pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Northcentral Regional Office
CLEAN WATER PROGRAM

Application Type **Renewal** / **Non-**

NPDES PERMIT FACT SHEET

INDIVIDUAL SEWAGE

Application No. **PA0228061**

Facility Type **Municipal**

APS ID **1020754**

Major / Minor **Major**

Authorization ID **1322096**

Applicant and Facility Information

Applicant Name	**Aqua Pennsylvania Wastewater, Inc.**	Facility Name	**Treasure Lake Resort**
Applicant Address	906 Beaver Drive	Facility Address	Township Road 854
	DuBois, PA 15801-2539		Dubois, PA 15801-9035
Applicant Contact	James Willard, Western Area Manager	Facility Contact	Mike Starr, Field Supervisor II
Applicant Phone	(724) 981-1200	Facility Phone	(724) 981-1200
Client ID	62614	Site ID	464465
Ch 94 Load Status	Not Overloaded	Municipality	Sandy Township
Connection Status	No Limitations	County	Clearfield
Date Application Received	July 28, 2020	EPA Waived?	No
Date Application Accepted	August 4, 2020	If No, Reason	Major Facility

Purpose of Application: Renewal of a NPDES Permit for a Sewage Treatment Plant

Summary of Review

The subject facility is a sewage treatment facility serving the Treasure Lake Resort in Sandy Township, Clearfield County.

A map of the discharge location is attached.

Sludge use and disposal description and location(s): Sludge is disposed at landfill and beneficially reused by land application.

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
✓		*Keith C. Allison* Keith C. Allison / Project Manager	December 27, 2021

✓		*Nicholas W. Hartranft* Nicholas W. Hartranft, P.E. / Environmental Engineer Manager	January 18, 2022

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	1.0
Latitude	41º 7' 58.59"	Longitude	-78º 41' 44.34"
Quad Name	Sabula, PA	Quad Code	0916
Wastewater Description:	Sewage Effluent		
Receiving Waters	Narrows Creek	Stream Code	48834
NHD Com ID	123863053	RMI	0.48
Drainage Area	6.99	Yield (cfs/mi^2)	0.0652
Q_{7-10} Flow (cfs)	0.468	Q_{7-10} Basis	Gage #03032500, Redbank Creek @ St. Charles, PA (1920-2008)
Elevation (ft)	1431	Slope (ft/ft)	0.00378
Watershed No.	17-C	Chapter 93 Class.	CWF
Existing Use	None	Existing Use Qualifier	N/A
Exceptions to Use	None	Exceptions to Criteria	None
Assessment Status	Impaired		
Cause(s) of Impairment	Metals		
Source(s) of Impairment	Abandoned Mine Drainage		
TMDL Status	Approved 04/09/2009	Name	Narrows Creek TMDL
Nearest Downstream Public Water Supply Intake	Hawthorn Area Water Authority		
PWS Waters	Red Bank Creek	Distance from Outfall (mi)	Approx. 64

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

Other Comments:

The discharge is not identified as a significant contributor to the above-listed impairment to Narrows Creek in the above-listed TMDL. The metals typically associated with AMD impairment (Total Aluminum, Total Iron, and Total Manganese) will be discussed specifically in the Development of Effluent Limitations section of this Fact Sheet.

The discharge is not expected to affect any downstream public water supply at this time with the limitations and monitoring proposed.

Treatment Facility Summary

Treatment Facility Name: New West Side STP

Permit No.	Issuance Date	Permit Coverage
1701401	A-3 – 05/3/18	Conversion of Treasure Lake East Plant to a Pump Station and upgrades at the West Plant to treat all wastewater from the Treasure Lake Development.
	A-2 – 11/3/17	Former East Plant - Conversion from gas to liquid Chlorination
	A-1 – 7/6/15	Former East Plant – Removal of Sand Filters and Drying Beds
	Transfer – 6/11/13	Permit Transfer to Aqua PA
	Original – 1/24/01	Incorporation of all existing plants and collection systems from numerous permits (~20) into one
1701407	A-2 – 08/26/21	Chemical Addition for the removal of Copper
	A-1 – 10/5/15	Bimini and Harris Cove pump station modifications
	Transfer – 6/11/13	Permit Transfer to Aqua PA
	Original – 2/12/02	West Plant – Including screening, aerated flow equalization tank, two aeration tanks, two clarifiers, UV disinfection and aerobic digestion tank.

Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)
Sewage	Secondary	Extended Aeration	UV	1.0

Hydraulic Capacity (MGD)	Organic Capacity (lbs/day)	Load Status	Biosolids Treatment	Biosolids Use/Disposal
1.25	2,500	Not Overloaded	Aerobic digestion	Landfill

Changes Since Last Permit Issuance: Conversion of the Treasure Lake East Plant to a pump station and the upgrades at the Treasure Lake West Plant (discharge approved by this NPDES Permit) to treat all flows under WQM Permit No. 1701401 Amendment No. 3 was substantially completed in September 2019.

The permittee received approval under WQM permit No. 1701407 A-2 for chemical treatment to remove Copper from the effluent.

Other Comments: The treatment system, as approved by WQM Permit No. 1701401 Amendment No. 3, consists of Screening and equalization at the former East Treatment Plant; Equalization tank (serving the west side drainage area); splitter boxes; two aeration tanks, two clarifiers, UV light disinfection, post aeration; and sludge holding.

Sludge/Biosolids Disposal

The facility's digested and dewatered sludge is disposed by landfill and beneficially reused as biosolids. Per the application, approximately 13.6 dry tons of sludge were disposed in the past year and 19.3 dry tons were beneficially reused.

Industrial Users

The facility receives flows from no significant industrial users.

Hauled in Waste

Per the application, the permittee has not received any hauled-in wastes over the past three years and has indicated that it does not intend to receive any over the next permit term.

Compliance History

DMR Data for Outfall 001 (from November 1, 2020 to October 31, 2021)

Parameter	OCT-21	SEP-21	AUG-21	JUL-21	JUN-21	MAY-21	APR-21	MAR-21	FEB-21	JAN-21	DEC-20	NOV-20
Flow (MGD) Average Monthly	0.568	0.659	0.641	0.674	0.559	0.863	0.761	1.032	0.572	0.702	0.693	0.498
Flow (MGD) Daily Maximum	0.952	1.872	1.29	1.14	0.957	3.62	1.11	2.766	1.414	1.6	2.20	0.790
pH (S.U.) Minimum	6.98	7.11	7.12	7.04	7.16	6.85	7.07	6.92	7.05	7.34	7.13	7.46
pH (S.U.) Instantaneous Maximum	7.61	7.56	7.54	7.53	7.65	7.76	7.44	7.56	7.99	8.0	7.90	7.81
DO (mg/L) Minimum	7.4	7.84	7.22	7.56	7.9	7.82	8.14	9.11	9.18	9.5	8.10	7.95
TRC (mg/L) Average Monthly	GG	GG	GG	GG	GG	< 0.001	GG	GG	GG	GG	< 0.0001	< 0.0001
TRC (mg/L) Instantaneous Maximum	GG	GG	GG	GG	GG	0.03	GG	GG	GG	GG	0.0001	< 0.0001
CBOD5 (lbs/day) Average Monthly	< 9	< 13	< 12	< 11	< 11	< 17	< 16	< 18	< 10	< 11.0	< 10.0	< 9
CBOD5 (lbs/day) Weekly Average	< 10	< 24	< 21	< 15	< 17	29	< 16	28	13	< 15.0	< 13.0	< 12
CBOD5 (mg/L) Average Monthly	< 2.0	< 2.0	< 2.00	< 2.0	< 2	< 3.0	< 2.00	< 2	< 2.0	< 2.0	< 2	< 2
CBOD5 (mg/L) Weekly Average	< 3.0	< 2.0	< 2.00	< 2.0	< 3	< 3.0	< 2.00	3	< 2.0	< 2.0	< 3	< 3
TSS (lbs/day) Average Monthly	< 13	< 17	< 15	< 14	< 17	< 21	< 30	< 31	< 16	< 15.0	21	< 15
TSS (lbs/day) Weekly Average	< 19	< 29	< 29	< 18	28	< 36	36	53	33	< 21.0	29	21
TSS (mg/L) Average Monthly	< 3	< 3.0	< 3.0	< 3.0	< 3	< 3	< 5.0	< 4	< 3.0	< 3.0	4	< 4
TSS (mg/L) Weekly Average	< 4	< 3.0	< 3.0	< 3.0	6	< 4	6	6	5	4.0	5	5
Fecal Coliform (No./100 ml) Geometric Mean	< 1.0	< 1	< 1.00	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00	< 1.0	< 1	< 1	< 1

Fecal Coliform (No./100 ml) Instantaneous Maximum	3.1	7.5	8.5	3.1	< 1.0	4.1	3.1	1	4.1	1	1	1.4
UV Transmittance (%) Minimum	77.1	77.2	72.4	77.6	78	77.3	81.2	79.2	78	83.5	80.6	77.8
Ammonia (lbs/day) Average Monthly	< 0.4	< 0.6	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6	< 0.8	< 0.4	< 0.3	< 2	< 0.5
Ammonia (lbs/day) Weekly Average	< 0.5	< 1	< 1	< 0.7	< 0.8	< 1.0	0.7	< 1.0	< 0.5	< 0.4	< 5	0.8
Ammonia (mg/L) Average Monthly	< 0.1	< 0.1	< 0.1	< 0.1	< 0.10	< 0.1	< 0.10	< 0.1	< 0.10	< 0.10	< 0.4	< 0.10
Ammonia (mg/L) Weekly Average	0.1	< 0.1	< 0.2	< 0.1	< 0.10	< 0.1	< 0.10	0.2	0.10	< 0.10	< 1.0	0.20
Total Copper (lbs/day) Average Monthly	0.03	0.008	< 0.02	< 0.02	< 0.04	< 0.05	< 0.07	< 0.04	< 0.02	< 0.02	< 0.02	0.003
Total Copper (lbs/day) Daily Maximum	0.03	0.008	< 0.02	< 0.02	< 0.04	< 0.05	< 0.07	< 0.04	< 0.02	< 0.02	< 0.02	< 0.003
Total Copper (ug/L) Average Monthly	6.00	2.00	< 4.00	< 3.86	< 10.00	< 10.00	< 10.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00
Total Copper (ug/L) Daily Maximum	6.00	< 2.00	< 4.00	< 3.86	< 10.00	< 10.00	< 10.00	< 5.00	< 5.00	< 5.00	< 5.00	< 5.00
Free Cyanide (lbs/day) Average Monthly	< 0.02	< 0.02	< 0.03	0.60	< 0.02	0.03	0.04	0.03	< 0.008	0.01	0.08	< 0.10
Free Cyanide (lbs/day) Daily Maximum	< 0.02	< 0.02	< 0.03	0.60	< 0.02	0.03	0.04	0.03	< 0.008	0.01	0.08	< 0.10
Free Cyanide (ug/L) Average Monthly	< 4.00	< 4.00	< 5.00	118.00	< 6.00	< 6.00	< 6.00	4.00	< 2.00	3.00	20.00	< 25.00
Free Cyanide (ug/L) Daily Maximum	< 4.00	< 4.00	< 5.00	118.00	< 6.00	< 6.00	< 6.00	4.00	< 2.00	3.00	20.00	< 25.00
Total Mercury (lbs/day) Average Monthly	< 0.0009	< 0.0008	0.001	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.002	< 0.0008	< 0.005	< 0.0008	< 0.001
Total Mercury (lbs/day) Daily Maximum	< 0.0009	< 0.0008	< 0.001	< 0.001	< 0.0008	< 0.001	< 0.001	< 0.002	< 0.0008	< 0.005	< 0.0008	< 0.001
Total Mercury (ug/L) Average Monthly	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 1.0	< 0.2	< 0.2
Total Mercury (ug/L) Daily Maximum	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 1.0	< 0.2	< 0.2

Compliance History, Cont'd

Effluent Violations for Outfall 001, from: November 1, 2020 To: October 31, 2021

Parameter	Date	SBC	DMR Value	Limit Value	Units
Free Cyanide	07/31/21	Avg Mo	0.60	0.05	lbs/day
Free Cyanide	07/31/21	Daily Max	0.60	0.08	lbs/day
Free Cyanide	07/31/21	Avg Mo	118.00	6.72	ug/L
Free Cyanide	11/30/20	Avg Mo	< 0.10	0.05	lbs/day
Free Cyanide	11/30/20	Daily Max	< 0.10	0.08	lbs/day
Free Cyanide	11/30/20	Avg Mo	< 25.00	6.72	ug/L
Free Cyanide	11/30/20	Daily Max	< 25.00	10.49	ug/L
Free Cyanide	12/31/20	Avg Mo	0.08	0.05	lbs/day
Free Cyanide	12/31/20	Avg Mo	20.00	6.72	ug/L
Free Cyanide	12/31/20	Daily Max	20.00	10.49	ug/L

Compliance History, Cont'd	
Summary of Inspections:	The facility was inspected by the Department at least annually over the past permit term. The most recent inspection on October 7, 2021 identified NPDES effluent violations but no operational violations at the time of inspection.
Other Comments:	The permittee entered into a Consent Order and Agreement (CO&A) with the Department on October 7, 2019 for ongoing Copper Violations and failed WET tests. Included in the CO&A were the requirements to submit a final Copper TRE report by June 30, 2020 and a final WET TRE by June 30, 2021 which has been received. The permittee received WQM Permit 1701407 A-2 to include a liquid coagulant and liquid polymer for the removal of Copper in the effluent. A query in WMS found no open violations for Aqua Pennsylvania Wastewater, Inc. in eFACTS.

Existing Effluent Limitations and Monitoring Requirements

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	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	6.0	XXX	XXX	XXX	1/day	Grab
TRC	XXX	XXX	XXX	0.05	XXX	0.17	1/day	Grab
CBOD5 Nov 1 - Apr 30	200	300	XXX	24	36	48	2/week	24-Hr Composite
CBOD5 May 1 - Oct 31	100	150	XXX	12	18	24	2/week	24-Hr Composite
TSS	250	375	XXX	30	45	60	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
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/week	Metered
Total Nitrogen	Report	XXX	XXX	Report	XXX	XXX	1/quarter	24-Hr Composite
Ammonia Nov 1 - Apr 30	37	56	XXX	4.5	6.0	9	2/week	24-Hr Composite
Ammonia May 1 - Oct 31	12	18	XXX	1.5	2.0	3	2/week	24-Hr Composite
Total Phosphorus	Report	XXX	XXX	Report	XXX	XXX	1/quarter	24-Hr Composite
Total Aluminum	Report	XXX	XXX	Report	XXX	XXX	1/year	24-Hr Composite
Free Cyanide (ug/L)	0.05	0.08 Daily Max	XXX	6.72	10.49 Daily Max	16.81	1/month	24-Hr Composite
Total Iron	Report	XXX	XXX	Report	XXX	XXX	1/year	24-Hr Composite
Total Manganese	Report	XXX	XXX	Report	XXX	XXX	1/year	24-Hr Composite

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		
Total Mercury (ug/L)	Report	Report Daily Max	XXX	Report	Report Daily Max	XXX	1/month	24-Hr Composite
Total Copper (ug/L)	0.09	0.15 Daily Max	XXX	11.60	18.11 Daily Max	29.02	1/month	24-Hr Composite

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 1.0
Latitude 41º 8' 21.70" **Longitude** -78º 41' 50.80"
Wastewater Description: Sewage Effluent

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)

Comments: The above limitations are applicable and included in the existing permit except for more stringent water quality-based limits for $CBOD_5$ as further discussed below.

Water Quality-Based Limitations

Stream Assessment

A Department Biologist conducted a stream survey of Narrows Creek around the Treasure Lake discharge point in April 2018. This survey noted a decline in the stream Index of Biotic Integrity (IBI) score from above to below the discharge point. Future stream assessments may be considered in changes to the facility's limits in future reviews.

DO, CBOD5 and NH3-N

The Department uses the WQM7.0 model to evaluate point source discharges of dissolved oxygen (DO), carbonaceous BOD ($CBOD_5$), and ammonia-nitrogen (NH_3-N) into free-flowing streams and rivers. To accomplish this, the model simulates two basic processes: the mixing and degradation of NH_3-N in the stream and the mixing and consumption of DO in the stream due to the degradation of $CBOD_5$ and NH_3-N. WQM7.0 modeling was performed (see Attachment B) of the discharge to Narrows Creek and showed that the existing limitations are adequate to protect the receiving stream.

Disinfection

The existing permit includes TRC monitoring due to previous use of chlorine as a backup disinfection option. Because this backup chlorination was not included in the modifications under WQM permit No. 1701401 A-3 and the permittee has not recently used chlorine disinfection this monitoring will be removed.

Existing monitoring for percent UV transmittance will be changed from weekly to daily consistent with DEP policy and typical monitoring for WWTPs and to assure consistent disinfection.

Water Quality Toxics Management

A "Reasonable Potential Analysis" was performed to determine parameters with the potential to violate water quality standards. The Reasonable Potential Analysis was conducted through the use of the Department's Toxics Management Strategy (TMS) Spreadsheet (see Attachment C). Toxic Management Strategy conducts a mass-balance water quality analysis model that includes consideration for mixing and other factors to determine water quality-based effluent limits. The model incorporates the water quality criteria in Chapter 93 of the Department's regulations. The TMS recommends limits when the highest seen concentration is greater 50% of the WQBEL and recommends monitoring when the

concentration is greater than 25% of the WQBEL for non-conservative pollutants or is greater than 10% of the WQBEL for conservative pollutants.

Analysis results with non-detect results at detection levels greater the Department's Target Quantitation Limits (Target QLs) as listed in the NPDES application are considered to potentially be present at levels near the higher detection level. The Department's Target QLs were developed consistent with EPA's Sufficiently Sensitive Methods Rule.

The parameters listed below were initially determined by the TMS to be recommended for limitations or monitoring. In addition, the existing toxic parameters requiring monitoring in the existing permit are listed. All concentrations are in µg/L.

The permittee was provided a Pre-Draft Permit Survey for Toxic Pollutants on April 6, 2021 to evaluate and provide additional information and monitoring results for parameters that were initially recommended by the TMS for limits for monitoring. These parameters as well as ones currently monitored in the NPDES permit are included in the table below

Pollutant	Existing Limit	Highest Concentration Initially Reported	WQBEL	Initial TMS Recommendation	Target QL
Total Aluminum	Report	260	750	Report	10
Hexavalent Chromium	None	60	13.5	Limit	1
Total Copper	11.6	24	17.8	Limit	4
Free Cyanide	6.72	4	5.18	Limit	1
Total Silver	None	<1.37	8.24	Report	0.4
Total Zinc	None	26	176	Report	5
Carbon Tetrachloride	None	<1.69	1.37	Limit	0.5
1,3-Dichloropropylene	None	<0.59	0.92	Limit	0.5
Hexachlorobutadiene	None	<1.35	0.034	Limit	0.5
1,2,4-Trichlorobenzene	None	<0.85	0.091	Limit	0.5
Total Iron	Monitor Only	130	1942	No limit or Monitoring	20
Total Manganese	Monitor Only	15	1295	No limit or Monitoring	2
Total Mercury	Monitor Only	< 0.2	0.065	No limit or Monitoring	0.2

Total Aluminum – Because detectable levels of Aluminum have been as high as 260 ug/L, at approximately one third of the WQBEL, the current monitoring requirements will continue. Treatment instituted under WQM Permit No. 1701407 A-2 is expected to further reduce Aluminum levels in the effluent.

Hexavalent Chromium – Because a detectable level of 60 ug/L was seen in one of the samples a limitation is proposed for Hexavalent Chromium. It is noted that the influent sample also had detectable hexavalent chromium at 70 ug/L. Sampling taken by the permittee from May 2020 to March 2021 as part of the WET TRE found the limitation to be achievable.

Total Copper – With the treatment instituted under WQM Permit No. 1701407 A-2 Copper levels have been reduced. However, an effluent limitation will remain in the permit to guarantee the efficacy of the treatment. The new limit of 17.8 ug/L will replace the existing limitation. The new limit is primarily the result of an inputted discharge hardness level of 174 mg/L as opposed to the assumed level of 100 mg/L in the previous review. The average result of the discharge hardness from three effluent samples was 10.2 gpg which corresponds to 174 mg/L.

Free Cyanide – Due to the continued presence in the effluent the limitation for free cyanide will remain although it has slightly changed from 6.72 ug/L to 5.18 ug/L due to changes in the modeling.

Total Silver – Total silver monitoring is recommended because although levels were non-detect they did not meet the Department's Target Quantitation Limit (TQL). Additional sampling provided by the permittee from July and August of 2021 were non-detect at 4 ug/L. Should the permittee conduct one more sample during the draft comment period that shows the pollutant is not detectable at a detection level that meets or is less than the Target QL the Department will reevaluate the necessity of the monitoring in the final permit.

Total Zinc – Zinc monitoring is now recommended due to the detected level as high as 26 ug/L seen in the effluent sampling at 15% of the WQBEL.

Carbon Tetrachloride – A carbon tetrachloride limitation was initially recommended because although levels were non-detect they did not meet the Department's Target Quantitation Limit (QL). The permittee conducted additional samples that shows the pollutant is not detectable at a detection levels that meets the Target QL. Therefore, no limitation or monitoring is necessary.

1,3-Dichloropropylene – A 1,3-Dichloropropylene limitation was initially recommended because although levels were non-detect they did not meet the Target QL. The permittee conducted additional samples that shows the pollutant is not detectable at a detection levels that meets the Target QL. Therefore, no limitation or monitoring is necessary.

Hexachlorobutadiene – A Hexachlorobutadiene limitation was initially recommended because although levels were non-detect they did not meet the Department's Target QL. The permittee conducted additional samples that shows the pollutant is not detectable at a detection levels that meets the Target QL. Therefore, no limitation or monitoring is necessary.

1,2,4-Trichlorobenzene - A 1,2,4-Trichlorobenzene limitation was initially recommended because although levels were non-detect they did not meet the Department's Target Quantitation Limit (TQL). The permittee conducted additional samples that shows the pollutant is not detectable at a detection levels that meets the Target QL. Therefore, no limitation or monitoring is necessary.

Total Iron – The existing total iron monitoring is no longer necessary due to sufficiently low levels. The levels of the annual samples have ranged from 100 to 170 ug/L which is less than the instream criteria of 1,500 ug/L.

Total Manganese – The existing total manganese monitoring is no longer necessary due to sufficiently low levels. The levels of the annual samples have ranged from <20 to 50 ug/L which is less than the instream criteria of 1,000 ug/L.

Total Mercury – The existing total mercury monitoring is no longer necessary due to consistently non-detectable levels.

Nutrient Requirements

Quarterly monitoring was conducted for the discharge over the past permit term. The monitoring over the past permit term found the Total Nitrogen and Total Phosphorus to average 18.6 mg/l and 2.8 mg/l, respectively, based on available eDMR data. The quarterly monitoring will continue over the next permit term for this major NPDES discharge.

Best Professional Judgment (BPJ) Limitations

Comments: None needed besides the above technology and water quality-based limits.

Anti-Backsliding

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

E. Coli Monitoring

The draft permit will include monthly monitoring for e. coli consistent with recent changes to 25 PA Code §93 and current Department policy.

Whole Effluent Toxicity (WET)

Due to missed WET Tests for 2016 and 2017 and the failure to take a retest when the permittee was notified of the failure in June 2018, the permittee began conducting quarterly WET tests and entered the TRE process. A WET TRE Final Report was submitted June 3, 2021 that included four consecutive passing tests after the beginning of the TRE process in the fourth quarter of 2019 through the third quarter of 2020. However, failed tests subsequently occurred which were not addressed in the TRE Final Report.

Pathogen Test results are included in the table below for reference. The permittee had proposed using the Pathogen Test for Pimephales promelas (Fathead Minnow) due to failures in the traditional test and included it in addition to the traditional test as listed below. The Department is not accepting the Pathogen Test in place of the traditional test at this time.

For Outfall 001, ☒ **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: At least quarterly since Second quarter 2018

The dilution series used for the tests listed below was: 100%, 88%, 76%, 38%, and 19%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 76%.

Summary of Most Recent Four Quarters' Test Results

TST Data Analysis

Test Date	*Ceriodaphnia* Results (Pass/Fail)		*Pimephales* Results (Pass/Fail)	
	Survival	Reproduction	Survival	Growth
~~Dec 2020~~	~~Pass~~	~~Pass~~	~~Fail~~	~~Fail~~
Feb-March 2021	Pass	Pass	Fail	Fail
Feb-March 2021 (Pathogen Test)	-	-	Pass	Pass
March 2021	Pass	Pass	Fail	Fail
March 2021 (Pathogen Test)	-	-	Pass	Pass
May 2021	Pass	Pass	Pass	Pass
May 2021 (Pathogen Test)	-	-	Pass	Pass
August 2021	Pass	Pass	Pass	Pass
August 2021 (Pathogen Test)	-	-	Pass	Pass
October 2021	Pass	Pass	Pass	Pass
October 2021 (Pathogen Test)	-	-	Pass	Pass

***** *A "passing" result is that in which the replicate data for the TIWC is not statistically significant from the control condition. This is exhibited when the calculated t value ("T-Test Result") is greater than the critical t value. A "failing" result is exhibited when the calculated t value ("T-Test Result") is less than the critical t 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: It is noted that WET testing has passed since May 2021 and should the quarterly tests continue to pass through the first quarter of 2022, the permittee would have four consecutive quarters of passing results.

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

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

1. Determine IWC – Acute (IWCa):

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

[(1.0 MGD x 1.547) / ((0.468 cfs x 1) + (1.0 MGD x 1.547))] x 100 = **76%**

Is IWCa < 1%? ☐ **YES** ☒ **NO**

Therefore, type of Test for Permit: **Chronic**

2b. Determine Target IWCc (If Chronic Tests Required)

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

[(1.0 MGD x 1.547) / ((0.468 cfs x 1) + (1.0 MGD x 1.547))] x 100 = **76%**

3. Determine Dilution Series

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

Dilution Series = 100%, 88%, 76%, 38%, and 19%.

WET Limits

Has reasonable potential been determined? ☒ YES ☐ NO

Will WET limits be established in the permit? ☐ YES ☒ NO

If WET limits will be established, identify the species and the limit values for the permit (TU).

N/A

If WET limits will not be established, but reasonable potential was determined, indicate the rationale for not establishing WET limits:

Due to the chemical addition implemented under WQM Permit No. 1701407 A-2 it appears as though, in addition to Copper Removal for which it was intended, the WET of the effluent is improving and because the TRE process has not ended no WET limits are being included at this time in the draft NPDES Permit.

Proposed Effluent Limitations and Monitoring Requirements

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

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

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	Continuous	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
Dissolved Oxygen	XXX	XXX	6.0	XXX	XXX	XXX	1/day	Grab
Carbonaceous Biochemical Oxygen Demand (CBOD5) Nov 1 - Apr 30	200	300	XXX	24.0	36.0	48	2/week	24-Hr Composite
Carbonaceous Biochemical Oxygen Demand (CBOD5) May 1 - Oct 31	100	150	XXX	12.0	18.0	24	2/week	24-Hr Composite
Total Suspended Solids	250	375	XXX	30.0	45.0	60	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
E. Coli (No./100 ml)	XXX	XXX	XXX	XXX	XXX	Report	1/month	Grab
Ultraviolet light transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Metered
Total Nitrogen	Report Avg Qrtly	Report Daily Max	XXX	Report Avg Qrtly	Report Daily Max	XXX	1/quarter	24-Hr Composite
Ammonia-Nitrogen Nov 1 - Apr 30	37	56	XXX	4.5	6.0	9	2/week	24-Hr Composite
Ammonia-Nitrogen May 1 - Oct 31	12	18	XXX	1.5	2.0	3	2/week	24-Hr Composite

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

Parameter	Effluent Limitations						Monitoring Requirements	
	Mass Units (lbs/day) (1)		Concentrations (mg/L)				Minimum (2) Measurement Frequency	Required Sample Type
	Average Monthly	Weekly Average	Instantaneous Minimum	Average Monthly	Weekly Average	Instant. Maximum		
Total Phosphorus	Report Avg Qrtly	Report Daily Max	XXX	Report Avg Qrtly	Report Daily Max	XXX	1/quarter	24-Hr Composite
Aluminum, Total (ug/L)	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Chromium, Hexavalent (ug/L)	0.11	0.18 Daily Max	XXX	13.5	21.0 Daily Max	33.9	1/month	24-Hr Composite
Copper, Total (ug/L)	0.15	0.23 Daily Max	XXX	17.8	27.7 Daily Max	44.4	1/month	24-Hr Composite
Cyanide, Free (ug/L)	0.043	0.067 Daily Max	XXX	5.18	8.08 Daily Max	12.9	1/month	24-Hr Composite
Silver, Total (ug/L)	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Zinc, Total (ug/L)	XXX	Report Daily Max	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite

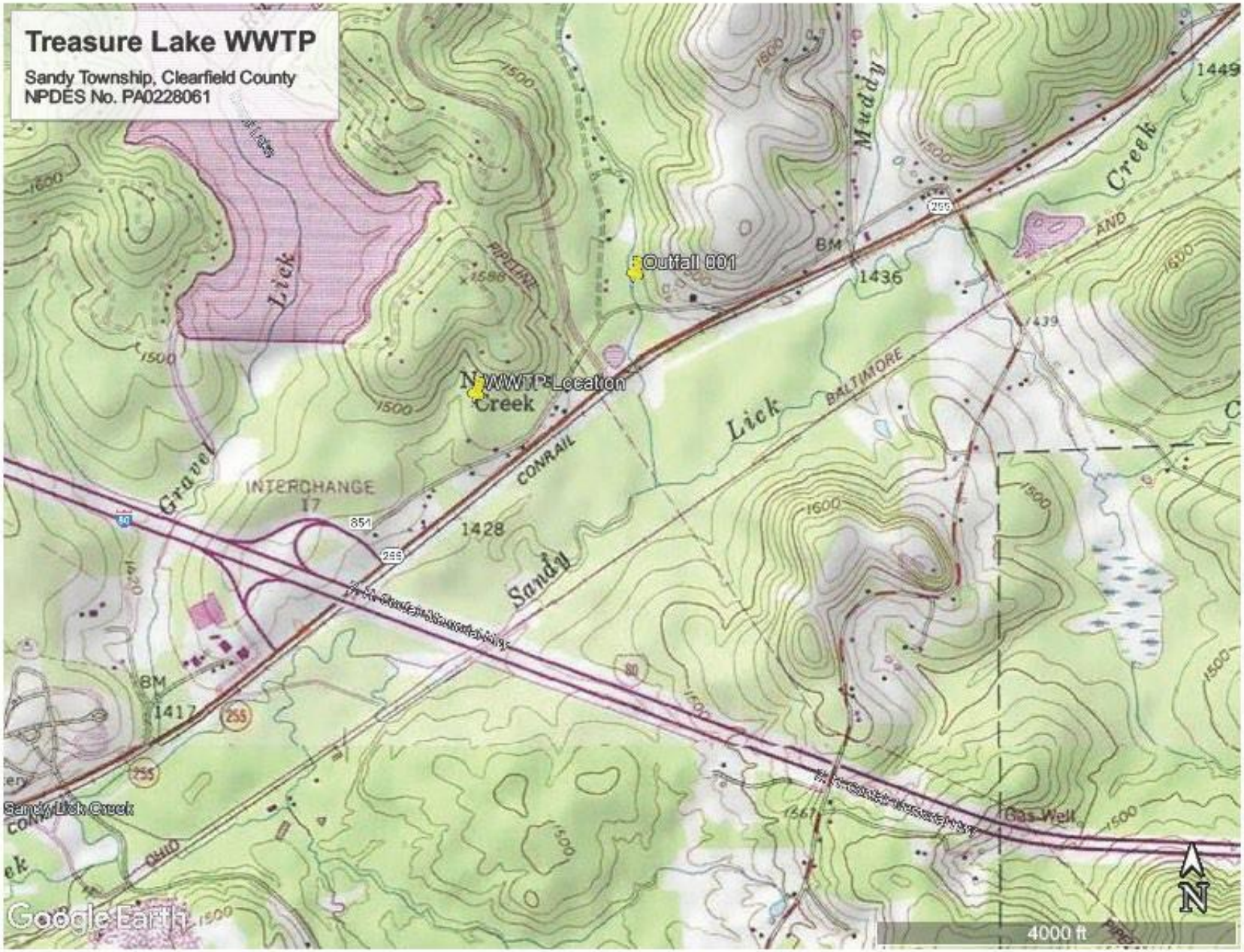
Compliance Sampling Location: Outfall 001

Other Comments: Monitoring for Hexavalent Chromium, Silver and Zinc are new as mentioned above. Monitoring for Iron, Manganese, Mercury, and TRC has been removed as mentioned above. Total Copper and Free Cyanide limits have been updated as mentioned above. UV Transmittance monitoring has been updated from weekly to daily as mentioned above consistent with Department policy for WWTPs. Monthly E. Coli monitoring is also now included in the permit consistent with 2021 changes to Chapter 93 of the Department's regulations and Department policy.

Tools and References Used to Develop Permit	
☒	WQM for Windows Model (see Attachment **B**)
☒	DEP Toxics Management Strategy Spreadsheet (see Attachment **C**)
☐	TRC Model Spreadsheet (see Attachment)
☐	Temperature Model Spreadsheet (see Attachment)
☐	Toxics Screening Analysis Spreadsheet (see Attachment)
☒	Water Quality Toxics Management Strategy, 361-0100-003, 4/06.
☒	Technical Guidance for the Development and Specification of Effluent Limitations, 362-0400-001, 10/97.
☐	Policy for Permitting Surface Water Diversions, 362-2000-003, 3/98.
☐	Policy for Conducting Technical Reviews of Minor NPDES Renewal Applications, 362-2000-008, 11/96.
☐	Technology-Based Control Requirements for Water Treatment Plant Wastes, 362-2183-003, 10/97.
☐	Technical Guidance for Development of NPDES Permit Requirements Steam Electric Industry, 362-2183-004, 12/97.
☐	Pennsylvania CSO Policy, 385-2000-011, 9/08.
☐	Water Quality Antidegradation Implementation Guidance, 391-0300-002, 11/03.
☐	Implementation Guidance Evaluation & Process Thermal Discharge (316(a)) Federal Water Pollution Act, 391-2000-002, 4/97.
☒	Determining Water Quality-Based Effluent Limits, 391-2000-003, 12/97.
☒	Implementation Guidance Design Conditions, 391-2000-006, 9/97.
☒	Technical Reference Guide (TRG) WQM 7.0 for Windows, Wasteload Allocation Program for Dissolved Oxygen and Ammonia Nitrogen, Version 1.0, 391-2000-007, 6/2004.
☐	Interim Method for the Sampling and Analysis of Osmotic Pressure on Streams, Brines, and Industrial Discharges, 391-2000-008, 10/1997.
☐	Implementation Guidance for Section 95.6 Management of Point Source Phosphorus Discharges to Lakes, Ponds, and Impoundments, 391-2000-010, 3/99.
☒	Technical Reference Guide (TRG) PENTOXSD for Windows, PA Single Discharge Wasteload Allocation Program for Toxics, Version 2.0, 391-2000-011, 5/2004.
☒	Implementation Guidance for Section 93.7 Ammonia Criteria, 391-2000-013, 11/97.
☐	Policy and Procedure for Evaluating Wastewater Discharges to Intermittent and Ephemeral Streams, Drainage Channels and Swales, and Storm Sewers, 391-2000-014, 4/2008.
☒	Implementation Guidance Total Residual Chlorine (TRC) Regulation, 391-2000-015, 11/1994.
☐	Implementation Guidance for Temperature Criteria, 391-2000-017, 4/09.
☐	Implementation Guidance for Section 95.9 Phosphorus Discharges to Free Flowing Streams, 391-2000-018, 10/97.
☐	Implementation Guidance for Application of Section 93.5(e) for Potable Water Supply Protection Total Dissolved Solids, Nitrite-Nitrate, Non-Priority Pollutant Phenolics and Fluorides, 391-2000-019, 10/97.
☐	Field Data Collection and Evaluation Protocol for Determining Stream and Point Source Discharge Design Hardness, 391-2000-021, 3/99.
☐	Implementation Guidance for the Determination and Use of Background/Ambient Water Quality in the Determination of Wasteload Allocations and NPDES Effluent Limitations for Toxic Substances, 391-2000-022, 3/1999.
☒	Design Stream Flows, 391-2000-023, 9/98.
☐	Field Data Collection and Evaluation Protocol for Deriving Daily and Hourly Discharge Coefficients of Variation (CV) and Other Discharge Characteristics, 391-2000-024, 10/98.
☐	Evaluations of Phosphorus Discharges to Lakes, Ponds and Impoundments, 391-3200-013, 6/97.
☐	Pennsylvania's Chesapeake Bay Tributary Strategy Implementation Plan for NPDES Permitting, 4/07.
☒	SOP: Establishing Effluent Limitations for Individual Sewage Permits, rev. 8/23/13; Whole Effluent Toxicity (WET), rev. 8/7/13.
☒	Other:

Attachments:

A. Discharge Location Map
B. WQM7.0
C. Toxics Management Strategy Spreadsheet


Treasure Lake WWTP
Sandy Township, Clearfield County
NPDES No. PA0228061
Outfall 001
WWTP Location
Muddy Creek
Lick
Gravel
INTERCHANGE 17
CONRAIL
BALTIMORE
Sandy
Gas Well
1436
1428
1417
BM
Google Earth
4000 ft
N

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
17C	48834	NARROWS CREEK	**0.480**	1431.00	6.99	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.065	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

Name	Permit Number	Existing Disc Flow (mgd)	Permitted Disc Flow (mgd)	Design Disc Flow (mgd)	Reserve Factor	Disc Temp (°C)	Disc pH
Treasure Lake	PA0228061	1.0000	0.0000	0.0000	0.000	20.00	7.00

Parameter Data

Parameter Name	Disc Conc (mg/L)	Trib Conc (mg/L)	Stream Conc (mg/L)	Fate Coef (1/days)
CBOD5	12.00	2.00	0.00	1.50
Dissolved Oxygen	6.00	8.24	0.00	0.00
NH3-N	1.50	0.00	0.00	0.70

Permit No. PA0228061

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
17C	48834	NARROWS CREEK	**0.001**	1420.00	8.00	0.00000	0.00	☑

Stream Data

Design Cond.	LFY (cfsm)	Trib Flow (cfs)	Stream Flow (cfs)	Rch Trav Time (days)	Rch Velocity (fps)	WD Ratio	Rch Width (ft)	Rch Depth (ft)	Tributary Temp (°C)	Tributary pH	Stream Temp (°C)	Stream pH
Q7-10	0.065	0.00	0.00	0.000	0.000	0.0	0.00	0.00	20.00	7.00	0.00	0.00
Q1-10		0.00	0.00	0.000	0.000							
Q30-10		0.00	0.00	0.000	0.000							

Discharge Data

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

Parameter Data

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

WQM 7.0 Hydrodynamic Outputs

SWP Basin	Stream Code	Stream Name
17C	48834	NARROWS 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												
0.480	0.46	0.00	0.46	1.547	0.00435	.561	17.86	31.81	0.20	0.147	20.00	7.00
Q1-10 Flow												
0.480	0.29	0.00	0.29	1.547	0.00435	NA	NA	NA	0.19	0.154	20.00	7.00
Q30-10 Flow												
0.480	0.62	0.00	0.62	1.547	0.00435	NA	NA	NA	0.21	0.140	20.00	7.00

Permit No. PA0228061

WQM 7.0 Modeling Specifications

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

WQM 7.0 D.O.Simulation

SWP Basin	Stream Code	Stream Name
17C	48834	NARROWS CREEK

RMI	Total Discharge Flow (mgd)	Analysis Temperature (°C)	Analysis pH
0.480	1.000	20.000	7.000
Reach Width (ft)	**Reach Depth (ft)**	**Reach WDRatio**	**Reach Velocity (fps)**
17.859	0.561	31.812	0.200
Reach CBOD5 (mg/L)	**Reach Kc (1/days)**	**Reach NH3-N (mg/L)**	**Reach Kn (1/days)**
9.72	1.422	1.16	0.700
Reach DO (mg/L)	**Reach Kr (1/days)**	**Kr Equation**	**Reach DO Goal (mg/L)**
6.510	8.256	Tsivoglou	6
Reach Travel Time (days)			
0.147			

Subreach Results

TravTime (days)	CBOD5 (mg/L)	NH3-N (mg/L)	D.O. (mg/L)
0.015	9.52	1.15	6.48
0.029	9.33	1.14	6.46
0.044	9.14	1.12	6.44
0.059	8.95	1.11	6.44
0.073	8.76	1.10	6.44
0.088	8.58	1.09	6.44
0.103	8.40	1.08	6.46
0.117	8.23	1.07	6.47
0.132	8.06	1.06	6.49
0.147	7.90	1.05	6.51

Permit No. PA0228061

WQM 7.0 Wasteload Allocations

SWP Basin	Stream Code	Stream Name
17C	48834	NARROWS 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
0.480	Treasure Lake	16.76	3	16.76	3	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
0.480	Treasure Lake	1.89	1.5	1.89	1.5	0	0

Dissolved Oxygen Allocations

RMI	Discharge Name	CBOD5		NH3-N		Dissolved Oxygen		Critical Reach	Percent Reduction
		Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)	Baseline (mg/L)	Multiple (mg/L)		
0.48	Treasure Lake	12	12	1.5	1.5	6	6	0	0

WQM 7.0 Effluent Limits

SWP Basin	Stream Code	Stream Name
17C	48834	NARROWS 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)
0.480	Treasure Lake	PA0228061	1.000	CBOD5	12		
				NH3-N	1.5	3	
				Dissolved Oxygen			6

Discharge Information

Instructions | Discharge | Stream

Facility: **Treasure Lake**

NPDES Permit No.: **PA0228061**

Outfall No.: **001**

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

Wastewater Description: **Domestic Wastewater**

Discharge Characteristics								
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
1	174	7.4						

					0 if left blank		0.5 if left blank		0 if left blank			1 if left blank	
	Discharge Pollutant	Units	Max Discharge Conc		Trib Conc	Stream Conc	Daily CV	Hourly CV	Stream CV	Fate Coeff	FOS	Criteria Mod	Chem Transl
Group 1	Total Dissolved Solids (PWS)	mg/L		509									
	Chloride (PWS)	mg/L		94.8									
	Bromide	mg/L		0.28									
	Sulfate (PWS)	mg/L		53									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		260									
	Total Antimony	µg/L	<	1									
	Total Arsenic	µg/L	<	1.5									
	Total Barium	µg/L		80									
	Total Beryllium	µg/L	<	0.1									
	Total Boron	µg/L		120									
	Total Cadmium	µg/L	<	0.123									
	Total Chromium (III)	µg/L	<	0.8									
	Hexavalent Chromium	µg/L		60									
	Total Cobalt	µg/L	<	0.7									
	Total Copper	µg/L		11									
	Free Cyanide	µg/L		4									
	Total Cyanide	µg/L	<	6									
	Dissolved Iron	µg/L		18									
	Total Iron	µg/L		130									
	Total Lead	µg/L	<	0.5									
	Total Manganese	µg/L		15									
	Total Mercury	µg/L	<	0.2									
	Total Nickel	µg/L		6									
	Total Phenols (Phenolics) (PWS)	µg/L	<	15.3									
	Total Selenium	µg/L	<	5									
	Total Silver	µg/L	<	1.37									
	Total Thallium	µg/L	<	0.068									
	Total Zinc	µg/L		26									
	Total Molybdenum	µg/L	<	3.4									
	Acrolein	µg/L	<	1.95									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	0.51									
	Benzene	µg/L	<	0.43									

Bromoform	µg/L	<	0.34									

Group 3	Carbon Tetrachloride	µg/L	<	0.5									
	Chlorobenzene	µg/L	<	0.21									
	Chlorodibromomethane	µg/L	<	0.39									
	Chloroethane	µg/L	<	0.42									
	2-Chloroethyl Vinyl Ether	µg/L	<	4									
	Chloroform	µg/L	<	0.51									
	Dichlorobromomethane	µg/L	<	0.32									
	1,1-Dichloroethane	µg/L	<	0.42									
	1,2-Dichloroethane	µg/L	<	0.39									
	1,1-Dichloroethylene	µg/L	<	0.33									
	1,2-Dichloropropane	µg/L	<	0.42									
	1,3-Dichloropropylene	µg/L	<	0.5									
	1,4-Dioxane	µg/L	<	20									
	Ethylbenzene	µg/L	<	0.27									
	Methyl Bromide	µg/L	<	0.46									
	Methyl Chloride	µg/L	<	0.36									
	Methylene Chloride	µg/L	<	0.45									
	1,1,2,2-Tetrachloroethane	µg/L	<	0.36									
	Tetrachloroethylene	µg/L	<	0.39									
	Toluene	µg/L	<	0.33									
	1,2-trans-Dichloroethylene	µg/L	<	0.39									
	1,1,1-Trichloroethane	µg/L	<	0.38									
	1,1,2-Trichloroethane	µg/L	<	0.24									
	Trichloroethylene	µg/L	<	0.46									
	Vinyl Chloride	µg/L	<	0.46									
Group 4	2-Chlorophenol	µg/L	<	0.65									
	2,4-Dichlorophenol	µg/L	<	1.25									
	2,4-Dimethylphenol	µg/L	<	1.3									
	4,6-Dinitro-o-Cresol	µg/L	<	4.5									
	2,4-Dinitrophenol	µg/L	<	4.3									
	2-Nitrophenol	µg/L	<	1.25									
	4-Nitrophenol	µg/L	<	0.95									
	p-Chloro-m-Cresol	µg/L	<	1.65									
	Pentachlorophenol	µg/L	<	4.85									
	Phenol	µg/L	<	1.25									
	2,4,6-Trichlorophenol	µg/L	<	1.2									
Group 5	Acenaphthene	µg/L	<	1.3									
	Acenaphthylene	µg/L	<	1.1									
	Anthracene	µg/L	<	0.65									
	Benzidine	µg/L	<	1.75									
	Benzo(a)Anthracene	µg/L	<	1.05									
	Benzo(a)Pyrene	µg/L	<	1.45									
	3,4-Benzofluoranthene	µg/L	<	1.55									
	Benzo(ghi)Perylene	µg/L	<	1.6									
	Benzo(k)Fluoranthene	µg/L	<	2									
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.75									
	Bis(2-Chloroethyl)Ether	µg/L	<	1.25									
	Bis(2-Chloroisopropyl)Ether	µg/L	<	1.7									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<	3.2									
	4-Bromophenyl Phenyl Ether	µg/L	<	0.95									
	Butyl Benzyl Phthalate	µg/L	<	1.9									
	2-Chloronaphthalene	µg/L	<	1.4									
	4-Chlorophenyl Phenyl Ether	µg/L	<	1.45									
	Chrysene	µg/L	<	2.25									
	Dibenzo(a,h)Anthrancene	µg/L	<	1.4									
	1,2-Dichlorobenzene	µg/L	<	1.6									
	1,3-Dichlorobenzene	µg/L	<	0.85									
	1,4-Dichlorobenzene	µg/L	<	0.75									
	3,3-Dichlorobenzidine	µg/L	<	0.65									
	Diethyl Phthalate	µg/L	<	1.35									
	Dimethyl Phthalate	µg/L	<	1.15									
	Di-n-Butyl Phthalate	µg/L	<	1.45									
	2,4-Dinitrotoluene	µg/L	<	3.85									

	2,6-Dinitrotoluene	µg/L	<	1.6									
	Di-n-Octyl Phthalate	µg/L		1.6									
	1,2-Diphenylhydrazine	µg/L	<	1									
	Fluoranthene	µg/L	<	1.75									
	Fluorene	µg/L	<	1.25									
	Hexachlorobenzene	µg/L	<	1.25									
	Hexachlorobutadiene	µg/L	<	0.5									
	Hexachlorocyclopentadiene	µg/L	<	1.1									
	Hexachloroethane	µg/L	<	1.3									
	Indeno(1,2,3-cd)Pyrene	µg/L	<	1.25									
	Isophorone	µg/L	<	1.15									
	Naphthalene	µg/L	<	1.25									
	Nitrobenzene	µg/L	<	1.3									
	n-Nitrosodimethylamine	µg/L	<	2									
	n-Nitrosodi-n-Propylamine	µg/L	<	1.35									
	n-Nitrosodiphenylamine	µg/L	<	1.55									
	Phenanthrene	µg/L	<	1.05									
	Pyrene	µg/L	<	0.8									
	1,2,4-Trichlorobenzene	µg/L	<	0.5									
Group 6	Aldrin	µg/L	<										
	alpha-BHC	µg/L	<										
	beta-BHC	µg/L	<										
	gamma-BHC	µg/L	<										
	delta BHC	µg/L	<										
	Chlordane	µg/L	<										
	4,4-DDT	µg/L	<										
	4,4-DDE	µg/L	<										
	4,4-DDD	µg/L	<										
	Dieldrin	µg/L	<										
	alpha-Endosulfan	µg/L	<										
	beta-Endosulfan	µg/L	<										
	Endosulfan Sulfate	µg/L	<										
	Endrin	µg/L	<										
	Endrin Aldehyde	µg/L	<										
	Heptachlor	µg/L	<										
	Heptachlor Epoxide	µg/L	<										
	PCB-1016	µg/L	<										
	PCB-1221	µg/L	<										
	PCB-1232	µg/L	<										
	PCB-1242	µg/L	<										
	PCB-1248	µg/L	<										
	PCB-1254	µg/L	<										
	PCB-1260	µg/L	<										
	PCBs, Total	µg/L	<										
	Toxaphene	µg/L	<										
	2,3,7,8-TCDD	ng/L	<										
Group 7	Gross Alpha	pCi/L											
	Total Beta	pCi/L	<										
	Radium 226/228	pCi/L	<										
	Total Strontium	µg/L	<										
	Total Uranium	µg/L	<										
	Osmotic Pressure	mOs/kg											

Stream / Surface Water Information

Treasure Lake, NPDES Permit No. PA0228061, Outfall 001

Instructions | Discharge | *Stream*

Receiving Surface Water Name: **Narrows Creek**

No. Reaches to Model: **1**

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	048834	0.48	1431	6.99			Yes
End of Reach 1	048834	0	1420	8			Yes

Q ***7-10***

Location	RMI	LFY (cfs/mi²)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	0.48	0.0652										100	7		
End of Reach 1	0	0.0652													

Q ***h***

Location	RMI	LFY (cfs/mi²)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	0.48														
End of Reach 1	0														

Model Results

Treasure Lake, NPDES Permit No. PA0228061, Outfall 001

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

☑ ***Hydrodynamics***

Q 7-10

RMI	Stream Flow (cfs)	PWS Withdrawal (cfs)	Net Stream Flow (cfs)	Discharge Analysis Flow (cfs)	Slope (ft/ft)	Depth (ft)	Width (ft)	W/D Ratio	Velocity (fps)	Travel Time (days)	Complete Mix Time (min)
0.48	0.46		0.46	1.547	0.004	0.561	17.861	31.815	0.2	0.147	0.817
0	0.52		0.522								

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)
0.48	3.74		3.74	1.547	0.004	0.86	17.861	20.758	0.344	0.085	4.16
0	4.207		4.21								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 0.817 PMF: 1 Analysis Hardness (mg/l): 157.16 Analysis pH: 7.27

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	
Total Aluminum	0	0		0	750	750	971	
Total Antimony	0	0		0	1,100	1,100	1,424	
Total Arsenic	0	0		0	340	340	440	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	27,187	
Total Boron	0	0		0	8,100	8,100	10,486	
Total Cadmium	0	0		0	3.125	3.38	4.37	Chem Translator of 0.925 applied
Total Chromium (III)	0	0		0	825.087	2,611	3,380	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	21.1	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	123	
Total Copper	0	0		0	20.576	21.4	27.7	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	28.5	

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	105.266	145	188	Chem Translator of 0.725 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	2.13	Chem Translator of 0.85 applied
Total Nickel	0	0		0	686.390	688	890	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	7.000	8.24	10.7	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	84.1	
Total Zinc	0	0		0	171.877	176	228	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	3.88	
Acrylonitrile	0	0		0	650	650	841	
Benzene	0	0		0	640	640	829	
Bromoform	0	0		0	1,800	1,800	2,330	
Carbon Tetrachloride	0	0		0	2,800	2,800	3,625	
Chlorobenzene	0	0		0	1,200	1,200	1,554	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	23,303	
Chloroform	0	0		0	1,900	1,900	2,460	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	19,419	
1,1-Dichloroethylene	0	0		0	7,500	7,500	9,710	
1,2-Dichloropropane	0	0		0	11,000	11,000	14,241	
1,3-Dichloropropylene	0	0		0	310	310	401	
Ethylbenzene	0	0		0	2,900	2,900	3,754	
Methyl Bromide	0	0		0	550	550	712	
Methyl Chloride	0	0		0	28,000	28,000	36,249	
Methylene Chloride	0	0		0	12,000	12,000	15,535	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	1,295	
Tetrachloroethylene	0	0		0	700	700	906	
Toluene	0	0		0	1,700	1,700	2,201	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	8,803	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	3,884	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	4,402	
Trichloroethylene	0	0		0	2,300	2,300	2,978	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	725	
2,4-Dichlorophenol	0	0		0	1,700	1,700	2,201	
2,4-Dimethylphenol	0	0		0	660	660	854	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	104	
2,4-Dinitrophenol	0	0		0	660	660	854	
2-Nitrophenol	0	0		0	8,000	8,000	10,357	
4-Nitrophenol	0	0		0	2,300	2,300	2,978	
p-Chloro-m-Cresol	0	0		0	160	160	207	
Pentachlorophenol	0	0		0	11.461	11.5	14.8	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	596	

Acenaphthene	0	0		0	83	83.0	107	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	300	300	388	
Benzo(a)Anthracene	0	0		0	0.5	0.5	0.65	
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	38,838	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	5,826	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	350	
Butyl Benzyl Phthalate	0	0		0	140	140	181	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	820	820	1,062	
1,3-Dichlorobenzene	0	0		0	350	350	453	
1,4-Dichlorobenzene	0	0		0	730	730	945	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	5,178	
Dimethyl Phthalate	0	0		0	2,500	2,500	3,237	
Di-n-Butyl Phthalate	0	0		0	110	110	142	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	2,071	
2,6-Dinitrotoluene	0	0		0	990	990	1,282	
1,2-Diphenylhydrazine	0	0		0	15	15.0	19.4	
Fluoranthene	0	0		0	200	200	259	
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	12.9	
Hexachlorocyclopentadiene	0	0		0	5	5.0	6.47	
Hexachloroethane	0	0		0	60	60.0	77.7	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	12,946	
Naphthalene	0	0		0	140	140	181	
Nitrobenzene	0	0		0	4,000	4,000	5,178	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	22,008	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	388	
Phenanthrene	0	0		0	5	5.0	6.47	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	168	

☑ ***CFC*** CCT (min): 0.817 PMF: 1 Analysis Hardness (mg/l): 157.16 Analysis pH: 7.27

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	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	285	
Total Arsenic	0	0		0	150	150	194	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	5,308	
Total Boron	0	0		0	1,600	1,600	2,071	
Total Cadmium	0	0		0	0.337	0.38	0.49	Chem Translator of 0.89 applied
Total Chromium (III)	0	0		0	107.327	125	162	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	13.5	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	24.6	
Total Copper	0	0		0	13.179	13.7	17.8	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	6.73	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	1,942	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	4.102	5.66	7.32	Chem Translator of 0.725 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	1.17	Chem Translator of 0.85 applied
Total Nickel	0	0		0	76.237	76.5	99.0	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	6.46	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	16.8	
Total Zinc	0	0		0	173.283	176	228	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	3.88	
Acrylonitrile	0	0		0	130	130	168	
Benzene	0	0		0	130	130	168	
Bromoform	0	0		0	370	370	479	
Carbon Tetrachloride	0	0		0	560	560	725	
Chlorobenzene	0	0		0	240	240	311	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	4,531	
Chloroform	0	0		0	390	390	505	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	4,013	
1,1-Dichloroethylene	0	0		0	1,500	1,500	1,942	
1,2-Dichloropropane	0	0		0	2,200	2,200	2,848	
1,3-Dichloropropylene	0	0		0	61	61.0	79.0	
Ethylbenzene	0	0		0	580	580	751	
Methyl Bromide	0	0		0	110	110	142	
Methyl Chloride	0	0		0	5,500	5,500	7,120	
Methylene Chloride	0	0		0	2,400	2,400	3,107	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	272	
Tetrachloroethylene	0	0		0	140	140	181	
Toluene	0	0		0	330	330	427	

1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	1,812	
1,1,1-Trichloroethane	0	0		0	610	610	790	
1,1,2-Trichloroethane	0	0		0	680	680	880	
Trichloroethylene	0	0		0	450	450	583	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	142	
2,4-Dichlorophenol	0	0		0	340	340	440	
2,4-Dimethylphenol	0	0		0	130	130	168	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	20.7	
2,4-Dinitrophenol	0	0		0	130	130	168	
2-Nitrophenol	0	0		0	1,600	1,600	2,071	
4-Nitrophenol	0	0		0	470	470	608	
p-Chloro-m-Cresol	0	0		0	500	500	647	
Pentachlorophenol	0	0		0	8.793	8.79	11.4	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	118	
Acenaphthene	0	0		0	17	17.0	22.0	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	76.4	
Benzo(a)Anthracene	0	0		0	0.1	0.1	0.13	
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	7,768	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	1,178	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	69.9	
Butyl Benzyl Phthalate	0	0		0	35	35.0	45.3	
2-Chloronaphthalene	0	0		0	N/A	N/A	N/A	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	160	160	207	
1,3-Dichlorobenzene	0	0		0	69	69.0	89.3	
1,4-Dichlorobenzene	0	0		0	150	150	194	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	1,036	
Dimethyl Phthalate	0	0		0	500	500	647	
Di-n-Butyl Phthalate	0	0		0	21	21.0	27.2	
2,4-Dinitrotoluene	0	0		0	320	320	414	
2,6-Dinitrotoluene	0	0		0	200	200	259	
1,2-Diphenylhydrazine	0	0		0	3	3.0	3.88	
Fluoranthene	0	0		0	40	40.0	51.8	
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	2.59	

Hexachlorocyclopentadiene	0	0		0	1	1.0	1.29	
Hexachloroethane	0	0		0	12	12.0	15.5	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	2,719	
Naphthalene	0	0		0	43	43.0	55.7	
Nitrobenzene	0	0		0	810	810	1,049	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	4,402	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	76.4	
Phenanthrene	0	0		0	1	1.0	1.29	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	33.7	

☑ ***THH*** CCT (min): 0.817 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	7.25	
Total Arsenic	0	0		0	10	10.0	12.9	
Total Barium	0	0		0	2,400	2,400	3,107	
Total Boron	0	0		0	3,100	3,100	4,013	
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	5.18	
Dissolved Iron	0	0		0	300	300	388	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	1,000	1,000	1,295	
Total Mercury	0	0		0	0.050	0.05	0.065	
Total Nickel	0	0		0	610	610	790	
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	0.31	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	3	3.0	3.88	
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	129	
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	42.7	
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	88.0	
Methyl Bromide	0	0		0	100	100.0	129	
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	73.8	
1,2-trans-Dichloroethylene	0	0		0	100	100.0	129	
1,1,1-Trichloroethane	0	0		0	10,000	10,000	12,946	
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	38.8	
2,4-Dichlorophenol	0	0		0	10	10.0	12.9	
2,4-Dimethylphenol	0	0		0	100	100.0	129	
4,6-Dinitro-o-Cresol	0	0		0	2	2.0	2.59	
2,4-Dinitrophenol	0	0		0	10	10.0	12.9	
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	5,178	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	70	70.0	90.6	
Anthracene	0	0		0	300	300	388	
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	259	
Bis(2-Ethylhexyl)Phthalate	0	0		0	N/A	N/A	N/A	
4-Bromophenyl Phenyl Ether	0	0		0	N/A	N/A	N/A	

Butyl Benzyl Phthalate	0	0		0	0.1	0.1	0.13	
2-Chloronaphthalene	0	0		0	800	800	1,036	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	1,000	1,000	1,295	
1,3-Dichlorobenzene	0	0		0	7	7.0	9.06	
1,4-Dichlorobenzene	0	0		0	300	300	388	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	600	600	777	
Dimethyl Phthalate	0	0		0	2,000	2,000	2,589	
Di-n-Butyl Phthalate	0	0		0	20	20.0	25.9	
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	25.9	
Fluorene	0	0		0	50	50.0	64.7	
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	5.18	
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	44.0	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	10	10.0	12.9	
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	25.9	
1,2,4-Trichlorobenzene	0	0		0	0.07	0.07	0.091	

☑ ***CRL*** CCT (min): 4.160 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
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	0.21	
Benzene	0	0		0	0.58	0.58	1.98	
Bromoform	0	0		0	7	7.0	23.9	
Carbon Tetrachloride	0	0		0	0.4	0.4	1.37	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.8	0.8	2.73	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	19.5	
Dichlorobromomethane	0	0		0	0.95	0.95	3.25	
1,2-Dichloroethane	0	0		0	9.9	9.9	33.8	
1,1-Dichloroethylene	0	0		0	N/A	N/A	N/A	
1,2-Dichloropropane	0	0		0	0.9	0.9	3.08	
1,3-Dichloropropylene	0	0		0	0.27	0.27	0.92	
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	68.3	
1,1,2,2-Tetrachloroethane	0	0		0	0.2	0.2	0.68	
Tetrachloroethylene	0	0		0	10	10.0	34.2	
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	1.88	
Trichloroethylene	0	0		0	0.6	0.6	2.05	
Vinyl Chloride	0	0		0	0.02	0.02	0.068	
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	0.1	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.5	1.5	5.13	
Acenaphthene	0	0		0	N/A	N/A	N/A	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	0.0001	0.0001	0.0003	
Benzo(a)Anthracene	0	0		0	0.001	0.001	0.003	
Benzo(a)Pyrene	0	0		0	0.0001	0.0001	0.0003	
3,4-Benzofluoranthene	0	0		0	0.001	0.001	0.003	
Benzo(k)Fluoranthene	0	0		0	0.01	0.01	0.034	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	0.1	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	0.32	0.32	1.09	
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	0.41	
Dibenzo(a,h)Anthrancene	0	0		0	0.0001	0.0001	0.0003	
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	0.17	
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	0.17	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	0.17	
1,2-Diphenylhydrazine	0	0		0	0.03	0.03	0.1	
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	0.0003	
Hexachlorobutadiene	0	0		0	0.01	0.01	0.034	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	0.1	0.1	0.34	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.001	0.001	0.003	
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	0.002	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	0.017	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	11.3	

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	

☑ ***Recommended WQBELs & Monitoring Requirements***

No. Samples/Month: 4

	Mass Limits		*Concentration Limits*						
Pollutants	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units	Governing WQBEL	WQBEL Basis	Comments
Total Aluminum	Report	Report	Report	Report	Report	µg/L	750	AFC	Discharge Conc > 10% WQBEL (no RP)
Hexavalent Chromium	0.11	0.18	13.5	21.0	33.6	µg/L	13.5	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Total Copper	0.15	0.23	17.8	27.7	44.4	µg/L	17.8	CFC	Discharge Conc ≥ 50% WQBEL (RP)
Free Cyanide	0.043	0.067	5.18	8.08	12.9	µg/L	5.18	THH	Discharge Conc ≥ 50% WQBEL (RP)
Total Silver	Report	Report	Report	Report	Report	µg/L	8.24	AFC	Discharge Conc > 10% WQBEL (no RP)
Total Zinc	Report	Report	Report	Report	Report	µg/L	176	AFC	Discharge Conc > 10% WQBEL (no RP)

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

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	3,107	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	2,071	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	0.49	µg/L	Discharge Conc < TQL
Total Chromium (III)	162	µg/L	Discharge Conc < TQL
Total Cobalt	24.6	µg/L	Discharge Conc < TQL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	388	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	1,942	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	7.32	µg/L	Discharge Conc < TQL
Total Manganese	1,295	µg/L	Discharge Conc ≤ 10% WQBEL

Total Mercury	0.065	µg/L	Discharge Conc < TQL
Total Nickel	99.0	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	PWS Not Applicable
Total Selenium	6.46	µg/L	Discharge Conc < TQL
Total Thallium	0.31	µg/L	Discharge Conc < TQL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	3.0	µg/L	Discharge Conc < TQL
Acrylonitrile	0.21	µg/L	Discharge Conc < TQL
Benzene	1.98	µg/L	Discharge Conc < TQL
Bromoform	23.9	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	1.37	µg/L	Discharge Conc < TQL
Chlorobenzene	129	µg/L	Discharge Conc < TQL
Chlorodibromomethane	2.73	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	4,531	µg/L	Discharge Conc < TQL
Chloroform	19.5	µg/L	Discharge Conc ≤ 25% WQBEL
Dichlorobromomethane	3.25	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	33.8	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	42.7	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	3.08	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	0.92	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	88.0	µg/L	Discharge Conc < TQL
Methyl Bromide	129	µg/L	Discharge Conc < TQL
Methyl Chloride	7,120	µg/L	Discharge Conc < TQL
Methylene Chloride	68.3	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	0.68	µg/L	Discharge Conc < TQL
Tetrachloroethylene	34.2	µg/L	Discharge Conc < TQL
Toluene	73.8	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	129	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	790	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	1.88	µg/L	Discharge Conc < TQL
Trichloroethylene	2.05	µg/L	Discharge Conc < TQL
Vinyl Chloride	0.068	µg/L	Discharge Conc < TQL
2-Chlorophenol	38.8	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	12.9	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	129	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	2.59	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	12.9	µg/L	Discharge Conc < TQL
2-Nitrophenol	2,071	µg/L	Discharge Conc < TQL
4-Nitrophenol	608	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	160	µg/L	Discharge Conc < TQL
Pentachlorophenol	0.1	µg/L	Discharge Conc < TQL
Phenol	5,178	µg/L	Discharge Conc < TQL

2,4,6-Trichlorophenol	5.13	µg/L	Discharge Conc < TQL
Acenaphthene	22.0	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	388	µg/L	Discharge Conc < TQL
Benzidine	0.0003	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	0.003	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	0.0003	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	0.003	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	0.034	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	0.1	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	259	µg/L	Discharge Conc < TQL
Bis(2-Ethylhexyl)Phthalate	1.09	µg/L	Discharge Conc < TQL
4-Bromophenyl Phenyl Ether	69.9	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	0.13	µg/L	Discharge Conc < TQL
2-Chloronaphthalene	1,036	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	0.41	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	0.0003	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	207	µg/L	Discharge Conc ≤ 25% WQBEL
1,3-Dichlorobenzene	9.06	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	194	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	0.17	µg/L	Discharge Conc < TQL
Diethyl Phthalate	777	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	647	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	25.9	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	0.17	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	0.17	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	0.1	µg/L	Discharge Conc < TQL
Fluoranthene	25.9	µg/L	Discharge Conc < TQL
Fluorene	64.7	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.0003	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	0.034	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	1.29	µg/L	Discharge Conc < TQL
Hexachloroethane	0.34	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.003	µg/L	Discharge Conc < TQL
Isophorone	44.0	µg/L	Discharge Conc < TQL
Naphthalene	55.7	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	12.9	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.002	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	0.017	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	11.3	µg/L	Discharge Conc < TQL
Phenanthrene	1.29	µg/L	Discharge Conc < TQL

Pyrene	25.9	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	0.091	µg/L	Discharge Conc < TQL