pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Southwest Regional Office
CLEAN WATER PROGRAM

Application Type	**Renewal**	Application No.	**PA0022241**
Facility Type	**Municipal**	APS ID	**651218**
Major / Minor	**Major**	Authorization ID	**1216927**

NPDES PERMIT FACT SHEET
INDIVIDUAL SEWAGE

Applicant and Facility Information

Applicant Name	**Borough of California**	Facility Name	**California Borough STP**
Applicant Address	225 3rd Street	Facility Address	1 Mechanic Street
	California, PA 15419		California, PA 15417
Applicant Contact	Mr. Patsy Alfano	Facility Contact	Mr. Doug Baker
Applicant Phone	(724) 938-8878	Facility Phone	(724) 938-8644
Client ID	2933	Site ID	253731
Ch 94 Load Status	Not Overloaded	Municipality	California Borough
Connection Status	No Limitations	County	Washington
Date Application Received	February 13, 2018	EPA Waived?	No
Date Application Accepted	February 16, 2018	If No, Reason	Major Facility

Purpose of Application: Application for a renewal of an existing NPDES Permit for the discharge of treated Sewage.

Summary of Review

The applicant has applied for a renewal of an existing NPDES Permit, Permit No. PA0022241, which was previously issued by the Department on June 18, 2013. That permit expired on June 30, 2018.

WQM Permit 6312403, issued on March 21, 2013, approved construction of a new STP with a hydraulic design capacity of 1.20 MGD and organic capacity of 1800 lbs/day. Construction was completed in January of 2015. The existing treatment process consists of 2 SBRs, 1 aerobic digester, UV disinfection and a centrifuge for dewatering of digested sludge. Dewatered solids are disposed of at Chestnut Valley Landfill (Permit No. 100419).

The receiving stream, Monongahela River, is classified as a WWF and is located in State Watershed No. 19-C.

The applicant has complied with Act 14 Notifications and no comments were received.

The application states there are no stormwater related outfalls located at the STP. Part C will not contain language titled "Requirements Applicable to Stormwater Outfalls".

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

Approve	Deny	Signatures	Date
X		William C. Mitchell, E.I.T. / Project Manager	February 4, 2021
X		Christopher Kriley, P.E. / Clean Water Program Manager	February 5, 2021

Summary of Review
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.

Discharge, Receiving Waters and Water Supply Information

Outfall No.	001	Design Flow (MGD)	1.2
Latitude	40° 04’ 11.00”	Longitude	79° 53’ 44.00”
Quad Name	California	Quad Code	1806
Wastewater Description:	Sewage Effluent		
Receiving Waters	Monongahela River	Stream Code	37185
NHD Com ID		RMI	51.4
Drainage Area	5130	Yield (cfs/mi^2)	
Q_{7-10} Flow (cfs)	530	Q_{7-10} Basis	US Army Corp of Engineers & USGS StreamStats
Elevation (ft)	744	Slope (ft/ft)	0.0001
Watershed No.	19-C	Chapter 93 Class.	WWF
Existing Use		Existing Use Qualifier	
Exceptions to Use		Exceptions to Criteria	
Assessment Status	Impaired		
Cause(s) of Impairment	PCB		
Source(s) of Impairment	Source Unknown		
TMDL Status	Final	Name	Monongahela River TMDL

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

Nearest Downstream Public Water Supply Intake	Newell Municipal Authority		
PWS Waters	Monongahela River	Flow at Intake (cfs)	
PWS RMI	50.6	Distance from Outfall (mi)	0.8

Changes Since Last Permit Issuance: NONE

Other Comments: The discharge is to the Monongahela River which has an EPA Approved TMDL and is impaired by PCBs and Chlordane. No WLAs have been developed for this sewage discharge as neither PCB nor Chlordane is typically found in sewage, but instead found in legacy sediments.

Treatment Facility Summary				
Treatment Facility Name: California Borough STP				
WQM Permit No.	**Issuance Date**			
6312403	3/21/2013			
Waste Type	**Degree of Treatment**	**Process Type**	**Disinfection**	**Avg Annual Flow (MGD)**
Sewage	Secondary	Sequencing Batch Reactor	Ultraviolet	0.598
Hydraulic Capacity (MGD)	**Organic Capacity (lbs/day)**	**Load Status**	**Biosolids Treatment**	**Biosolids Use/Disposal**
1.2	1800	Not Overloaded	Centrifugation	Landfill

Changes Since Last Permit Issuance: None

Compliance History

Operations Compliance Check Summary Report

Facility: California_Borough_STP

NPDES Permit No.: PA0022241

Compliance Review Period: 12/14/2015 – 12/14/2020

Open Violations by Client Summary

None.

Inspection Summary

INSP ID	INSPECTED DATE	INSP TYPE	AGENCY	INSPECTION RESULT DESC	# OF VIOLATIONS
3084490	09/25/2020	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	0
3080262	09/02/2020	Administrative/File Review	PA Dept of Environmental Protection	Violation(s) Noted	1
2781463	04/25/2018	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	0
2781427	03/23/2018	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	0
2660285	10/19/2017	Routine/Partial Inspection	PA Dept of Environmental Protection	No Violations Noted	0
2571724	03/16/2017	Compliance Evaluation	PA Dept of Environmental Protection	No Violations Noted	0
2501438	07/18/2016	Compliance Evaluation	PA Dept of Environmental Protection	Violation(s) Noted	1

Violation Summary

VIOL ID	VIOLATION DATE	VIOLATION TYPE	VIOLATION TYPE DESC	RESOLVED DATE
894210	09/02/2020	92A.62	NPDES - Failure to pay annual fee	11/18/2020
764398	07/18/2016	92A.41(A)10C	NPDES - Failure to collect representative samples	01/04/2017

Enforcement Summary

No enforcement actions.

DMR Violation Summary

Current eDMR user.

Effluent limit violation summary 12/14/2015 – 12/14/2020:

MONITORING END DATE	OUTFALL	PARAMETER	SAMPLE VALUE	PERMIT VALUE	UNIT OF MEASURE	STATISTICAL BASE CODE
07/31/2018	001	Fecal Coliform	1050	1000	CFU/100 ml	Instantaneous Maximum
03/31/2019	001	Fecal Coliform	12100	10000	CFU/100 ml	Instantaneous Maximum
06/30/2019	001	Fecal Coliform	4350	1000	CFU/100 ml	Instantaneous Maximum

Compliance Status:

Facility has no compliance issues.

Completed by: David Roote

Completed date: 12/14/2020

Development of Effluent Limitations

Outfall No. 001 **Design Flow (MGD)** 1.2
Latitude 40º 4' 11.00" **Longitude** -79º 53' 44.00"
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)
Total Residual Chlorine	0.5	Average Monthly	-	92a.48(b)(2)

Comments: Water Quality Analysis Modeling for CBOD5, DO and Ammonia-Nitrogen is not necessary, and we will again re-impose Federal Minimum Secondary Effluent Limitations due to the large dilution available in the Monongahela River. Q7-10 flow of the Monongahela River at the point of discharge is 530 cfs. The instream to wasteflow dilution ration = total stream flow (531.85667 cfs) / discharge flow (1.85667 cfs) = 286/1.

For existing discharges (NPDES Renewal Applications), if WQM7.0 modeling results for summer indicates that an average monthly warm period limit of 25 mg/L (default in model) is acceptable for ammonia-nitrogen, a year-round monitoring requirement, at a minimum should be established. Due to the large dilution ration discussed above, assume that a monthly warm period limit of 25 mg/L is acceptable for ammonia-nitrogen and impose a year-round monitoring requirement for ammonia-nitrogen that is consistent with Table 6-3 of the Permit Writers Manual. Application data for Outfall # 001 indicates that long-term average ammonia-nitrogen concentration in the discharge is 0.74 mg/L.

Water Quality-Based Limitations

A “Reasonable Potential Analysis” (Attachment Toxic Management Spreadsheet) was conducted. No limitations were determined through water quality modeling, using DEPs Toxic Management Spreadsheet Version 1.1, and no WQBELs will be imposed on this facility during this permit cycle. For modeling purposes, the river width is 542.5 ft. (measured from Google Earth Pro) and an assumed river depth of 12 ft.

Best Professional Judgment (BPJ) Limitations

Comments: A Dissolved Oxygen minimum limitation of 4.0 mg/L will be implemented based on the standard in 25 PA Code Chapter 93 and best professional judgment.

Anti-Backsliding

Section 402(o) of the Clean Water Act (CWA), enacted in the Water Quality Act of 1987, establishes anti-backsliding rules governing two situations. The first situation occurs when a permittee seeks to revise a Technology-Based effluent limitation based on BPJ to reflect a subsequently promulgated effluent guideline which is less stringent. The second situation addressed by Section 402(o) arises when a permittee seeks relaxation of an effluent limitation which is based upon a State treatment standard of water quality standard.

Previous limits can be used pursuant to EPA's anti-backsliding regulation 40 CFR 122.44 (l) Reissued permits. (1) Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued. Interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62). (2) In the case of effluent limitations established on the basis of Section 402(a)(1)(B) of the CWA, a permit may not be renewed, reissued, or modified on the basis of effluent guidelines promulgated under section 304(b) subsequent to the original issuance of such permit, to contain effluent limitations which are less stringent than the comparable effluent limitations in the previous permit.

The facility is not seeking to revise the previously permitted effluent limits.

Additional Considerations:

Ultraviolet (UV) disinfection is used therefore Total Residual Chlorine (TRC) limits are not applicable. Routine monitoring of UV Transmittance will be at the same monitoring frequency that is used for TRC.
For pH, Dissolved Oxygen (DO) and UV Transmittance, a monitoring frequency 1/day has been imposed. In general, less frequent monitoring may be established only when the permittee demonstrates that there will be no discharge on days where monitoring is not required.

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). A 1/quarter monitor and report requirement for Total N & Total P has been added to the permit as per Chapter 92.a.61.

Mass loading limits are applicable for publicly owned treatment works. Current policy requires average monthly mass loading limits be established for CBOD5, TSS, and NH_3-N 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).

For POTWs with design flows greater than 2,000 GPD influent BOD_5 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.

Monitoring frequency for the proposed effluent limits are based upon Table 6-3, Self-Monitoring Requirements for Sewage Dischargers, from the Departments Technical Guidance for the Development and Specification of Effluent Limitations. Please note that Monitoring Requirements were changed for Flow to 2/week Metered to be consistent with the guidance.

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. In addition, as a consequence of actions associated with Triennial Review 13, the Environmental Quality Board has directed DEP to collect additional data related to sulfate, chloride, and 1,4-dioxane. Furthermore, in an August 2013 letter from Jon Capacasa of the Region III Water Protection Program to DEP (attached), EPA has expressed concern related to bromide and the importance of monitoring all point sources for bromide when it may be present.

Based on these concerns and under the authority of §92a.61, DEP has determined it should implement increased monitoring in NPDES permits for these parameters: TDS, sulfate, chloride, bromide, and 1,4-dioxane.

Increased monitoring in NPDES permits will only occur when the following conditions are met:

- Where the concentration of TDS in the discharge exceeds 1,000 mg/L, or the net TDS load from a discharge exceeds 20,000 lbs/day, and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for TDS, sulfate, chloride, and bromide. Discharges of 0.1 MGD or less should monitor and report for TDS, sulfate, chloride, and bromide if the concentration of TDS in the discharge exceeds 5,000 mg/L.

- Where the concentration of bromide in a discharge exceeds 1 mg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for bromide. Discharges of 0.1 MGD or less should monitor and report for bromide if the concentration of bromide in the discharge exceeds 10 mg/L.

- Where the concentration of 1,4-dioxane (CAS 123-91-1) in a discharge exceeds 10 µg/L and the discharge flow exceeds 0.1 MGD, Part A of the permit should include monitor and report for 1,4-dioxane. Discharges of 0.1 MGD or less should monitor and report for 1,4-dioxane if the concentration of 1,4-dioxane in the discharge exceeds 100 µg/L.

Monitoring is not required for TDS, sulfate, chloride, bromide & 1,4-dioxane. Concentrations of bromide is less than 1 mg/L (application reports 0.5 mg/L), TDS is less than 1000 mg/L (application reports 656 mg/L) & 1,4-dioxane is less than 10 ug/L (application reports ND).

Whole Effluent Toxicity (WET)

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:

The dilution series used for the tests was: 100%, 60%, 30%, 3%, and 1%. The Target Instream Waste Concentration (TIWC) to be used for analysis of the results is: 0.03 or 3%.

Summary of Four Most Recent Test Results

TST Data Analysis

(Please see the attached DEP WET Analysis Spreadsheet).

Test Date	*Ceriodaphnia* Results (Pass/Fail)		*Pimephales* Results (Pass/Fail)	
	Survival	Reproduction	Survival	Growth
6/25/2015	PASS	N/A – Acute Testing	PASS	N/A – Acute Testing
6/15/2017	PASS	N/A – Acute Testing	PASS	N/A – Acute Testing
3/30/2018	PASS	N/A – Acute Testing	PASS	N/A – Acute Testing
6/29/2018	PASS	N/A – Acute Testing	PASS	N/A – Acute Testing

***** *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: Federal regulation, in 40 CFR 122.21(j)(5)(ii)(A), requires that POTWs with design flow rates exceeding 1 MGD submit a minimum of 4 WET tests, either in the form of 4 quarterly tests or 4 annual tests, in the year preceding the permit application or in the 4 and half year time period of the prior permit cycle, respectively, in accordance with 40 CFR 122.21(j)(5)(iv)(A) and (B).

The applicant was in the process of building a new STP during the last permit cycle. The newly constructed relocated 1.2 MGD STP went online in January of 2015. The applicant's engineer stated in an email that the applicant was unaware that WET testing had to be conducted during or after construction activities. 4 WET tests were submitted with the renewal application and no reasonable potential was determined based upon those test results.

Part C.III, Whole Effluent Toxicity (WET), requires annual testing in conformance with the Federal Regulations. The applicant is aware of the permit requirements and they have been advised to strictly adhere to those requirements. If those requirements are not strictly followed, then the Department may impose quarterly testing during the next permit cycle.

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

Acute Partial Mix Factor (PMFa): **0.125** Chronic Partial Mix Factor (PMFc): **0.864**

1. Determine IWC – Acute (IWCa):

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

[(1.2 MGD x 1.547) / ((530 cfs x 0.125) + (1.2 MGD x 1.547))] x 100 = **2.73%**

Is IWCa < 1%? ☐ **YES** ☒ **NO** **(YES - Acute Tests Required OR NO - Chronic Tests Required)**

Type of Test for Permit Renewal: **Chronic Tests**

2a. Determine Target IWCa (If Acute Tests Required)

TIWCa = 2.73% / 0.3 = 9.1**%**

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

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

[(1.2 MGD x 1.547) / ((530 cfs x 0.864) + (1.2 MGD x 1.547))] x 100 = **1 %**

3. Determine Dilution Series

Dilution Series = 100%, 60%, 30%, 2%, and 1%.

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:

N/A

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.

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	2/week	Metered
pH (S.U.)	XXX	XXX	6.0	XXX	XXX	9.0	1/day	Grab
DO	XXX	XXX	4.0	XXX	XXX	XXX	1/day	Grab
CBOD5	250	375	XXX	25	40	50	2/week	24-Hr Composite
BOD5 Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	XXX	2/week	24-Hr Composite
TSS	300	450	XXX	30	45	60	2/week	24-Hr Composite
TSS Raw Sewage Influent	Report	Report Daily Max	XXX	Report	XXX	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
UV Transmittance (%)	XXX	XXX	Report	XXX	XXX	XXX	1/day	Measured
Total Nitrogen	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite
Ammonia-Nitrogen	Report	XXX	XXX	Report	XXX	Report	2/week	Grab
Total Phosphorus	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	24-Hr Composite

Compliance Sampling Location: Outfall # 001

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

Discharge Information

Instructions | Discharge | Stream

Facility: **California Borough STP** NPDES Permit No.: **PA0022241** Outfall No.: **001**

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

Discharge Characteristics									
Design Flow (MGD)*	Hardness (mg/l)*	pH (SU)*	Partial Mix Factors (PMFs)				Complete Mix Times (min)	
			AFC	CFC	THH	CRL	Q_{7-10}	Q_h
1.2	168.7	7.415						

					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		656									
	Chloride (PWS)	mg/L		186									
	Bromide	mg/L		0.5									
	Sulfate (PWS)	mg/L		130									
	Fluoride (PWS)	mg/L											
Group 2	Total Aluminum	µg/L		54									
	Total Antimony	µg/L		0.36									
	Total Arsenic	µg/L		1.3									
	Total Barium	µg/L		22									
	Total Beryllium	µg/L	<	0.3									
	Total Boron	µg/L		405									
	Total Cadmium	µg/L	<	0.33									
	Total Chromium (III)	µg/L		3									
	Hexavalent Chromium	µg/L		4.8									
	Total Cobalt	µg/L		1									
	Total Copper	µg/L		8									
	Free Cyanide	µg/L		2.8									
	Total Cyanide	µg/L	<	2.2									
	Dissolved Iron	µg/L		35									
	Total Iron	µg/L		87									
	Total Lead	µg/L	<	0.66									
	Total Manganese	µg/L		15									
	Total Mercury	µg/L		0.08									
	Total Nickel	µg/L		11									
	Total Phenols (Phenolics) (PWS)	µg/L	<	75									
	Total Selenium	µg/L		0.71									
	Total Silver	µg/L	<	0.66									
	Total Thallium	µg/L	<	0.33									
	Total Zinc	µg/L		86									
	Total Molybdenum	µg/L		66									
	Acrolein	µg/L	<	1.9									
	Acrylamide	µg/L	<										
	Acrylonitrile	µg/L	<	1.2									
	Benzene	µg/L	<	0.23									
	Bromoform	µg/L	<	0.4									

Group 3	Carbon Tetrachloride	µg/L	<	0.31										
	Chlorobenzene	µg/L		0.31										
	Chlorodibromomethane	µg/L	<	0.45										
	Chloroethane	µg/L	<	0.33										
	2-Chloroethyl Vinyl Ether	µg/L	<	0.38										
	Chloroform	µg/L	<	0.21										
	Dichlorobromomethane	µg/L	<	0.28										
	1,1-Dichloroethane	µg/L	<	0.32										
	1,2-Dichloroethane	µg/L	<	0.28										
	1,1-Dichloroethylene	µg/L	<	0.29										
	1,2-Dichloropropane	µg/L	<	0.24										
	1,3-Dichloropropylene	µg/L	<	0.47										
	1,4-Dioxane	µg/L	<	58.9										
	Ethylbenzene	µg/L	<	0.34										
	Methyl Bromide	µg/L												
	Methyl Chloride	µg/L												
	Methylene Chloride	µg/L	<	0.45										
	1,1,2,2-Tetrachloroethane	µg/L	<	0.34										
	Tetrachloroethylene	µg/L	<	0.35										
	Toluene	µg/L	<	0.23										
	1,2-trans-Dichloroethylene	µg/L	<	0.26										
	1,1,1-Trichloroethane	µg/L	<	0.22										
	1,1,2-Trichloroethane	µg/L	<	0.33										
	Trichloroethylene	µg/L	<	0.33										
	Vinyl Chloride	µg/L	<	0.3										
Group 4	2-Chlorophenol	µg/L	<	0.31										
	2,4-Dichlorophenol	µg/L	<	0.3										
	2,4-Dimethylphenol	µg/L	<	0.2										
	4,6-Dinitro-o-Cresol	µg/L	<	0.24										
	2,4-Dinitrophenol	µg/L	<	2.4										
	2-Nitrophenol	µg/L	<	0.42										
	4-Nitrophenol	µg/L	<	0.99										
	p-Chloro-m-Cresol	µg/L	<	0.15										
	Pentachlorophenol	µg/L	<	1.1										
	Phenol	µg/L	<	0.22										
	2,4,6-Trichlorophenol	µg/L	<	0.54										
Group 5	Acenaphthene	µg/L	<	0.14										
	Acenaphthylene	µg/L	<	0.18										
	Anthracene	µg/L	<	0.14										
	Benzidine	µg/L	<	2.9										
	Benzo(a)Anthracene	µg/L	<	0.16										
	Benzo(a)Pyrene	µg/L	<	0.21										
	3,4-Benzofluoranthene	µg/L	<	0.12										
	Benzo(ghi)Perylene	µg/L	<	0.21										
	Benzo(k)Fluoranthene	µg/L	<	0.18										
	Bis(2-Chloroethoxy)Methane	µg/L	<	0.2										
	Bis(2-Chloroethyl)Ether	µg/L	<	0.18										
	Bis(2-Chloroisopropyl)Ether	µg/L	<	0.26										
	Bis(2-Ethylhexyl)Phthalate	µg/L		0.36										
	4-Bromophenyl Phenyl Ether	µg/L	<	0.16										
	Butyl Benzyl Phthalate	µg/L		0.29										
	2-Chloronaphthalene	µg/L	<	0.17										
	4-Chlorophenyl Phenyl Ether	µg/L	<	0.13										
	Chrysene	µg/L	<	0.14										
	Dibenzo(a,h)Anthrancene	µg/L	<	0.2										
	1,2-Dichlorobenzene	µg/L	<	0.38										
	1,3-Dichlorobenzene	µg/L		0.32										
	1,4-Dichlorobenzene	µg/L		0.42										
	3,3-Dichlorobenzidine	µg/L	<	0.45										
	Diethyl Phthalate	µg/L	<	0.17										
	Dimethyl Phthalate	µg/L	<	0.13										
	Di-n-Butyl Phthalate	µg/L	<	0.113										
	2,4-Dinitrotoluene	µg/L	<	0.12										

	2,6-Dinitrotoluene	µg/L	<	0.2										
	Di-n-Octyl Phthalate	µg/L	<	0.094										
	1,2-Diphenylhydrazine	µg/L	<	0.25										
	Fluoranthene	µg/L	<	0.16										
	Fluorene	µg/L	<	0.19										
	Hexachlorobenzene	µg/L	<	0.22										
	Hexachlorobutadiene	µg/L	<	0.18										
	Hexachlorocyclopentadiene	µg/L	<	0.16										
	Hexachloroethane	µg/L	<	0.28										
	Indeno(1,2,3-cd)Pyrene	µg/L	<	0.11										
	Isophorone	µg/L	<	0.14										
	Naphthalene	µg/L		1.1										
	Nitrobenzene	µg/L	<	0.26										
	n-Nitrosodimethylamine	µg/L	<	0.6										
	n-Nitrosodi-n-Propylamine	µg/L	<	0.23										
	n-Nitrosodiphenylamine	µg/L	<	0.17										
	Phenanthrene	µg/L	<	0.12										
	Pyrene	µg/L	<	0.15										
	1,2,4-Trichlorobenzene	µg/L	<	0.15										
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												

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

Toxics Management Spreadsheet
Version 1.1, October 2020

Stream / Surface Water Information

California Borough STP, NPDES Permit No. PA0022241, Outfall 001

Instructions | Discharge | Stream

Receiving Surface Water Name: Monongahela River

No. Reaches to Model: 1

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

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi^2)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*
Point of Discharge	037185	51.4	744	5130	0.0001		Yes
End of Reach 1	037185	50.6	743.9	5160	0.0001	0.356	Yes

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

Location	RMI	LFY (cfs/mi^2)*	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness*	pH*	Hardness	pH
Point of Discharge	51.4	0.1	530			542.5	12					100	7		
End of Reach 1	50.6	0.1													

Q_h

Location	RMI	LFY (cfs/mi^2)	Flow (cfs)		W/D Ratio	Width (ft)	Depth (ft)	Velocity (fps)	Travel Time (days)	Tributary		Stream		Analysis	
			Stream	Tributary						Hardness	pH	Hardness	pH	Hardness	pH
Point of Discharge	51.4														
End of Reach 1	50.6														

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Toxics Management Spreadsheet
Version 1.1, October 2020

Model Results

California Borough STP, NPDES Permit No. PA0022241, Outfall 001

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

☑ ***Hydrodynamics***

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

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)
51.4	530		530	1.856	0.0001	12.	542.5	45.208	0.082	0.598	963.647
50.6	533	0.551	532.449268								

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)
51.4	1786.51		1786.51	1.856	0.0001	20.46	542.5	26.515	0.161	0.303	434.966
50.6	1795.347	0.551	1794.80								

☑ ***Wasteload Allocations***

☑ ***AFC*** CCT (min): 15 PMF: 0.125 Analysis Hardness (mg/l): 101.88 Analysis pH: 7.01

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	27,465	
Total Antimony	0	0		0	1,100	1,100	40,282	
Total Arsenic	0	0		0	340	340	12,451	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	769,015	
Total Boron	0	0		0	8,100	8,100	296,620	
Total Cadmium	0	0		0	2.050	2.17	79.6	Chem Translator of 0.943 applied
Total Chromium (III)	0	0		0	578.503	1,831	67,040	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	597	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	3,479	
Total Copper	0	0		0	13.677	14.2	522	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	22	22.0	806	

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	65.901	83.6	3,061	Chem Translator of 0.788 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	60.3	Chem Translator of 0.85 applied
Total Nickel	0	0		0	475.657	477	17,453	Chem Translator of 0.998 applied
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	Chem Translator of 0.922 applied
Total Silver	0	0		0	3.321	3.91	143	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	2,380	
Total Zinc	0	0		0	119.040	122	4,457	Chem Translator of 0.978 applied
Acrolein	0	0		0	3	3.0	110	
Acrylonitrile	0	0		0	650	650	23,803	
Benzene	0	0		0	640	640	23,437	
Bromoform	0	0		0	1,800	1,800	65,916	
Carbon Tetrachloride	0	0		0	2,800	2,800	102,535	
Chlorobenzene	0	0		0	1,200	1,200	43,944	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	18,000	18,000	659,155	
Chloroform	0	0		0	1,900	1,900	69,578	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	15,000	15,000	549,296	
1,1-Dichloroethylene	0	0		0	7,500	7,500	274,648	
1,2-Dichloropropane	0	0		0	11,000	11,000	402,817	
1,3-Dichloropropylene	0	0		0	310	310	11,352	
Ethylbenzene	0	0		0	2,900	2,900	106,197	
Methylene Chloride	0	0		0	12,000	12,000	439,437	
1,1,2,2-Tetrachloroethane	0	0		0	1,000	1,000	36,620	
Tetrachloroethylene	0	0		0	700	700	25,634	
Toluene	0	0		0	1,700	1,700	62,254	
1,2-trans-Dichloroethylene	0	0		0	6,800	6,800	249,014	
1,1,1-Trichloroethane	0	0		0	3,000	3,000	109,859	
1,1,2-Trichloroethane	0	0		0	3,400	3,400	124,507	
Trichloroethylene	0	0		0	2,300	2,300	84,225	
Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	560	560	20,507	
2,4-Dichlorophenol	0	0		0	1,700	1,700	62,254	
2,4-Dimethylphenol	0	0		0	660	660	24,169	
4,6-Dinitro-o-Cresol	0	0		0	80	80.0	2,930	
2,4-Dinitrophenol	0	0		0	660	660	24,169	
2-Nitrophenol	0	0		0	8,000	8,000	292,958	
4-Nitrophenol	0	0		0	2,300	2,300	84,225	
p-Chloro-m-Cresol	0	0		0	160	160	5,859	
Pentachlorophenol	0	0		0	8.788	8.79	322	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	460	460	16,845	
Acenaphthene	0	0		0	83	83.0	3,039	
Anthracene	0	0		0	N/A	N/A	N/A	

Benzidine	0	0		0	300	300	10,986	
Benzo(a)Anthracene	0	0		0	0.5	0.5	18.3	
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	1,098,592	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	4,500	4,500	164,789	
4-Bromophenyl Phenyl Ether	0	0		0	270	270	9,887	
Butyl Benzyl Phthalate	0	0		0	140	140	5,127	
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	30,028	
1,3-Dichlorobenzene	0	0		0	350	350	12,817	
1,4-Dichlorobenzene	0	0		0	730	730	26,732	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	4,000	4,000	146,479	
Dimethyl Phthalate	0	0		0	2,500	2,500	91,549	
Di-n-Butyl Phthalate	0	0		0	110	110	4,028	
2,4-Dinitrotoluene	0	0		0	1,600	1,600	58,592	
2,6-Dinitrotoluene	0	0		0	990	990	36,254	
1,2-Diphenylhydrazine	0	0		0	15	15.0	549	
Fluoranthene	0	0		0	200	200	7,324	
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	366	
Hexachlorocyclopentadiene	0	0		0	5	5.0	183	
Hexachloroethane	0	0		0	60	60.0	2,197	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	10,000	10,000	366,197	
Naphthalene	0	0		0	140	140	5,127	
Nitrobenzene	0	0		0	4,000	4,000	146,479	
n-Nitrosodimethylamine	0	0		0	17,000	17,000	622,536	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	300	300	10,986	
Phenanthrene	0	0		0	5	5.0	183	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	130	130	4,761	

☑ *CFC* CCT (min): 720 PMF: 0.864 Analysis Hardness (mg/l): 100.28 Analysis pH: 7.00

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	

Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	54,512	
Total Arsenic	0	0		0	150	150	37,167	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	1,015,902	
Total Boron	0	0		0	1,600	1,600	396,449	
Total Cadmium	0	0		0	0.246	0.27	67.2	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.283	86.4	21,402	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	2,576	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	4,708	
Total Copper	0	0		0	8.977	9.35	2,317	Chem Translator of 0.96 applied
Free Cyanide	0	0		0	5.2	5.2	1,288	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	429,748	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.524	3.19	791	Chem Translator of 0.791 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	0.770	0.91	224	Chem Translator of 0.85 applied
Total Nickel	0	0		0	52.129	52.3	12,955	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	1,236	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	3,221	
Total Zinc	0	0		0	118.416	120	29,758	Chem Translator of 0.986 applied
Acrolein	0	0		0	3	3.0	743	
Acrylonitrile	0	0		0	130	130	32,212	
Benzene	0	0		0	130	130	32,212	
Bromoform	0	0		0	370	370	91,679	
Carbon Tetrachloride	0	0		0	560	560	138,757	
Chlorobenzene	0	0		0	240	240	59,467	
Chlorodibromomethane	0	0		0	N/A	N/A	N/A	
2-Chloroethyl Vinyl Ether	0	0		0	3,500	3,500	867,233	
Chloroform	0	0		0	390	390	96,635	
Dichlorobromomethane	0	0		0	N/A	N/A	N/A	
1,2-Dichloroethane	0	0		0	3,100	3,100	768,121	
1,1-Dichloroethylene	0	0		0	1,500	1,500	371,671	
1,2-Dichloropropane	0	0		0	2,200	2,200	545,118	
1,3-Dichloropropylene	0	0		0	61	61.0	15,115	
Ethylbenzene	0	0		0	580	580	143,713	
Methylene Chloride	0	0		0	2,400	2,400	594,674	
1,1,2,2-Tetrachloroethane	0	0		0	210	210	52,034	
Tetrachloroethylene	0	0		0	140	140	34,689	
Toluene	0	0		0	330	330	81,768	
1,2-trans-Dichloroethylene	0	0		0	1,400	1,400	346,893	
1,1,1-Trichloroethane	0	0		0	610	610	151,146	
1,1,2-Trichloroethane	0	0		0	680	680	168,491	
Trichloroethylene	0	0		0	450	450	111,501	

Vinyl Chloride	0	0		0	N/A	N/A	N/A	
2-Chlorophenol	0	0		0	110	110	27,256	
2,4-Dichlorophenol	0	0		0	340	340	84,245	
2,4-Dimethylphenol	0	0		0	130	130	32,212	
4,6-Dinitro-o-Cresol	0	0		0	16	16.0	3,964	
2,4-Dinitrophenol	0	0		0	130	130	32,212	
2-Nitrophenol	0	0		0	1,600	1,600	396,449	
4-Nitrophenol	0	0		0	470	470	116,457	
p-Chloro-m-Cresol	0	0		0	30	30.0	7,433	
Pentachlorophenol	0	0		0	6.742	6.74	1,671	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	91	91.0	22,548	
Acenaphthene	0	0		0	17	17.0	4,212	
Anthracene	0	0		0	N/A	N/A	N/A	
Benzidine	0	0		0	59	59.0	14,619	
Benzo(a)Anthracene	0	0		0	0.1	0.1	24.8	
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	1,486,685	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	910	910	225,481	
4-Bromophenyl Phenyl Ether	0	0		0	54	54.0	13,380	
Butyl Benzyl Phthalate	0	0		0	35	35.0	8,672	
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	39,645	
1,3-Dichlorobenzene	0	0		0	69	69.0	17,097	
1,4-Dichlorobenzene	0	0		0	150	150	37,167	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	800	800	198,225	
Dimethyl Phthalate	0	0		0	500	500	123,890	
Di-n-Butyl Phthalate	0	0		0	21	21.0	5,203	
2,4-Dinitrotoluene	0	0		0	320	320	79,290	
2,6-Dinitrotoluene	0	0		0	200	200	49,556	
1,2-Diphenylhydrazine	0	0		0	3	3.0	743	
Fluoranthene	0	0		0	40	40.0	9,911	
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	496	
Hexachlorocyclopentadiene	0	0		0	1	1.0	248	
Hexachloroethane	0	0		0	12	12.0	2,973	
Indeno(1,2,3-cd)Pyrene	0	0		0	N/A	N/A	N/A	
Isophorone	0	0		0	2,100	2,100	520,340	

Naphthalene	0	0		0	43	43.0	10,655	
Nitrobenzene	0	0		0	810	810	200,702	
n-Nitrosodimethylamine	0	0		0	3,400	3,400	842,455	
n-Nitrosodi-n-Propylamine	0	0		0	N/A	N/A	N/A	
n-Nitrosodiphenylamine	0	0		0	59	59.0	14,619	
Phenanthrene	0	0		0	1	1.0	248	
Pyrene	0	0		0	N/A	N/A	N/A	
1,2,4-Trichlorobenzene	0	0		0	26	26.0	6,442	

☑ ***THH*** CCT (min): 720 THH PMF: 0.864 Analysis Hardness (mg/l): N/A Analysis pH: N/A PWS PMF: 0.9456

Pollutants	Stream Conc (µg/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	#########	WQC applied at RMI 50.6 with a design stream flow of 533 cfs
Chloride (PWS)	0	0		0	250,000	250,000	68,125,994	WQC applied at RMI 50.6 with a design stream flow of 533 cfs
Sulfate (PWS)	0	0		0	250,000	250,000	68,125,994	WQC applied at RMI 50.6 with a design stream flow of 533 cfs
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	1,388	
Total Arsenic	0	0		0	10	10.0	2,478	
Total Barium	0	0		0	2,400	2,400	594,674	
Total Boron	0	0		0	3,100	3,100	768,121	
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	140	140	34,689	
Dissolved Iron	0	0		0	300	300	74,334	
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	247,781	
Total Mercury	0	0		0	0.050	0.05	12.4	
Total Nickel	0	0		0	610	610	151,146	
Total Phenols (Phenolics) (PWS)	0	0		0	5	5.0	1,363	WQC applied at RMI 50.6 with a design stream flow of 533 cfs
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Thallium	0	0		0	0.24	0.24	59.5	
Total Zinc	0	0		0	N/A	N/A	N/A	
Acrolein	0	0		0	6	6.0	1,487	
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	32,212	
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	8,177	
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	131,324	
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	322,115	
1,2-trans-Dichloroethylene	0	0		0	140	140	34,689	
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	20,070	
2,4-Dichlorophenol	0	0		0	77	77.0	19,079	
2,4-Dimethylphenol	0	0		0	380	380	94,157	
4,6-Dinitro-o-Cresol	0	0		0	13	13.0	3,221	
2,4-Dinitrophenol	0	0		0	69	69.0	17,097	
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	2,576,921	
2,4,6-Trichlorophenol	0	0		0	N/A	N/A	N/A	
Acenaphthene	0	0		0	670	670	166,013	
Anthracene	0	0		0	8,300	8,300	2,056,581	
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	346,893	
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	37,167	
2-Chloronaphthalene	0	0		0	1,000	1,000	247,781	
Chrysene	0	0		0	N/A	N/A	N/A	
Dibenzo(a,h)Anthrancene	0	0		0	N/A	N/A	N/A	
1,2-Dichlorobenzene	0	0		0	420	420	104,068	
1,3-Dichlorobenzene	0	0		0	420	420	104,068	

1,4-Dichlorobenzene	0	0		0	420	420	104,068	
3,3-Dichlorobenzidine	0	0		0	N/A	N/A	N/A	
Diethyl Phthalate	0	0		0	17,000	17,000	4,212,275	
Dimethyl Phthalate	0	0		0	270,000	270,000	66,900,832	
Di-n-Butyl Phthalate	0	0		0	2,000	2,000	495,562	
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	32,212	
Fluorene	0	0		0	1,100	1,100	272,559	
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	9,911	
Hexachloroethane	0	0		0	N/A	N/A	N/A	
Indeno(1,2,3-cd)Pyrene	0	0		0	0.0038	0.004	0.94	
Isophorone	0	0		0	35	35.0	8,672	
Naphthalene	0	0		0	N/A	N/A	N/A	
Nitrobenzene	0	0		0	17	17.0	4,212	
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	205,658	
1,2,4-Trichlorobenzene	0	0		0	35	35.0	8,672	

☑ *CRL* CCT (min): ###### 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	0.051	0.051	49.1	
Benzene	0	0		0	1.2	1.2	1,156	
Bromoform	0	0		0	4.3	4.3	4,142	
Carbon Tetrachloride	0	0		0	0.23	0.23	222	
Chlorobenzene	0	0		0	N/A	N/A	N/A	
Chlorodibromomethane	0	0		0	0.4	0.4	385	
2-Chloroethyl Vinyl Ether	0	0		0	N/A	N/A	N/A	
Chloroform	0	0		0	5.7	5.7	5,491	
Dichlorobromomethane	0	0		0	0.55	0.55	530	
1,2-Dichloroethane	0	0		0	0.38	0.38	366	
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	328	
Ethylbenzene	0	0		0	N/A	N/A	N/A	
Methylene Chloride	0	0		0	4.6	4.6	4,431	
1,1,2,2-Tetrachloroethane	0	0		0	0.17	0.17	164	
Tetrachloroethylene	0	0		0	0.69	0.69	665	
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	568	
Trichloroethylene	0	0		0	2.5	2.5	2,408	
Vinyl Chloride	0	0		0	0.025	0.025	24.1	
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	260	
Phenol	0	0		0	N/A	N/A	N/A	
2,4,6-Trichlorophenol	0	0		0	1.4	1.4	1,349	
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	0.083	
Benzo(a)Anthracene	0	0		0	0.0038	0.004	3.66	
Benzo(a)Pyrene	0	0		0	0.0038	0.004	3.66	
3,4-Benzofluoranthene	0	0		0	0.0038	0.004	3.66	
Benzo(k)Fluoranthene	0	0		0	0.0038	0.004	3.66	
Bis(2-Chloroethyl)Ether	0	0		0	0.03	0.03	28.9	
Bis(2-Chloroisopropyl)Ether	0	0		0	N/A	N/A	N/A	
Bis(2-Ethylhexyl)Phthalate	0	0		0	1.2	1.2	1,156	
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	3.66	
Dibenzo(a,h)Anthrancene	0	0		0	0.0038	0.004	3.66	
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	20.2	
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	48.2	
2,6-Dinitrotoluene	0	0		0	0.05	0.05	48.2	
1,2-Diphenylhydrazine	0	0		0	0.036	0.036	34.7	
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	0.27	
Hexachlorobutadiene	0	0		0	0.44	0.44	424	
Hexachlorocyclopentadiene	0	0		0	N/A	N/A	N/A	
Hexachloroethane	0	0		0	1.4	1.4	1,349	
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	0.66	
n-Nitrosodi-n-Propylamine	0	0		0	0.005	0.005	4.82	
n-Nitrosodiphenylamine	0	0		0	3.3	3.3	3,179	
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

Pollutants	*Mass Limits*		*Concentration Limits*				Governing WQBEL	WQBEL Basis	Comments
	AML (lbs/day)	MDL (lbs/day)	AML	MDL	IMAX	Units			

☑ ***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).

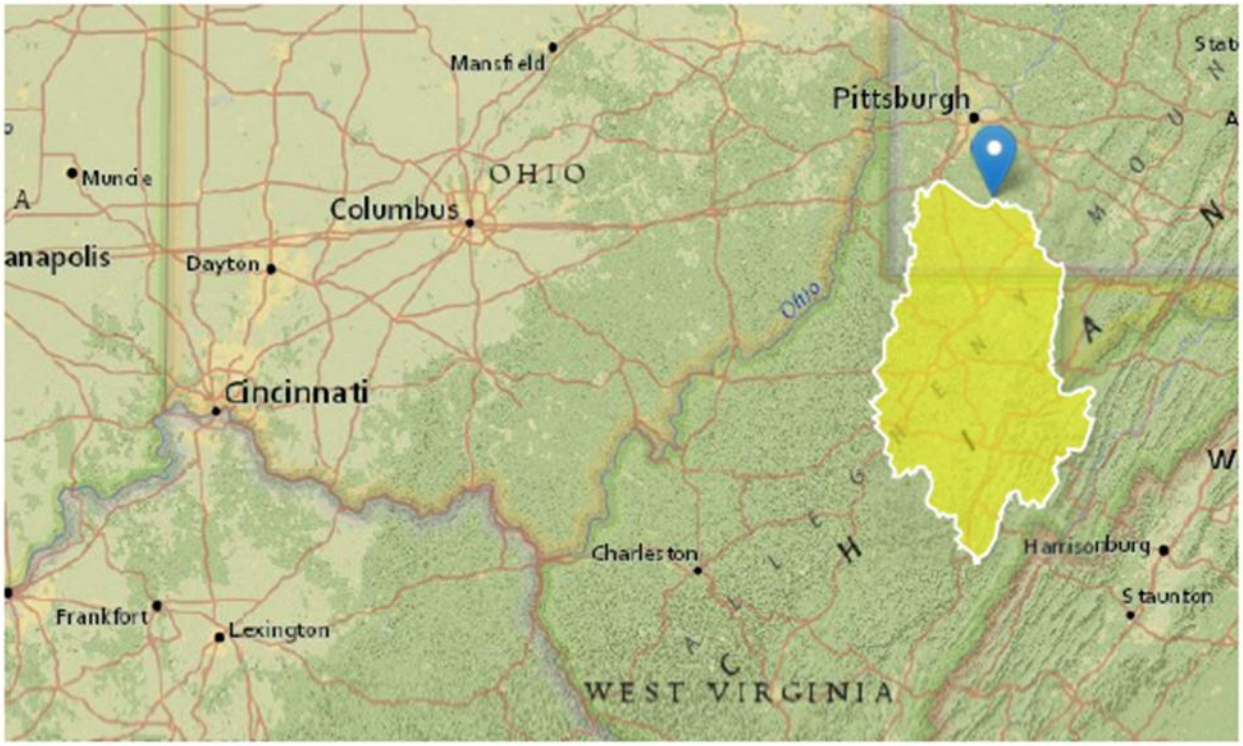
Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	136,252	mg/L	Discharge Conc ≤ 10% WQBEL
Chloride (PWS)	68,126	mg/L	Discharge Conc ≤ 10% WQBEL
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	68,126	mg/L	Discharge Conc ≤ 10% WQBEL
Total Aluminum	17,604	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	1,388	µg/L	Discharge Conc ≤ 10% WQBEL
Total Arsenic	2,478	µg/L	Discharge Conc ≤ 10% WQBEL
Total Barium	492,907	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	190,121	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cadmium	51.0	µg/L	Discharge Conc ≤ 10% WQBEL
Total Chromium (III)	21,402	µg/L	Discharge Conc ≤ 10% WQBEL
Hexavalent Chromium	382	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cobalt	2,230	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	334	µg/L	Discharge Conc ≤ 10% WQBEL
Free Cyanide	516	µg/L	Discharge Conc ≤ 25% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	74,334	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	429,748	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	791	µg/L	Discharge Conc < TQL
Total Manganese	247,781	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	12.4	µg/L	Discharge Conc ≤ 10% WQBEL
Total Nickel	11,187	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)	1,363	µg/L	Discharge Conc ≤ 10% WQBEL
Total Selenium	1,236	µg/L	Discharge Conc ≤ 10% WQBEL
Total Silver	91.7	µg/L	Discharge Conc ≤ 10% WQBEL
Total Thallium	59.5	µg/L	Discharge Conc < TQL
Total Zinc	2,857	µg/L	Discharge Conc ≤ 10% WQBEL
Total Molybdenum	N/A	N/A	No WQS
Acrolein	70.4	µg/L	Discharge Conc < TQL
Acrylonitrile	49.1	µg/L	Discharge Conc < TQL
Benzene	1,156	µg/L	Discharge Conc < TQL
Bromoform	4,142	µg/L	Discharge Conc < TQL
Carbon Tetrachloride	222	µg/L	Discharge Conc < TQL

Chlorobenzene	28,166	µg/L	Discharge Conc ≤ 25% WQBEL
Chlorodibromomethane	385	µg/L	Discharge Conc < TQL
Chloroethane	N/A	N/A	No WQS
2-Chloroethyl Vinyl Ether	422,492	µg/L	Discharge Conc < TQL
Chloroform	5,491	µg/L	Discharge Conc < TQL
Dichlorobromomethane	530	µg/L	Discharge Conc < TQL
1,1-Dichloroethane	N/A	N/A	No WQS
1,2-Dichloroethane	366	µg/L	Discharge Conc < TQL
1,1-Dichloroethylene	8,177	µg/L	Discharge Conc < TQL
1,2-Dichloropropane	258,190	µg/L	Discharge Conc < TQL
1,3-Dichloropropylene	328	µg/L	Discharge Conc < TQL
1,4-Dioxane	N/A	N/A	No WQS
Ethylbenzene	68,068	µg/L	Discharge Conc < TQL
Methylene Chloride	4,431	µg/L	Discharge Conc < TQL
1,1,2,2-Tetrachloroethane	164	µg/L	Discharge Conc < TQL
Tetrachloroethylene	665	µg/L	Discharge Conc < TQL
Toluene	39,902	µg/L	Discharge Conc < TQL
1,2-trans-Dichloroethylene	34,689	µg/L	Discharge Conc < TQL
1,1,1-Trichloroethane	70,415	µg/L	Discharge Conc < TQL
1,1,2-Trichloroethane	568	µg/L	Discharge Conc < TQL
Trichloroethylene	2,408	µg/L	Discharge Conc < TQL
Vinyl Chloride	24.1	µg/L	Discharge Conc < TQL
2-Chlorophenol	13,144	µg/L	Discharge Conc < TQL
2,4-Dichlorophenol	19,079	µg/L	Discharge Conc < TQL
2,4-Dimethylphenol	15,491	µg/L	Discharge Conc < TQL
4,6-Dinitro-o-Cresol	1,878	µg/L	Discharge Conc < TQL
2,4-Dinitrophenol	15,491	µg/L	Discharge Conc < TQL
2-Nitrophenol	187,774	µg/L	Discharge Conc < TQL
4-Nitrophenol	53,985	µg/L	Discharge Conc < TQL
p-Chloro-m-Cresol	3,755	µg/L	Discharge Conc < TQL
Pentachlorophenol	206	µg/L	Discharge Conc < TQL
Phenol	2,576,921	µg/L	Discharge Conc < TQL
2,4,6-Trichlorophenol	1,349	µg/L	Discharge Conc < TQL
Acenaphthene	1,948	µg/L	Discharge Conc < TQL
Acenaphthylene	N/A	N/A	No WQS
Anthracene	2,056,581	µg/L	Discharge Conc < TQL
Benzidine	0.083	µg/L	Discharge Conc < TQL
Benzo(a)Anthracene	3.66	µg/L	Discharge Conc < TQL
Benzo(a)Pyrene	3.66	µg/L	Discharge Conc < TQL
3,4-Benzofluoranthene	3.66	µg/L	Discharge Conc < TQL
Benzo(ghi)Perylene	N/A	N/A	No WQS
Benzo(k)Fluoranthene	3.66	µg/L	Discharge Conc < TQL
Bis(2-Chloroethoxy)Methane	N/A	N/A	No WQS
Bis(2-Chloroethyl)Ether	28.9	µg/L	Discharge Conc < TQL
Bis(2-Chloroisopropyl)Ether	346,893	µg/L	Discharge Conc < TQL

Bis(2-Ethylhexyl)Phthalate	1,156	µg/L	Discharge Conc ≤ 25% WQBEL
4-Bromophenyl Phenyl Ether	6,337	µg/L	Discharge Conc < TQL
Butyl Benzyl Phthalate	3,286	µg/L	Discharge Conc ≤ 25% WQBEL
2-Chloronaphthalene	247,781	µg/L	Discharge Conc < TQL
4-Chlorophenyl Phenyl Ether	N/A	N/A	No WQS
Chrysene	3.66	µg/L	Discharge Conc < TQL
Dibenzo(a,h)Anthrancene	3.66	µg/L	Discharge Conc < TQL
1,2-Dichlorobenzene	19,247	µg/L	Discharge Conc < TQL
1,3-Dichlorobenzene	8,215	µg/L	Discharge Conc ≤ 25% WQBEL
1,4-Dichlorobenzene	17,134	µg/L	Discharge Conc ≤ 25% WQBEL
3,3-Dichlorobenzidine	20.2	µg/L	Discharge Conc < TQL
Diethyl Phthalate	93,887	µg/L	Discharge Conc < TQL
Dimethyl Phthalate	58,679	µg/L	Discharge Conc < TQL
Di-n-Butyl Phthalate	2,582	µg/L	Discharge Conc < TQL
2,4-Dinitrotoluene	48.2	µg/L	Discharge Conc < TQL
2,6-Dinitrotoluene	48.2	µg/L	Discharge Conc < TQL
Di-n-Octyl Phthalate	N/A	N/A	No WQS
1,2-Diphenylhydrazine	34.7	µg/L	Discharge Conc < TQL
Fluoranthene	4,694	µg/L	Discharge Conc < TQL
Fluorene	272,559	µg/L	Discharge Conc < TQL
Hexachlorobenzene	0.27	µg/L	Discharge Conc < TQL
Hexachlorobutadiene	235	µg/L	Discharge Conc < TQL
Hexachlorocyclopentadiene	117	µg/L	Discharge Conc < TQL
Hexachloroethane	1,349	µg/L	Discharge Conc < TQL
Indeno(1,2,3-cd)Pyrene	0.94	µg/L	Discharge Conc < TQL
Isophorone	8,672	µg/L	Discharge Conc < TQL
Naphthalene	3,286	µg/L	Discharge Conc ≤ 25% WQBEL
Nitrobenzene	4,212	µg/L	Discharge Conc < TQL
n-Nitrosodimethylamine	0.66	µg/L	Discharge Conc < TQL
n-Nitrosodi-n-Propylamine	4.82	µg/L	Discharge Conc < TQL
n-Nitrosodiphenylamine	3,179	µg/L	Discharge Conc < TQL
Phenanthrene	117	µg/L	Discharge Conc < TQL
Pyrene	205,658	µg/L	Discharge Conc < TQL
1,2,4-Trichlorobenzene	3,051	µg/L	Discharge Conc < TQL

StreamStats Report

Region ID: PA
Workspace ID: PA20201217120926255000
Clicked Point (Latitude, Longitude): 40.07019, -79.89496
Time: 2020-12-17 07:09:49 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	5130	square miles
ELEV	Mean Basin Elevation	1854	feet

Low-Flow Statistics Parameters[100 Percent (5130 square miles) Low Flow Region 4]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	5130	square miles	2.26	1400

Applicant:	Borough of California
Name of plant:	California Borough STP
Permit Number:	PA0022241
Municipality:	California Borough
County:	Washington County
Receiving stream:	Monongahela River

The following program will calulate partial mix factors for acute and chronic conditions:

calculated fields

net stream flow (Qs cfs)=	530
discharge flow (Qd mgd)=	1.2
velocity (fps)=	0.082
width (feet) =	542.5
depth (feet) =	12
slope (ft/ft) =	0.0001

complete mix time (min) = 963.63

FOR ACUTE CONDIT IONS: IF COMPLETE MIX TIME < 15 MINUTES
THEN PMF = 1, IF > 15 MINUTES CALCULATE PMFa

PMFa = 0.125
or 12.48 %

FOR CHRONIC CONDITIONS: IF COMPLETE MIX TIME < 720 MINUTES
THEN PMF = 1, IF > 720 MINUTES CALCULATE PMFc

PMFc = 0.864
or 86.44 %

IWCc=[Qd * 1.547] / [(Qs*PMFc) + (Qd * 1.547)] = 0.0040

Target IWCc=IWCc/1= 0.004 **0.40 %**

IWCa=[Qd * 1.547] / [(Qs*PMFa) + (Qd * 1.547)] = 0.0273

Target IWCa=IWCa/0.3= 0.091 **or** **9.10 %**

WET tests should pass if percentage for C.dubia LC50 and P.promelas LC50 are greater than the target IWCa (acute) or NOEC > target IWCc (chronic).

Program written by David Ponchione on April 8, 1999

Program run by : W. Mitchell **on** December 16, 2020

For Department use only

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Acute
Species Tested	Ceriodaphnia
Endpoint	Survival
TIWC (decimal)	0.03
No. Per Replicate	1
TST b value	0.8
TST alpha value	0.1

Facility Name: California Borough STP

Permit No.: PA00222241

Test Completion Date: 6/25/2015

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	5	5

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail: **PASS**

Test Completion Date: 6/15/2017

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	5	5

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail: **PASS**

Test Completion Date: 3/30/2018

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	5	5

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail: **PASS**

Test Completion Date: 6/29/2018

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	5	5

T-Test Result
Deg. of Freedom
Critical T Value
Pass or Fail: **PASS**

DEP Whole Effluent Toxicity (WET) Analysis Spreadsheet

Type of Test	Acute
Species Tested	Pimephales
Endpoint	Survival
TIWC (decimal)	0.03
No. Per Replicate	10
TST b value	0.8
TST alpha value	0.1

Facility Name: California Borough STP

Permit No.: PA00222241

Test Completion Date: 6/27/2015

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	0.9	0.9
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.975	0.975
Std Dev.	0.050	0.050
# Replicates	4	4

T-Test Result	11.6270
Deg. of Freedom	5
Critical T Value	1.4759
Pass or Fail	**PASS**

Test Completion Date: 6/17/2017

Replicate No.	Control	TIWC
1	0.9	0.8
2	0.9	1
3	1	1
4	1	0.9
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.950	0.925
Std Dev.	0.058	0.096
# Replicates	4	4

T-Test Result	6.2947
Deg. of Freedom	4
Critical T Value	1.5332
Pass or Fail	**PASS**

Test Completion Date: 4/1/2018

Replicate No.	Control	TIWC
1	1	1
2	0.9	0.9
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	0.975	0.975
Std Dev.	0.050	0.050
# Replicates	4	4

T-Test Result	11.6270
Deg. of Freedom	5
Critical T Value	1.4759
Pass or Fail	**PASS**

Test Completion Date: 7/1/2018

Replicate No.	Control	TIWC
1	1	1
2	1	1
3	1	1
4	1	1
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
Mean	1.000	1.000
Std Dev.	0.000	0.000
# Replicates	4	4

T-Test Result	
Deg. of Freedom	
Critical T Value	
Pass or Fail	**PASS**

WET Summary and Evaluation

Facility Name	California Borough STP
Permit No.	PA0022241
Design Flow (MGD)	1.2
Q_{7-10} Flow (cfs)	530
PMF_a	0.125
PMF_c	0.864

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	6/25/15	6/15/17	3/30/18	6/29/18
Ceriodaphnia	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**	6/27/15	6/17/17	4/1/18	7/1/18
Pimephales	Survival	PASS	PASS	PASS	PASS

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**				

		Test Results (Pass/Fail)			
		Test Date	Test Date	Test Date	Test Date
Species	**Endpoint**				

Reasonable Potential? NO

Permit Recommendations

Test Type	Chronic
TIWC	1 % Effluent
Dilution Series	1, 2, 30, 60, 100 % Effluent
Permit Limit	None
Permit Limit Species	