiration Date.

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Recorded Daily Flow
pH (S.U.)	XXX	XXX	6.0 Inst Min	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	5.0 Inst Min	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.311	XXX	0.5	1/day	Grab
CBOD5 Nov 1 - Apr 30	521	792	XXX	25	38	XXX	2/week	24-Hr Composite
CBOD5 May 1 - Oct 31	313	469	XXX	15	22.5	XXX	2/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	2/week	24-Hr Composite
TSS	626	938	XXX	30	45	XXX	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report	XXX	Report	Report	XXX	2/week	24-Hr Composite
Fecal Coliform (No./100 ml) Oct 1 - Apr 30	XXX	XXX	XXX	2000 Geo Mean	XXX	10000	2/week	Grab
Fecal Coliform (No./100 ml) May 1 - Sep 30	XXX	XXX	XXX	200 Geo Mean	XXX	1000	2/week	Grab
Total Nitrogen	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite

Outfall011 , Continued (from Permit Effective Date through Permit Expiration Date)

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) ⁽¹⁾		Concentrations (mg/L)				Minimum ⁽²⁾ Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Ammonia Nov 1 - Apr 30	250	375	XXX	12	18	XXX	2/week	24-Hr Composite
Ammonia May 1 - Oct 31	84	125	XXX	4	6	XXX	2/week	24-Hr Composite
Total Phosphorus	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Total Copper	Report	XXX	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite
Free Available Cyanide	Report	XXX	XXX	Report	Report Daily Max	XXX	1/week	24-Hr Composite

Compliance Sampling Location: outfall 011

Other Comments:

WQM7.0 Modeling Results

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20D	33564	RACCOON CREEK	11.140	760.00	172.00	0.00120	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary Temp	Tributary pH	Stream Temp	Stream pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.034	0.00	0.00	0.000	0.000	40.0	40.00	1.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Hopewell STP	PA0026328	2.5000	2.5000	2.5000	0.000	25.00	7.00

Parameter Data

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

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20D	33564	RACCOON CREEK	7.890	738.30	202.00	0.00120	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary Temp	Tributary pH	Stream Temp	Stream pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.034	0.00	0.00	0.000	0.000	40.0	40.00	1.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

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

Parameter Data

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

WQM 7.0 Hydrodynamic Outputs

<u>SWP Basin</u>		<u>Stream Code</u>				<u>Stream Name</u>						
20D		33564				RACCOON CREEK						
RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
11.140	5.85	0.00	5.85	3.8675	0.00120	1	40	40	0.24	0.818	21.99	7.00
Q1-10 Flow												
11.140	3.74	0.00	3.74	3.8675	0.00120	NA	NA	NA	0.19	1.044	22.54	7.00
Q30-10 Flow												
11.140	7.95	0.00	7.95	3.8675	0.00120	NA	NA	NA	0.30	0.672	21.64	7.00

WQM 7.0 D.O. Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>		
20D	33564	RACCOON CREEK		
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>		<u>Analysis pH</u>
11.140	2.500	21.990		7.000
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>	<u>Reach Velocity (fps)</u>	
40.000	1.000	40.000	0.243	
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>		<u>Reach Kn (1/days)</u>
7.16	0.686	1.77		0.816
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>		<u>Reach DO Goal (mg/L)</u>
6.156	2.903	Tsivoglou		5
<u>Reach Travel Time (days)</u>				
0.818				
	<u>TravTime</u>	<u>Subreach Results</u>		
	(days)	<u>CBOD5</u>	<u>NH3-N</u>	<u>D.O.</u>
		(mg/L)	(mg/L)	(mg/L)
	0.082	6.73	1.66	5.69
	0.164	6.33	1.55	5.38
	0.245	5.95	1.45	5.20
	0.327	5.59	1.36	5.11
	0.409	5.26	1.27	5.10
	0.491	4.95	1.19	5.13
	0.572	4.65	1.11	5.21
	0.654	4.37	1.04	5.31
	0.736	4.11	0.97	5.44
	0.818	3.87	0.91	5.57

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
20D	33564	RACCOON CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
11.140	Hopewell STP	8.05	15.85	8.05	15.85	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
11.140	Hopewell STP	1.7	5.21	1.7	5.21	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
11.14	Hopewell STP	14.95	14.95	4.46	4.46	3	3	0	0

WQM 7.0 Effluent Limits

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>			
20D		33564		RACCOON CREEK			
RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
11.140	Hopewell STP	PA0026328	2.500	CBOD5	14.95		
				NH3-N	4.46	8.92	
				Dissolved Oxygen			3

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20D	33564	RACCOON CREEK	11.140	760.00	172.00	0.00120	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary Temp	Tributary pH	Stream Temp	Stream pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.068	0.00	0.00	0.000	0.000	40.0	40.00	1.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Hopewell STP	PA0026328	2.5000	2.5000	2.5000	0.000	25.00	7.00

Parameter Data

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

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20D	33564	RACCOON CREEK	7.890	738.30	202.00	0.00120	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary Temp	Tributary pH	Stream Temp	Stream pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.068	0.00	0.00	0.000	0.000	40.0	40.00	1.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

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

Parameter Data

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

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20D	33564	RACCOON CREEK	11.140	760.00	172.00	0.00120	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary Temp	Tributary pH	Stream Temp	Stream pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.068	0.00	0.00	0.000	0.000	40.0	40.00	1.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Hopewell STP	PA0026328	2.5000	2.5000	2.5000	0.000	25.00	7.00

Parameter Data

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

Input Data WQM 7.0

SWP Basin	Stream Code	Stream Name	RMI	Elevation (ft)	Drainage Area (sq mi)	Slope (ft/ft)	PWS Withdrawal (mgd)	Apply FC
20D	33564	RACCOON CREEK	7.890	738.30	202.00	0.00120	0.00	<input checked="" type="checkbox"/>

Stream Data

Design Cond.	LFY	Trib Flow	Stream Flow	Rch Trav Time	Rch Velocity	WD Ratio	Rch Width	Rch Depth	Tributary Temp	Tributary pH	Stream Temp	Stream pH
	(cfsm)	(cfs)	(cfs)	(days)	(fps)		(ft)	(ft)	(°C)		(°C)	
Q7-10	0.068	0.00	0.00	0.000	0.000	40.0	40.00	1.00	5.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

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

Parameter Data

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

WQM 7.0 Hydrodynamic Outputs

<u>SWP Basin</u>		<u>Stream Code</u>				<u>Stream Name</u>						
20D		33564				RACCOON CREEK						
RMI	Stream Flow (cfs)	PWS With (cfs)	Net Stream Flow (cfs)	Disc Analysis Flow (cfs)	Reach Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Reach Trav Time (days)	Analysis Temp (°C)	Analysis pH
Q7-10 Flow												
11.140	11.70	0.00	11.70	3.8675	0.00120	1	40	40	0.39	0.510	9.97	7.00
Q1-10 Flow												
11.140	7.49	0.00	7.49	3.8675	0.00120	NA	NA	NA	0.28	0.700	11.81	7.00
Q30-10 Flow												
11.140	15.91	0.00	15.91	3.8675	0.00120	NA	NA	NA	0.49	0.402	8.91	7.00

WQM 7.0 D.O.Simulation

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>			
20D	33564	RACCOON CREEK			
<u>RMI</u>	<u>Total Discharge Flow (mgd)</u>	<u>Analysis Temperature (°C)</u>		<u>Analysis pH</u>	
11 140	2 500	9 970		7 000	
<u>Reach Width (ft)</u>	<u>Reach Depth (ft)</u>	<u>Reach WDRatio</u>		<u>Reach Velocity (fps)</u>	
40.000	1.000	40.000		0.389	
<u>Reach CBOD5 (mg/L)</u>	<u>Reach Kc (1/days)</u>	<u>Reach NH3-N (mg/L)</u>		<u>Reach Kn (1/days)</u>	
7.72	1.145	5.18		0.323	
<u>Reach DO (mg/L)</u>	<u>Reach Kr (1/days)</u>	<u>Kr Equation</u>		<u>Reach DO Goal (mg/L)</u>	
6.940	2.512	Tsivoglou		5	
<u>Reach Travel Time (days)</u>	<u>Subreach Results</u>				
0.510	<u>TravTime (days)</u>	<u>CBOD5 (mg/L)</u>	<u>NH3-N (mg/L)</u>	<u>D.O. (mg/L)</u>	
	0.051	7.44	5.10	6.70	
	0.102	7.17	5.02	6.52	
	0.153	6.91	4.93	6.37	
	0.204	6.66	4.85	6.26	
	0.255	6.42	4.77	6.19	
	0.306	6.18	4.70	6.14	
	0.357	5.96	4.62	6.11	
	0.408	5.74	4.54	6.10	
	0.459	5.54	4.47	6.11	
	0.510	5.34	4.40	6.14	

WQM 7.0 Wasteload Allocations

<u>SWP Basin</u>	<u>Stream Code</u>	<u>Stream Name</u>
20D	33564	RACCOON CREEK

NH3-N Acute Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
11.140	Hopewell STP	17.87	50	17.87	50	0	0

NH3-N Chronic Allocations

RMI	Discharge Name	Baseline Criterion (mg/L)	Baseline WLA (mg/L)	Multiple Criterion (mg/L)	Multiple WLA (mg/L)	Critical Reach	Percent Reduction
11.140	Hopewell STP	4.08	20.86	4.08	20.86	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	<u>CBOD5</u>		<u>NH3-N</u>		<u>Dissolved Oxygen</u>		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
11.14	Hopewell STP	25	25	20.86	20.86	3	3	0	0

WQM 7.0 Effluent Limits

<u>SWP Basin</u>		<u>Stream Code</u>		<u>Stream Name</u>			
20D		33564		RACCOON CREEK			
RMI	Name	Permit Number	Disc Flow (mgd)	Parameter	Effl. Limit 30-day Ave. (mg/L)	Effl. Limit Maximum (mg/L)	Effl. Limit Minimum (mg/L)
11.140	Hopewell STP	PA0026328	2.500	CBOD5	25		
				NH3-N	20.86	41.72	
				Dissolved Oxygen			3

TRC Spreadsheet Output

TRC_CALC_2021_renewal

1A	B	C	D	E	F	G
2 TRC EVALUATION			Enter Facility Name in E3			
3 <u>Input appropriate values in B4:B8 and E4:E7</u>						
4	5.85 = Q stream (cfs)			0.034 = CV Daily		
5	2.5 = Q discharge (MGD)			0.034 = CV Hourly		
6	4 = no. samples			0.81 = AFC_Partial Mix Factor		
7	0.3 = Chlorine Demand of Stream			1 = CFC_Partial Mix Factor		
8	= Chlorine Demand of Discharge			= AFC_Criteria Compliance Time (min)		
9	0.311 = BAT/BPJ Value			= CFC_Criteria Compliance Time (min)		
	= % Factor of Safety (FOS)			= Decay Coefficient (K)		
10	Source	Reference	AFC Calculations	Reference	CFC Calculations	
11	TRC	1.3.2.iii	WLA afc = 0.410	1.3.2.iii	WLA cfc = 0.481	
12	PENTOXSD TRG	5.1a	LTAMULT afc = 0.925	5.1c	LTAMULT cfc = 0.961	
13	PENTOXSD TRG	5.1b	LTA_afc = 0.379	5.1d	LTA_cfc = 0.463	
14						
15	Source		Effluent Limit Calculations			
16	PENTOXSD TRG	5.1f	AML MULT = 1.040			
17	PENTOXSD TRG	5.1g	AVG MON LIMIT (mg/l) = 0.311	BAT/BPJ		
18			INST MAX LIMIT (mg/l) = 0.485			

WLA afc $(.019/e^{-k \cdot AFC_tc}) + [(AFC_Yc \cdot Qs \cdot .019 / Qd \cdot e^{-k \cdot AFC_tc}) \dots + Xd + (AFC_Yc \cdot Qs \cdot Xs / Qd)] \cdot (1 - FOS / 100)$

LTAMULT afc $EXP((0.5 \cdot LN(cvh^2 + 1)) - 2.326 \cdot LN(cvh^2 + 1)^{0.5})$

LTA_afc $wla_afc \cdot LTAMULT_afc$

WLA_cfc $(.011/e^{-k \cdot CFC_tc}) + [(CFC_Yc \cdot Qs \cdot .011 / Qd \cdot e^{-k \cdot CFC_tc}) \dots + Xd + (CFC_Yc \cdot Qs \cdot Xs / Qd)] \cdot (1 - FOS / 100)$

LTAMULT_cfc $EXP((0.5 \cdot LN(cvd^2 / no_samples + 1)) - 2.326 \cdot LN(cvd^2 / no_samples + 1)^{0.5})$

LTA_cfc $wla_cfc \cdot LTAMULT_cfc$

AML MULT $EXP(2.326 \cdot LN((cvd^2 / no_samples + 1)^{0.5}) - 0.5 \cdot LN(cvd^2 / no_samples + 1))$

AVG MON LIMIT $MIN(BAT_BPJ, MIN(LTA_afc, LTA_cfc) \cdot AML_MULT)$

INST MAX LIMIT $1.5 \cdot ((av_mon_limit / AML_MULT) / LTAMULT_afc)$

Toxics Management Spreadsheet



Model Results

Hopewell STP, NPDES Permit No. PA0026328, Outfall 011

Instructions

Results

RETURN TO INPUTS

SAVE AS PDF

PRINT

All

Inputs

Results

Limits

Hydrodynamics

Q₇₋₁₀

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
11.14	5.85		5.85	3.868	0.001	1.	40.	40.	0.243	0.818	22.937
7.89	6.87		6.868								

Q_h

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
11.14	34.78		34.78	3.868	0.001	1.836	40.	21.787	0.526	0.377	20.611
7.89	40.029		40.03								

Wasteload Allocations

AFC

CCT (min): 15

PMF: 0.809

Analysis Hardness (mg/l): 472

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	
Total Aluminum	0	0		0	750	750	1,667	
Total Antimony	0	0		0	1,100	1,100	2,445	
Total Arsenic	0	0		0	340	340	756	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	46,679	
Total Boron	0	0		0	8,100	8,100	18,005	
Total Cadmium	0	0		0	9.082	10.3	23.0	Chem Translator of 0.879 applied
Total Chromium (III)	0	0		0	2030.734	6,426	14,284	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	36.2	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	211	
Total Copper	0	0		0	57.991	60.4	134	Chem Translator of 0.96 applied
Free Available Cyanide	0	0		0	22	22.0	48.9	
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	332.520	589	1,308	Chem Translator of 0.565 applied
Total Manganese	0	0	0	N/A	N/A	N/A	
Total Mercury	0	0	0	1.400	1.65	3.66	Chem Translator of 0.85 applied
Total Nickel	0	0	0	1740.282	1,744	3,876	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	46.409	54.6	121	Chem Translator of 0.85 applied
Total Thallium	0	0	0	65	65.0	144	
Total Zinc	0	0	0	436.401	446	992	Chem Translator of 0.978 applied
Acrolein	0	0	0	3	3.0	6.67	
Acrylonitrile	0	0	0	650	650	1,445	
Benzene	0	0	0	640	640	1,423	
Bromoform	0	0	0	1,800	1,800	4,001	
Carbon Tetrachloride	0	0	0	2,800	2,800	6,224	
Chlorobenzene	0	0	0	1,200	1,200	2,667	
Chlorodibromomethane	0	0	0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0	0	18,000	18,000	40,010	
Chloroform	0	0	0	1,900	1,900	4,223	
Dichlorobromomethane	0	0	0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0	0	15,000	15,000	33,342	
1,1-Dichloroethylene	0	0	0	7,500	7,500	16,671	
1,2-Dichloropropane	0	0	0	11,000	11,000	24,451	
1,3-Dichloropropylene	0	0	0	310	310	689	
Ethylbenzene	0	0	0	2,900	2,900	6,446	
Methyl Bromide	0	0	0	550	550	1,223	
Methyl Chloride	0	0	0	28,000	28,000	62,238	
Methylene Chloride	0	0	0	12,000	12,000	26,673	
1,1,2,2-Tetrachloroethane	0	0	0	1,000	1,000	2,223	
Tetrachloroethylene	0	0	0	700	700	1,556	
Toluene	0	0	0	1,700	1,700	3,779	
1,2-trans-Dichloroethylene	0	0	0	6,800	6,800	15,115	
1,1,1-Trichloroethane	0	0	0	3,000	3,000	6,668	
1,1,2-Trichloroethane	0	0	0	3,400	3,400	7,557	
Trichloroethylene	0	0	0	2,300	2,300	5,112	
Vinyl Chloride	0	0	0	N/A	N/A	N/A	
2-Chlorophenol	0	0	0	560	560	1,245	
2,4-Dichlorophenol	0	0	0	1,700	1,700	3,779	
2,4-Dimethylphenol	0	0	0	660	660	1,467	
4,6-Dinitro-o-Cresol	0	0	0	80	80.0	178	
2,4-Dinitrophenol	0	0	0	660	660	1,467	
2-Nitrophenol	0	0	0	8,000	8,000	17,782	
4-Nitrophenol	0	0	0	2,300	2,300	5,112	
p-Chloro-m-Cresol	0	0	0	160	160	356	
Pentachlorophenol	0	0	0	8.723	8.72	19.4	
Phenol	0	0	0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0	0	460	460	1,022	
Acenaphthene	0	0	0	83	83.0	184	
Anthracene	0	0	0	N/A	N/A	N/A	

Total Dissolved Solids (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	553	
Total Arsenic	0	0		0	150	150	377	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	10,300	
Total Boron	0	0		0	1,600	1,600	4,019	
Total Cadmium	0	0		0	0.721	0.85	2.15	Chem Translator of 0.844 applied
Total Chromium (III)	0	0		0	264.157	307	772	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	26.1	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	47.7	
Total Copper	0	0		0	33.728	35.1	88.3	Chem Translator of 0.96 applied
Free Available Cyanide	0	0		0	5.2	5.2	13.1	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	3,768	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	12.958	22.9	57.6	Chem Translator of 0.565 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	2.28	Chem Translator of 0.85 applied
Total Nickel	0	0		0	193.292	194	487	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	12.5	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	32.7	
Total Zinc	0	0		0	439.971	446	1,121	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	7.54	
Acrylonitrile	0	0		0	130	130	327	
Benzene	0	0		0	130	130	327	
Bromoform	0	0		0	370	370	929	
Carbon Tetrachloride	0	0		0	560	560	1,407	
Chlorobenzene	0	0		0	240	240	603	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	8,792	
Chloroform	0	0		0	390	390	980	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	7,787	
1,1-Dichloroethylene	0	0		0	1,500	1,500	3,768	
1,2-Dichloropropane	0	0		0	2,200	2,200	5,527	
1,3-Dichloropropylene	0	0		0	61	61.0	153	
Ethylbenzene	0	0		0	580	580	1,457	
Methyl Bromide	0	0		0	110	110	276	
Methyl Chloride	0	0		0	5,500	5,500	13,816	
Methylene Chloride	0	0		0	2,400	2,400	6,029	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	528	
Tetrachloroethylene	0	0		0	140	140	352	
Toluene	0	0		0	330	330	829	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	3,517	
1,1,1-Trichloroethane	0	0		0	610	610	1,532	

1,1,2-Trichloroethane	0	0		0	680	680	1,708	
Trichloroethylene	0	0		0	450	450	1,130	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	276	
2,4-Dichlorophenol	0	0		0	340	340	854	
2,4-Dimethylphenol	0	0		0	130	130	327	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	40.2	
2,4-Dinitrophenol	0	0		0	130	130	327	
2-Nitrophenol	0	0		0	1,600	1,600	4,019	
4-Nitrophenol	0	0		0	470	470	1,181	
p-Chloro-m-Cresol	0	0		0	30	30.0	75.4	
Pentachlorophenol	0	0		0	6.693	6.69	16.8	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	229	
Acenaphthene	0	0		0	17	17.0	42.7	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	148	
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.25	
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	15,073	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	2,286	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	136	
Butyl Benzyl Phthalate	0	0		0	35	35.0	87.9	
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	402	
1,3-Dichlorobenzene	0	0		0	69	69.0	173	
1,4-Dichlorobenzene	0	0		0	150	150	377	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	2,010	
Dimethyl Phthalate	0	0		0	500	500	1,256	
Di-n-Butyl Phthalate	0	0		0	21	21.0	52.8	
2,4-Dinitrotoluene	0	0		0	320	320	804	
2,6-Dinitrotoluene	0	0		0	200	200	502	
1,2-Diphenylhydrazine	0	0		0	3	3.0	7.54	
Fluoranthene	0	0		0	40	40.0	100	
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	5.02	
Hexachlorocyclopentadiene	0	0		0	1	1.0	2.51	
Hexachloroethane	0	0		0	12	12.0	30.1	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	

Isophorone	0	0		0	2,100	2,100	5,275	
Naphthalene	0	0		0	43	43.0	108	
Nitrobenzene	0	0		0	810	810	2,035	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	8,541	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	148	
Phenanthrene	0	0		0	1	1.0	2.51	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	65.3	

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	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	14.1	
Total Arsenic	0	0		0	10	10.0	25.1	
Total Barium	0	0		0	2,400	2,400	6,029	
Total Boron	0	0		0	3,100	3,100	7,787	
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 Available Cyanide	0	0		0	140	140	352	
Dissolved Iron	0	0		0	300	300	754	
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	2,512	
Total Mercury	0	0		0	0.050	0.05	0.13	
Total Nickel	0	0		0	610	610	1,532	
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	0.6	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	6	6.0	15.1	
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	130	130	327
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	82.9
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	530	530	1,331
Methyl Bromide	0	0		0	47	47.0	118
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	1,300	1,300	3,266
1,2-trans-Dichloroethylene	0	0		0	140	140	352
1,1,1-Trichloroethane	0	0		0	N/A	N/A	N/A
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	81	81.0	203
2,4-Dichlorophenol	0	0		0	77	77.0	193
2,4-Dimethylphenol	0	0		0	380	380	955
4,6-Dinitro-o-Cresol	0	0		0	13	13.0	32.7
2,4-Dinitrophenol	0	0		0	69	69.0	173
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	10,400	10,400	26,126
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A
Acenaphthene	0	0		0	670	670	1,683
Anthracene	0	0		0	8,300	8,300	20,850
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	1,400	1,400	3,517
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	150	150	377
2-Chloronaphthalene	0	0		0	1,000	1,000	2,512
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	420	420	1,055	
1,3-Dichlorobenzene	0	0		0	420	420	1,055	
1,4-Dichlorobenzene	0	0		0	420	420	1,055	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	17,000	17,000	42,705	
Dimethyl Phthalate	0	0		0	270,000	270,000	678,264	
Di-n-Butyl Phthalate	0	0		0	2,000	2,000	5,024	
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	130	130	327	
Fluorene	0	0		0	1,100	1,100	2,763	
Hexachlorobenzene	0	0		0	N/A	N/A	N/A	
Hexachlorobutadiene	0	0		0	N/A	N/A	N/A	
Hexachlorocyclopentadiene	0	0		0	40	40.0	100	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.0038	0.004	0.01	
Isophorone	0	0		0	35	35.0	87.9	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	17	17.0	42.7	
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	830	830	2,085	
1,2,4-Trichlorobenzene	0	0		0	35	35.0	87.9	

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	
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 Available 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	0.051	0.051	0.51
Benzene	0	0		0	1.2	1.2	12.0
Bromoform	0	0		0	4.3	4.3	43.0
Carbon Tetrachloride	0	0		0	0.23	0.23	2.3
Chlorobenzene	0	0		0	N/A	N/A	N/A
Chlorodibromomethane	0	0		0	0.4	0.4	4.0
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A
Chloroform	0	0		0	5.7	5.7	57.0
Dichlorobromomethane	0	0		0	0.55	0.55	5.5
1,2-Dichloroethane	0	0		0	0.38	0.38	3.8
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A
1,2-Dichloropropane	0	0		0	N/A	N/A	N/A
1,3-Dichloropropylene	0	0		0	0.34	0.34	3.4
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	46.0
1,1,2,2-Tetrachloroethane	0	0		0	0.17	0.17	1.7
Tetrachloroethylene	0	0		0	0.69	0.69	6.9
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	0.59	0.59	5.9
Trichloroethylene	0	0		0	2.5	2.5	25.0
Vinyl Chloride	0	0		0	0.025	0.025	0.25
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	0.270	0.27	2.7
Phenol	0	0		0	N/A	N/A	N/A
2,4,6-Trichlorophenol	0	0		0	1.4	1.4	14.0
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	0.0009
Benzo(a)Anthracene	0	0		0	0.0038	0.004	0.038
Benzo(a)Pyrene	0	0		0	0.0038	0.004	0.038
3,4-Benzofluoranthene	0	0		0	0.0038	0.004	0.038
Benzo(k)Fluoranthene	0	0		0	0.0038	0.004	0.038
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.3
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A
Bis(2-Ethylhexyl)Phthalate	0	0		0	1.2	1.2	12.0
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	0.038
Dibenzo(a,h)Anthracene	0	0		0	0.0038	0.004	0.038
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	0.21
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	0.5
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.5
1,2-Diphenylhydrazine	0	0		0	0.036	0.036	0.36
Fluoranthene	0	0		0	N/A	N/A	N/A
Fluorene	0	0		0	N/A	N/A	N/A
Hexachlorobenzene	0	0		0	0.00028	0.0003	0.003
Hexachlorobutadiene	0	0		0	0.44	0.44	4.4
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A
Hexachloroethane	0	0		0	1.4	1.4	14.0
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A
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	0.007
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.05
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	33.0
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

Total Cobalt	47.7	µg/L	Discharge Conc < TQL
Total Manganese	2,512	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Silver	77.8	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.13	µg/L	Discharge Conc < TQL
Total Selenium	12.5	µg/L	Discharge Conc < TQL
Bromoform	43.0	µg/L	Discharge Conc ≤ 25% WQBEL
Total Thallium	0.6	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	4.27	µg/L	Discharge Conc < TQL
Chloroform	57.0	µg/L	Discharge Conc ≤ 25% WQBEL
Acrylonitrile	0.51	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	2.3	µg/L	Discharge Conc < TQL
Chlorobenzene	327	µg/L	Discharge Conc < TQL
Chlorodibromomethane	4.0	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	8,792	µg/L	Discharge Conc < TQL
Methylene Chloride	46.0	µg/L	Discharge Conc ≤ 25% WQBEL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	3.8	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	82.9	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	5,527	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	3.4	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
1,1,2,2-Tetrachloroethane	1.7	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.25	µg/L	Discharge Conc < TQL
2-Chlorophenol	203	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	193	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	327	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	32.7	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	173	µg/L	Discharge Conc < TQL
2-Nitrophenol	4,019	µg/L	Discharge Conc < TQL
4-Nitrophenol	1,181	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	75.4	µg/L	Discharge Conc < TQL
Pentachlorophenol	2.7	µg/L	Discharge Conc < TQL
Phenol	26,126	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	14.0	µg/L	Discharge Conc < TQL
Acenaphthene	42.7	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	20,850	µg/L	Discharge Conc < TQL
Benzdine	0.0009	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.038	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.038	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.038	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS

