

 Application Type
 Renewal

 Facility Type
 Industrial

 Major / Minor
 Minor

NPDES PERMIT FACT SHEET INDIVIDUAL INDUSTRIAL WASTE (IW) AND IW STORMWATER

 Application No.
 PA0052159

 APS ID
 1088328

 Authorization ID
 1439424

Applicant and Facility Information

Applicant Name	Aqua PA Inc.	Facility Name	Ridley Creek WTP
Applicant Address	762 West Lancaster Avenue	Facility Address	Elwyn Road & Baltimore Pike
	Bryn Mawr, PA 19010-3489		Media, PA 19063
Applicant Contact	Matthew Miller	Facility Contact	Matthew Miller
Applicant Phone	(610) 645-1082	Facility Phone	(717) 645-1082
Client ID	309251	Site ID	250033
SIC Code	4941	Municipality	Middletown Township
SIC Description	Trans. & Utilities - Water Supply	County	Delaware
Date Application Recei	vedApril 3, 2023	EPA Waived?	Yes
Date Application Accept	oted	If No, Reason	
Purpose of Application	Permit Renewal		

Summary of Review

The applicant requests renewal of an NPDES permit to discharge treated industrial wastewater from a water filtration plant to Ridley Creek.

The plant takes water from Chester and Ridley Creeks.

There are three outfalls at the site for wastewater discharge. Filter backwash and thickener supernatant are discharged through Outfall 001. Backwash decant can also be discharged to the raw water pump station for recycle. Outfall 002 discharges sedimentation basin overflow; currently basins are disconnected from outfall. There has been no discharge from Outfall 002 for the past 5 years; however, permittee wants to keep this outfall in the permit. Outfall 004 discharges process water used to wash traveling screen (leaf screen) to remove trapped debris. The maximum discharge could be up to 1 mgd and the discharge type is listed in the application as continuous-intermittent.

Wastewater is pumped to a thickener where polymer is added to enhance the settling of solids. Dewatered solids are hauled out and disposed of at a wastewater treatment plant. Polymer LT 340 is the coagulant used for wastewater treatment.

Other outfalls located at the site do not require to be monitored.

No upgrades to the facility are proposed at this time. No chemical additives are reported in the application.

The eDMR review shows the discharge is in compliance with the existing permit limits and no comments received from Operations Section.

Approve	Deny	Signatures	Date
Х		Sara Abraham Sara Reji Abraham, E.I.T. / Project Manager	July 3, 2023
Х		Pravin Patel	
		Pravin C. Patel, P.E. / Environmental Engineer Manager	07/05/2023

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.

Act 14 Notifications:

Middletown Township	-	3/13/2023
Delaware County	-	3/13/2023

Permit Conditions:

- A. Acquire Necessary Property Rights
- B. Proper Sludge Disposal
- C. WQM Permits
- D. Applicable BAT if Developed
- E. Chlorine Optimization
- F. TMDL/WLA Requirement
- G. Chemical Additive Condition
- H. Sedimentation Basin Cleaning

Discharge, Receiving Waters and Water Supply Information

Outfall No. 001		_ Design Flow (MGD)	.15
Latitude 39° 5	64' 58.81"	_ Longitude	-75º 24' 10.76"
Quad Name Me	edia	Quad Code	1942
Wastewater Descri	Water Treatment Effluer ption: <u>recovery basins</u>)	nt (decant water from residuals thi	ckeners and backwash
Receiving Waters	Ridley Creek (HQ-TSF)	Stream Code	00621
NHD Com ID	25607080	RMI	7.5
Drainage Area	30 mi ²		
Q ₇₋₁₀ Flow (cfs)	4.5	Q ₇₋₁₀ Basis	DRBC docket D-85-29CP
Elevation (ft)	99.5		
Watershed No.	3-G	Chapter 93 Class.	HQ-TSF
Assessment Status	s Impaired		
Cause(s) of Impair	ment cause unknown, flow re	gime modification, siltation	

Discharge, Receiving Waters and Water Supply Informatic	on	
Outfall No. 004 Latitude 39° 54' 58.81"	Design Flow (MGD) Longitude	1.0 -75° 24' 10.76"
Quad Name Media	Quad Code	1942
Wastewater Description: Traveling screen back wash		
Receiving Waters <u>Ridley Creek (HQ-TSF)</u>	Stream Code	00621
	Chapter 02 Class	
Assessment Status Impaired		
Cause(s) of Impairment Source(s) of Impairment Urban Runoff/Storm Sewers	ter/Flow Variability	

	Treatment Facility Summary							
Treatment Facility Name: Ridley Creek Water Treatment Plant								
Waste Type	Degree of Treatment	Process Type	Disinfection	Avg Annual Flow (MGD)				
Industrial		Flocculation, Sedimentation	No Disinfection	0.15				
Hydraulic Capacity (MGD)	Organic Capacity (Ibs/dav)	Load Status	Biosolids Treatment	Biosolids Use/Disposal				
		Not Overloaded						

Compliance History

DMR Data for Outfall 001 (from May 1, 2022 to April 30, 2023)

Parameter	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22	JUN-22	MAY-22
Flow (MGD)												
Average Monthly	0.047	0.039	0.041	0.04	0.039	0.046	0.052	0.065	0.064	0.063	0.062	0.056
Flow (MGD)												
Daily Maximum	0.058	0.045	0.1	0.046	0.051	0.064	0.069	0.107	0.083	0.079	0.085	0.087
pH (S.U.)												
Instantaneous												
Minimum	7.61	7.42	7.29	7.49	7.38	7.52	7.72	7.83	7.67	7.49	7.6	7.4
pH (S.U.)												
Instantaneous												
Maximum	8.1	7.74	7.58	7.8	7.77	8.09	8.12	8.14	8.18	7.96	7.9	7.85
TRC (mg/L)												
Average Monthly	0.1	0.1	0.2	< 0.2	0.2	0.3	0.2	0.1	0.1	< 0.05	0.1	0.1
TRC (mg/L)												
Instantaneous												
Maximum	0.25	0.25	0.3	0.45	0.25	0.5	0.25	0.2	0.05	0.08	0.15	0.15
TSS (mg/L)				-		-						
Average Monthly	2	3	4	3	6	3	3	4	3	3	2.0	2.0
TSS (mg/L)					10							
Daily Maximum	2.4	3.6	4	5.2	10	4	3.6	6	4.4	7.6	2.8	2.4
I otal Aluminum												
(mg/L)			0.5	0.5		0.5			0.5	<u> </u>		<u> </u>
Average Monthly	0.4	0.4	0.5	0.5	0.6	0.5	0.4	0.4	0.5	0.5	0.4	0.4
(mg/L)	0.50	0.45	0.65	0.50	0.70	0.55	0.40	0.50	0.50	0.50	0.44	0.47
	0.52	0.45	0.05	0.59	0.72	0.55	0.49	0.52	0.53	0.53	0.41	0.47
Average Monthly	- 0.1	-01	- 0.1	- 0.1	-01	-01	- 0.1	- 0.1	-01	-01	-01	< 0.1
Total Iron (mg/L)	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
	- 01	- 0.1	- 0 1	- 0 1	- 0 1	- 0 1	- 0 1	- 0 1	- 0 1	- 0 1	- 0 1	- 0 1
Total Manganese	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1
(mg/L)												
Average Monthly	0.03	0.03	0.04	0.03	0.04	0.03	0.02	0.02	0.02	0.03	0.05	0.03
Total Manganese	0.00	0.00	0.01	0.00	0.0 .	0.00	0.02	0.02	0.02	0.00	0.00	0.00
(mg/L)												
Daily Maximum	0.03	0.04	0.04	0.04	0.05	0.03	0.02	0.03	0.03	0.04	0.06	0.03

DMR Data for Outfall 004 (from May 1, 2022 to April 30, 2023)

Parameter	APR-23	MAR-23	FEB-23	JAN-23	DEC-22	NOV-22	OCT-22	SEP-22	AUG-22	JUL-22	JUN-22	MAY-22
Flow (MGD)												
Average Monthly	0.0015	0.0015	0.0015	0.0015	0.0029	0.0041	0.0046	0.0034	0.0013	0.0015	0.0015	0.0015

Flow (MGD)												
Daily Maximum	0.0015	0.0015	0.0015	0.0015	0.003	0.0046	0.0046	0.0046	0.0015	0.0015	0.0015	0.0015
pH (S.U.)												
Instantaneous												
Minimum	7.22	7.16	7.26	7.22	7.18	7.24	7.27	7.27	7.18	7.46	7.36	7.36
pH (S.U.)												
Instantaneous												
Maximum	7.55	7.49	7.48	7.51	7.75	7.74	7.61	7.64	7.62	7.7	7.77	7.73
TRC (mg/L)												
Average Monthly	< 0.01	< 0.01	< 0.01	< 0.01	< 0.02	< 0.01	< 0.01	< 0.01	0.01	< 0.1	< 0.02	< 0.03
TRC (mg/L)												
Instantaneous												
Maximum	< 0.01	< 0.01	< 0.01	< 0.01	0.2	< 0.01	< 0.01	0.08	0.1	0.3	0.25	0.43

Outfall No.	001		Design Flow (MGD)	.15
Latitude	39º 54' 57.00	n	Longitude	-75º 24' 10.00"
		Water Treatment Effluent	(decant water from residuals thicked	ners and backwash recovery
Wastewater De	escription:	basins)		-

Technology-Based Limitations

The following technology-based limitations are based on the document "Technology Based Control Requirements for Water Treatment Plant Wastes":

Parameter	Average Monthly (mg/l)	Daily Maximum (mg/l)	Basis
TSS	30	60	Doc. No. 362-2183-003
Iron, T	2	4	Doc. No. 362-2183-003
Aluminum, T	4	8	Doc. No. 362-2183-003
Manganese, T	1	2	Doc. No. 362-2183-003
рН	6.0 to 9.0 at all times		Doc. No. 362-2183-003
TRC	0.5		Doc. No. 362-2183-003

All these above limits are existing.

Water Quality-Based Limitations

A "Reasonable Potential Analysis" using TMS, determined the following parameter of concern:

Aluminum, Total; it is controlled by the technology limit.

Outfall No.	002		Design Flow (MGD)	0
Latitude	39º 54' 59.00	"	Longitude	-75º 24' 12.00"
Wastewater De	escription:	Overflow from sedimentation basin		

The recommended limits for Outfall 002 are similar to the limits for Outfall 001. No changes in the existing requirements.

Outfall No.	004	Design Flow (MGD)	1.0
Latitude	39º 54' 59.00"	Longitude	-75º 24' 14.00"
Wastewater De	escription: traveling screen backwash		

The existing pH (6.0 to 9.0 STU) and TRC (0.5 mg/l) limits are recommended to continue in the draft permit.

A "Reasonable Potential Analysis" using TMS, determined the following parameters of concern:

Parameter	Average Monthly (mg/l)	Daily Maximum (mg/l)	Basis
Total Copper	Report	Report	TMS
Total Zinc*	0.224	0.350	TMS

* Only three sample results are reported in the application for Total Zinc. A monitoring requirement is included in the draft permit to collect more data and will be evaluated at the next permit renewal.

Anti-Backsliding

N/A

See the below attached TMS reports:

Outfall 001:

Inst	tructions D	ischarge Stream													
Fac	ility: Rid	ley Creek WTP					NPI	DES Per	mit No.:	PA0052	159		Outfall	No.: 001	
Eva	luation Type:	Major Sewage /	Industri	ial W	aste		Wa	stewater	Descrip	tion: dec	ant wat	er from i	residual	thicken	ers and
					Discha	arge (Cha	racterist	tics						
De	esign Flow	Handmann (mm/l)t		e		Pa	arti	al Mix Fa	actors (F	PMFs)		Com	plete Mi	x Times	(min)
	(MGD)*	Hardness (mg/l)*	рп(50)-	AF	С		CFC	THE	1	CRL	Q,	7-10	0) _h
	0.15	136	7	.6											
						0	if let	ft blank	0.5 if le	ft blank	() if left blan	k	1 if lef	t blank
						+									
	Discha	arge Pollutant	Units	Max	Conc	Tri Cor	b nc	Stream Conc	Daily CV	Hourly CV	Strea m CV	Fate Coeff	FOS	Criteri a Mod	Chem Transl
	Total Dissolve	ed Solids (PWS)	mg/L		288										
5	Chloride (PW	S)	mg/L		85.4										
on lo	Bromide		mg/L	<	0.2										
5	Sulfate (PWS)	mg/L		34.7										
	Fluoride (PWS	5)	mg/L	<	0.07										
	Total Aluminu	m	µg/L		850										
	Total Antimon	у	µg/L	<	0.2										
	Total Arsenic		µg/L	<	2										
	Total Barium		µg/L		93										
	Total Berylliur	n	µg/L	<	1										
	Total Boron		µg/L	<	200										
	Total Cadmiu	m	µg/L	<	0.2										
	Total Chromiu	ım (III)	µg/L	<	3										
	Hexavalent C	hromium	µg/L	<	0.25										
	Total Cobalt		µg/L		0.2										
	Total Copper		µg/L		1										
p2	Free Cyanide		µg/L				H								
8	Total Cyanide		µg/L	<	10		#	-							
ō	Dissolved Iror	1	µg/L	<	20			2							
	Total Iron		µg/L		190		Ħ								
	Total Lead		µg/L	<	1										
	Total Mangan	ese	µg/L		60			-							
	Total Mercury		µg/L	<	0.2										
	Total Nickel		µg/L		1.8										
	Total Phenols	(Phenolics) (PWS)	µg/L	<	2			-							
	Total Seleniur	n	µg/L	<	1		₩	-							
	Total Silver		µg/L	<	0.3		H								
	Total Thaillun		µg/L	~	22										
	Total Molyhda		µg/L		23			-							
\vdash	A oroloin	anun/l	µg/L	-			Ħ								
	Acrolem		µg/L				Ħ								
	Acrylonitrile		µg/L	<				-							
	Benzene		ug/L	<											
	Bromoform		uc/L	<			Ħ								
1	Cromotorini		P8/C												

	Carbon Tetrachloride	µg/L	<				-					
	Chlorobenzene	ua/L										
	Chlorodibromomethane	uo/l	<									
	Chloroothana	wall	-				-					_
	2 Oblematical View Ether	Pg/L	-		-		<u> </u>					
	2-Chlorbeinyl Vinyl Ether	pg/L	~				-					\rightarrow
	Chloroform	µg/L	<									
	Dichlorobromomethane	µg/L	<									
	1,1-Dichloroethane	µg/L	<		_		-					
-	1.2-Dichloroethane	ua/L	<									
à	1 1-Dichloroethylene	uo/l	<									
5	1.2-Dichloropropage	ual	e				-					
5	1.2 Dichlerene des	Pyrc					-					
-	1,3-Dichloropropylene	µg/L	<									
	1,4-Dioxane	µg/L	<									
	Ethylbenzene	µg/L	<									
	Methyl Bromide	µg/L	<									
	Methyl Chloride	ua/L	<									
	Methylene Chloride	ual	<		⊢		-					
	1 1 2 2 Tetrachloraethana	ug/l	-		-		<u> </u>					
	Tata al la satta das	Pg/L	-				-					
	Tetrachloroethylene	hð/r	<									
	Toluene	µg/L	<									
	1,2-trans-Dichloroethylene	µg/L	<									
	1,1,1-Trichloroethane	µg/L	<									
	1.1.2-Trichloroethane	ug/L	<									
	Trichlomethylene	uol	1				-					
	Maul Oblasida	Pg/C	-		-		-					
L	Vinyi Chionde	pg/L	<u> </u>									
	2-Chiorophenol	µg/L	<									
	2,4-Dichlorophenol	µg/L	<									
	2,4-Dimethylphenol	µg/L	<		-		-					
	4,6-Dinitro-o-Cresol	µg/L	<									
4	2.4-Dinitrophenol	ug/L	<									
9	2 Nitrophonol	uall	-				-					
2	2-Nitrophenol	Pyrc			-		<u> </u>					
0	4-ivitrophenoi	µg/L	<									
	p-Chloro-m-Cresol	µg/L	<									
	Pentachlorophenol	µg/L	<									
	Phenol	µg/L	<		-		-					
	2,4,6-Trichlorophenol	µg/L	<									
	Acenaphthene	ua/L	<									
	Acenanhthylene	uo/	~				-					
	Astherases	Pg/C	-		-		<u> </u>					
	Anthracene	pg/L	S		⊨	=						
	Benzidine	µg/L	<									
	Benzo(a)Anthracene	µg/L	<									
	Benzo(a)Pyrene	µg/L	<				-					
	3,4-Benzofluoranthene	µg/L	<									
	Benzo(dhi)Pervlene	ua/L	<									
	Benzo(k)Eluoranthene	uo/l	<									
	Bis/2-Chlomethow/Methane	ugil	1									
	Dis(2 Chlomothy) Westerne	Part					-					
	bis(2-Chioroethyi)Ether	pg/L	<									
	Bis(2-Chloroisopropyl)Ether	µg/L	<									
	Bis(2-Ethylhexyl)Phthalate	µg/L	<									
	4-Bromophenyl Phenyl Ether	µg/L	<									
	Butyl Benzyl Phthalate	µg/L	<									
	2-Chloronaphthalene	ua/L	<				-					
	4 Chlorophonyl Bhonyl Ethor	uall	-		-		-					\rightarrow
	4-Onlorophenyi Phenyi Euler	Pyrc			-							
	Unrysene	hân	<									
	Dibenzo(a,h)Anthrancene	µg/L	<									
	1,2-Dichlorobenzene	µg/L	<									
	1,3-Dichlorobenzene	µg/L	<									
	1.4-Dichlorobenzene	µg/L	<									
d	3.3-Dichlorobenzidine	uo/l	<									
00	Diathyl Phthalate	ucil	-								H	
5	Directly Philade	Pg/L	-									
	Dimethyl Phthalate	hân	<									
	Di-n-Butyl Phthalate	µg/L	<									
	2,4-Dinitrotoluene	µg/L	<									
				-				 	 	 	_	

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	2,6-Dinitrotoluene	µg/L	<								-
	Di-n-Octyl Phthalate	µg/L	<								
	1,2-Diphenylhydrazine	µg/L	<								
	Fluoranthene	µg/L	<	-					-		-
	Fluorene	µg/L	<								
	Hexachlorobenzene	µg/L	<								1
	Hexachlorobutadiene	µg/L	<						1		1
	Hexachlorocyclopentadiene	µg/L	<	_					-		-
	Hexachloroethane	µg/L	<								1
	Indeno(1,2,3-cd)Pyrene	µg/L	<								1
	Isophorone	µg/L	<	-					-		-
	Naphthalene	µg/L	<								
	Nitrobenzene	µg/L	<								1
	n-Nitrosodimethylamine	µg/L	<	-					7		-
	n-Nitrosodi-n-Propylamine	µg/L	<	_							
	n-Nitrosodiphenylamine	µg/L	<								1
	Phenanthrene	µg/L	<						Т		1
	Pyrene	µg/L	<	_					-		-
	1,2,4-Trichlorobenzene	µg/L	<								
	Aldrin	µg/L	<								1
	alpha-BHC	µg/L	<								-
	beta-BHC	µg/L	<								
	gamma-BHC	µg/L	<								1
	delta BHC	µg/L	<						Ì		
	Chlordane	µg/L	<	_					-		-
	4,4-DDT	µg/L	<								1
	4,4-DDE	µg/L	<								
	4,4-DDD	µg/L	<								-
	Dieldrin	µg/L	<								
	alpha-Endosulfan	µg/L	<								1
	beta-Endosulfan	µg/L	<	-					7	-	-
90	Endosulfan Sulfate	µg/L	<	_							
Ino	Endrin	µg/L	<								
5	Endrin Aldehyde	µg/L	<						T	-i	
	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	<						Ì		-
	PCB-1254	µg/L	<	_					\rightarrow		-
	PCB-1260	µg/L	<								
	PCBs, Total	µg/L	<								
	Toxaphene	µg/L	<								-
	2,3,7,8-TCDD	ng/L	<								
	Gross Alpha	pCi/L									
5	Total Beta	pCi/L	<						Ì		
dn	Radium 226/228	pCi/L	<								-
2	Total Strontium	µg/L	<								
~	Total Uranium	µg/L	<						_		4
	Osmotic Pressure	mOs/kg									
											4
											4
											_
									_		4
									_		4
											-
									_		-
									_		4

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Stream / Surface Water Information

Ridley Creek WTP, NPDES Permit No. PA0052159, Outfall 001

Instructions Discharge Stream

Receiving Surface V	Vater Name:					No. Reaches to Mod	el: <u>1</u>	Statewide Criteria Great Lakes Criteria
Location	Stream Code*	RMI	Elevation (ft)*	DA (mi ²)*	Slope (ft/ft)	PWS Withdrawal (MGD)	Apply Fish Criteria*	ORSANCO Criteria
Point of Discharge	000621	7.5	99.5	30			Yes	
End of Reach 1	000621	4.8	75	33.3			Yes	

Q 7-10

Location	PMI	LFY	Flow	(cfs)	W/D	Width	Depth	Velocit	Time	Tributa	ary	Stream	m	Analys	sis
Location	T SIVII	(cfs/mi ²)*	Stream	Tributary	Ratio	(ft)	(ft)	y (fps)	(days)	Hardness	pН	Hardness*	pH*	Hardness	pН
Point of Discharge	7.5	0.1	4.5									100	7		
End of Reach 1	4.8	0.1	7.65												

Qh

Location	DMI	LFY	Flow	(cfs)	W/D	Width	Depth	Velocit	Time	Tributa	ary	Stream	m	Analys	sis
Location	rsivii	(cfs/mi ²)	Stream	Tributary	Ratio	(ft)	(ft)	y (fps)	(days)	Hardness	pН	Hardness	pН	Hardness	pH
Point of Discharge	7.5														
End of Reach 1	4.8														

Stream / Surface Water Information

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Ridley	Creek WTP.	NPDES Permit	No. PA0052159	Outfall 001
nucley	CIEEK WIF,	INFOLS FEITING	NO. PROUSEISS,	Outrail 001

Instructions	Results	RETURN TO INPUTS	SAVE AS PDF	PRINT) Inputs	O Results) Limits
Hydrodyr	namics						

Wasteload Allocations

AFC CC	CT (min):	15	PMF:	0.513	Ana	lysis Hardne	ss (mg/l):	103.29 Analysis pH: 7.03
Pollutants	Conc	Stream	Trib Conc	Fate	WQC	WQ Obj	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	(ug/l)		(Pg/L)	COEI	(Pg/L)	(pg/L)	NI/A	
Chloride (PWS)	6			0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		ō	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		ō	750	750	8.209	
Total Antimony	0	0		0	1,100	1,100	12,040	
Total Arsenic	0	0		0	340	340	3,722	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	229,860	
Total Boron	0	0		0	8,100	8,100	88,660	
Total Cadmium	0	0		0	2.078	2.2	24.1	Chem Translator of 0.943 applied
Total Chromium (III)	0	0		0	585.066	1,851	20,266	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	178	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	1,040	
Total Copper	0	0		0	13.855	14.4	158	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	66.896	85.1	931	Chem Translator of 0.786 applied
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	18.0	Chem Translator of 0.85 applied
Total Nickel	0	0		0	481.232	482	5,278	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	3.401	4.0	43.8	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	711	
Total Zinc	0	0		0	120.438	123	1,348	Chem Translator of 0.978 applied

Model Results

6/16/2023

Polutants Conce Conce Conce Steam (U) Fate (U) WCC (U) WLA (U) Comments Total Dissolved Solids (PWS) 0 0 0 N/A N/A N/A Othorise (PWS) 0 0 0 N/A N/A N/A N/A Suffae (PWS) 0 0 0 N/A N/A N/A Total Auminum 0 0 0 N/A N/A N/A Total Auminum 0 0 0 100 120 2/4 4/88 Total Artenic 0 0 0 1/50 1500 3.059	CFC CC	T (min): 57.	.027	PMF:	1	Ana	alysis Hardne	ess (mg/l):	101.77 Analysis pH: 7.02
Total Dissolved Solids (PWS) 0 0 - - 0 N/A N/A N/A Othorise (PWS) 0 0 0 0 N/A N/A N/A Fluorise (PWS) 0 0 0 N/A N/A N/A N/A Total Atominum 0 0 0 0 N/A N/A N/A Total Atominum 0 0 0 0 160 160 3.059 Chem Translator of 1 applied Total Barium 0 0 160 160 3.059 Chem Translator of 0.08 applied Total Contrium (III) 0 0 0 16.00 16.00 3.059 Chem Translator of 0.08 applied Total Contrium (III) 0 0 0 10.01 10.4 212 Chem Translator of 0.08 applied Total Coper 0 0 0 10.01 10.4 212 Chem Translator of 0.082 applied Total Coper 0 0 0 10.01 <t< td=""><td>Pollutants</td><td>Conc</td><td>Stream CV</td><td>Trib Conc (µg/L)</td><td>Fate Coef</td><td>WQC (µg/L)</td><td>WQ Obj (µg/L)</td><td>WLA (µg/L)</td><td>Comments</td></t<>	Pollutants	Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Chloride (PWS) 0 0 0 NA N/A N/A N/A Staffac (PWS) 0 0 0 N/A N/A N/A N/A Total Animum 0 0 0 N/A N/A N/A N/A Total Animum 0 0 0 0 10 N/A N/A Total Animum 0 0 0 10 150 3.059 Chem Translator of 1 applied Total Asseric 0 0 0 1.000 4.100 4.00 32.628 Chem Translator of 0.083 applied Total Cohati 0 0 0 0 1.000 32.628 Chem Translator of 0.898 applied Total Cohati 0 0 0 10 10.4 212 Chem Translator of 0.898 applied Total Cobati 0 0 10 10.4 17.3 Chem Translator of 0.898 applied Dissolved from 0 0 1.500 1.500 30.589 WQC = 30 day aver	Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Suitale (PWS) 0 0 0 NA N/A N/A N/A Total Aluminum 0 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 0 0 20 220 220 4.486 Total Barium 0 0 0 150 150 3.050 Chem Translator of 1 applied Total Boron 0 0 0 1.000 1.000 82.028 Chem Translator of 0.008 applied Total Contrium (II) 0 0 0 1.600 1.600 1.600 1.600 1.600 Total Contrium (II) 0 0 0 0 1.600 <td>Chloride (PWS)</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>N/A</td> <td>N/A</td> <td>N/A</td> <td></td>	Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS) 0 0 NA N/A N/A N/A Total Antinum 0 0 0 10 100	Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Total Akumirum 0 0 NA N/A N/A N/A Total Arsenic 0 0 0 150 150 30.569 Chem Translator of 1 applied Total Barium 0 0 0 150 150 30.659 Chem Translator of 0.908 applied Total Boron 0 0 0 0.0 2.242 Chem Translator of 0.908 applied Total Chomium (III) 0 0 0 10 10.4 212 Chem Translator of 0.808 applied Total Chomium (III) 0 0 0 10 10.4 212 Chem Translator of 0.808 applied Total Copper 0 0 0 10 10.4 212 Chem Translator of 0.808 applied Dissolved iron 0 0 0 10 10.4 212 Chem Translator of 0.808 applied Total Manganese 0 0 0 10.0 10.0 30.589 WQC = 30 day average; PMF = 1 Total Manganese 0 0 0.770 0	Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Antimony 0 0 220 220 4.480 Total Barium 0 0 0 4.100 4.480 Total Boron 0 0 4.100 4.100 83.609 Total Cadmium 0 0 0 0.249 0.27 5.59 Chem Translator of 0.908 applied Total Cadmium 0 0 0 0.249 0.27 5.59 Chem Translator of 0.908 applied Total Cadmium 0 0 0 10.44 212 Chem Translator of 0.908 applied Total Cabalt 0 0 10 10.44 212 Chem Translator of 0.902 applied Total Copper 0 0 0 10 9.01 9.47 183 Chem Translator of 0.98 applied Total Manganese 0 0 0 1.500 3.059 WQCC = 30 day average; PMF = 1 Total Manganese 0 0 1.500 3.059 Chem Translator of 0.98 applied Total Sher 0 0 0 <t< td=""><td>Total Aluminum</td><td>0</td><td>0</td><td></td><td>0</td><td>N/A</td><td>N/A</td><td>N/A</td><td></td></t<>	Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Arsenic 0 0 150 150 13059 Chem Translator of 1 applied Total Barium 0 0 0 100 1100 83.609 Chem Translator of 0.908 applied Total Cadmium 0 0 0 0 2.00 1.600 32.628 Total Chomium (III) 0 0 0 75.148 87.41 1.783 Chem Translator of 0.908 applied Total Cobalt 0 0 0 10 10.4 212 Chem Translator of 0.908 applied Total Cobatt 0 0 0 19 10.0 387 Total Cobatt 0 0 0 9.001 9.47 103 Chem Translator of 0.982 applied Dissolved Iron 0 0 0 1.500 1.500 30.589 WQC = 30 day average: PMF = 1 Total Manganese 0 0 2.00 1.500 3.580 Chem Translator of 0.878 applied Total Manganese 0 0 0 0.770 0.91	Total Antimony	0	0		0	220	220	4,486	
Total Barum 0 0 4,100 4,100 83.00 Total Born 0 0 1,800 1,800 32.63 Total Cadmium 0 0 0 0,249 0.27 5.59 Chem Translator of 0.903 applied Total Chromium (III) 0 0 1 0 75.184 87.4 1,783 Chem Translator of 0.903 applied Hexavaler Chromium 0 0 10 19.0 387 Chem Translator of 0.90 applied Total Cobalt 0 0 0 19.47 193 Chem Translator of 0.90 applied Dissolved Iron 0 0 0 1.500 30.589 WQC = 30 day average; PMF = 1 Total Manganese 0 0 1.500 3.059 Chem Translator of 0.98 applied Total Mercury 0 0 0 1.500 3.0589 WQC = 30 day average; PMF = 1 Total Manganese 0 0 1.500 3.0589 Chem Translator of 0.98 applied Total Nickel 0 0	Total Arsenic	0	0		0	150	150	3,059	Chem Translator of 1 applied
Total Boron 0 0 0 0.049 0.24.09 0.27.05 5.59 Chem Translator of 0.908 applied Total Chromium 0 0 0 0.249 0.27 5.59 Chem Translator of 0.908 applied Hexavalert Chromium 0 0 0 10 10.4 1.783 Chem Translator of 0.982 applied Total Cobat 0 0 0 10 10.4 212 Chem Translator of 0.982 applied Total Cobat 0 0 0 19.0 387 Total Copper 0 0 0 1.600 1.600 30.59 WQC = 30 day average; PMF = 1 Total Inn 0 0 0 1.600 1.600 30.59 WQC = 30 day average; PMF = 1 Total Nickel 0 0 0 0.770 0.911 18.5 Chem Translator of 0.285 applied Total Nickel 0 0 0 0.770 0.911 18.5 Chem Translator of 0.297 applied Total Nickel 0 0 0 0.772 0.911 18.5 Chem Translator of 0.292	Total Barium	0	0		0	4,100	4,100	83,609	
Total Cadmum 0 0 0.249 0.27 5.50 Chem Translator of 0.00 applied Total Chromium (III) 0 0 75.184 87.4 1,783 Chem Translator of 0.80 applied Total Cobalt 0 0 10 10.4 212 Chem Translator of 0.80 applied Total Cobalt 0 0 0 10 10.4 212 Chem Translator of 0.80 applied Total Cobalt 0 0 0.0 10.0 19.7 193 Chem Translator of 0.90 applied Dissolved Iron 0 0 0 1.500 30.580 WQC = 30 day average; PMF = 1 Total Lead 0 0 1.00 1.500 30.580 WQC = 30 day average; PMF = 1 Total Manganese 0 0 0 0.770 0.91 18.5 Chem Translator of 0.89 applied Total Mercury 0 0 0 0.770 0.91 18.5 Chem Translator of 0.922 applied Total Steinium 0 0 0 N/A N/A </td <td>Total Boron</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>1,600</td> <td>1,600</td> <td>32,628</td> <td></td>	Total Boron	0	0		0	1,600	1,600	32,628	
Total Chromium (III) 0 0 75.184 87.4 1.783 Chem Translator of 0.88 applied Hexavalent Chromium 0 0 10 10.4 212 Chem Translator of 0.982 applied Total Cobalt 0 0 10 10.4 212 Chem Translator of 0.982 applied Total Cobalt 0 0 10 10.4 212 Chem Translator of 0.98 applied Total Cobalt 0 0 0 9.01 9.47 193 Chem Translator of 0.98 applied Dissolved Iron 0 0 0 N/A N/A N/A Total Manganese 0 0 1.500 1.500 30.588 WOC = 30 day average; PMF = 1 Total Manganese 0 0 0 0.770 0.91 18.5 Chem Translator of 0.389 applied Total Phenolics (Phenolics) (PWS) 0 0 0 170 18.5 Chem Translator of 0.392 applied Total Selenium 0 0 10 13 13.0 2265 Cost </td <td>Total Cadmium</td> <td>0</td> <td>0</td> <td></td> <td>0</td> <td>0.249</td> <td>0.27</td> <td>5.59</td> <td>Chem Translator of 0.908 applied</td>	Total Cadmium	0	0		0	0.249	0.27	5.59	Chem Translator of 0.908 applied
Hexavalent Chromium 0 0 10 10.4 212 Chem Translator of 0.962 applied Total Cobalt 0 0 19 18.0 387	Total Chromium (III)	0	0		0	75.184	87.4	1,783	Chem Translator of 0.86 applied
Total Cobalt 0 0 10 19.0 387 Total Copper 0 0 0 0 0.01 0.01 183 Chem Translator of 0.86 applied Dissolved Iron 0 0 0 1.500 1.500 30.589 WQC = 30 day average: PMF = 1 Total Lead 0 0 0 2.565 3.525 66.3 Chem Translator of 0.88 applied Total Manganese 0 0 0 0.01 0 0.01	Hexavalent Chromium	0	0		0	10	10.4	212	Chem Translator of 0.962 applied
Total Copper 0 0 0 0 0 0 0 0 0 0 0 0 0 N/A N/A N/A Total Iron 0 0 0 0 1.500 30,589 WQC = 30 day average; PMF = 1 Total Lead 0 0 2.565 3.25 68.3 Chem Translator of 0.788 applied Total Manganese 0 0 0 0 0.0 0	Total Cobalt	0	0		0	19	19.0	387	
Dissolved Iron 0 0 0 N/A N/A N/A N/A Total Iron 0 0 0 1.500 30.589 WQC = 30 day average; PMF = 1 Total Lead 0 0 0 2.555 3.25 68.3 Chem Translator of 0.788 applied Total Maganese 0 0 0 0 0.91 18.5 Chem Translator of 0.85 applied Total Nickel 0 0 0 0 0.5782 52.9 1.080 Chem Translator of 0.997 applied Total Selenium 0 0 0 0 4.800 4.99 102 Chem Translator of 0.997 applied Total Selenium 0 0 0 13 13.0 265 13 13.0 265 14 122 2.480 Chem Translator of 0.988 applied Total Thallium 0 0 0 119.904 122 2.480 Chem Translator of 0.988 applied If THH CCT (min): 57.027 PMF: 1 Analysis Hard	Total Copper	0	0		0	9.091	9.47	193	Chem Translator of 0.96 applied
Total Iron 0 0 1,500 1,500 30,580 WQC = 30 day average; PMF = 1 Total Lead 0 0 0 2,565 3,25 80.3 Chem Translator of 0.788 applied Total Manganese 0 0 0 0 0.770 0.91 18.5 Chem Translator of 0.85 applied Total Mercury 0 0 0 0.52782 52.9 1,080 Chem Translator of 0.907 applied Total Nickel 0 0 0 0.44 N/A N/A N/A Total Selenium 0 0 0 4.800 4.99 102 Chem Translator of 0.922 applied Total Thallium 0 0 13.0 285 Total Zinc 0 0 19.904 122 2.480 Chem Translator of 0.988 applied V Tht CCT (min): 57.027 PMF: 1 Analysis Hardness (mg1): N/A Analysis pH: N/A Total Dissolved Solids (PWS) 0 0	Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Lead 0 0 2.585 3.25 66.3 Chem Translator of 0.788 applied Total Manganese 0 0 0 0 0 N/A N/A N/A Total Mercury 0 0 0 0 0 0.770 0.91 18.5 Chem Translator of 0.85 applied Total Nickel 0 0 0 0 52.782 52.9 1.080 Chem Translator of 0.907 applied Total Selenium 0 0 0 0.800 4.909 102 Chem Translator of 0.922 applied Total Silver 0 0 0 13 13.0 285 285 Total Zinc 0 0 0 119.904 122 2,480 Chem Translator of 0.988 applied ✓ THH CCT (mi): 57.027 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Total Zinc 0 0 50.000 500.000 N/A Analysis pH: N/A	Total Iron	0	0		0	1,500	1,500	30,589	WQC = 30 day average; PMF = 1
Total Manganese 0 0 N/A N/A N/A N/A N/A Total Mercury 0 0 0 0 0 0.770 0.91 18.5 Chem Translator of 0.95 applied Total Nickel 0 0 0 52.782 52.9 1,080 Chem Translator of 0.997 applied Total Selenium 0 0 0 N/A N/A N/A N/A Total Selenium 0 0 0 4.800 4.99 102 Chem Translator of 0.922 applied Total Silver 0 0 0 13 13.0 265 Total Zinc 0 0 119.904 122 2,480 Chem Translator of 0.988 applied Image: Total Zinc 0 0 119.904 122 2,480 Chem Translator of 0.986 applied Image: Total Dissolved Solids (PWS) 0 0 50.000 Fate WQC (µg/L) WLA (µg/L) Comments Choride (PWS) 0 0 250.000	Total Lead	0	0		0	2.565	3.25	66.3	Chem Translator of 0.788 applied
Total Mercury 0 0 0 0.770 0.91 18.5 Chem Translator of 0.85 applied Total Nickel 0 0 0 52.782 52.9 1,080 Chem Translator of 0.997 applied Total Phenolics (PWS) 0 0 0 N/A N/A N/A Total Selenium 0 0 4.600 4.99 102 Chem Translator of 0.922 applied Total Silver 0 0 4.600 4.99 102 Chem Translator of 0.922 applied Total Thallium 0 0 0 13 13.0 265 Total Zinc 0 0 0 119.904 122 2,480 Chem Translator of 0.986 applied Image: Total Zinc 0 0 0 119.904 122 2,480 Chem Translator of 0.986 applied Image: Total Zinc 0 0 500.000 500.000 N/A Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants Corean Corean Corean	Total Manganese	0	0		0	N/A	N/A	N/A	
Total Nickel 0 0 52.782 52.9 1,080 Chem Translator of 0.997 applied Total Phenols (PWS) 0 0 0 4.800 4.99 102 Chem Translator of 0.927 applied Total Selenium 0 0 4.600 4.99 102 Chem Translator of 0.922 applied Total Silver 0 0 4.600 4.99 102 Chem Translator of 0.922 applied Total Thallium 0 0 0 13 13.0 286 Chem Translator of 0.988 applied Image: Total Zinc 0 0 119.904 122 2.480 Chem Translator of 0.988 applied Image: Total Zinc 0 0 119.904 122 2.480 Chem Translator of 0.988 applied Image: Total Zinc 0 0 119.904 122 2.480 Chem Translator of 0.988 applied Image: Total Zinc CCT (min): 57.027 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Total Dissolved Solids (PWS) 0 <td< td=""><td>Total Mercury</td><td>0</td><td>0</td><td></td><td>0</td><td>0.770</td><td>0.91</td><td>18.5</td><td>Chem Translator of 0.85 applied</td></td<>	Total Mercury	0	0		0	0.770	0.91	18.5	Chem Translator of 0.85 applied
Total Phenols (Phenolis) (PWS) 0 0 0 N/A N/A N/A N/A Total Selenium 0 0 0 4.600 4.99 102 Chem Translator of 0.922 applied Total Silver 0 0 0 10 N/A N/A N/A Chem Translator of 0.922 applied Total Thallium 0 0 0 13 13.0 285 Chem Translator of 0.988 applied Total Zinc 0 0 119.904 122 2,480 Chem Translator of 0.988 applied CCT (min): 57.027 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants Conc Stream Trib Conc Fate WQC WQ Obj WLA (µg/L) Comments Choride (PWS) 0 0 0 250,000 500,000 N/A Sulfate (PWS) 0 0 0 2,000 2,000 N/A N/A Total Antimory 0 0 <t< td=""><td>Total Nickel</td><td>0</td><td>0</td><td></td><td>0</td><td>52.782</td><td>52.9</td><td>1,080</td><td>Chem Translator of 0.997 applied</td></t<>	Total Nickel	0	0		0	52.782	52.9	1,080	Chem Translator of 0.997 applied
Total Selenium 0 0 4.800 4.99 102 Chem Translator of 0.922 applied Total Silver 0 0 0 13 13.0 265 Total Thallium 0 0 0 13 13.0 265 Total Zinc 0 0 119.904 122 2,480 Chem Translator of 0.986 applied // Total Zinc 0 0 119.904 122 2,480 Chem Translator of 0.986 applied // Total Zinc 0 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants Stream Trib Conc Fate WQC WQC WQ Obj WLA (µg/L) Comments Choride (PWS) 0 0 0 500,000 500,000 N/A Sulfate (PWS) 0 0 250,000 250,000 N/A Total Antimony 0 0 250,000 260,000 N/A Total Antimony 0 0 5.8 5.	Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Silver 0 0 N/A N/A N/A N/A Chem Translator of 1 applied Total Thallium 0 0 0 13 13.0 265	Total Selenium	0	0		0	4.600	4.99	102	Chem Translator of 0.922 applied
Total Thallium 0 0 13 13.0 265 Total Zinc 0 0 0 119.904 122 2,480 Chem Translator of 0.986 applied Image: Constraint of the second	Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Zinc 0 0 119.904 122 2,480 Chem Translator of 0.988 applied	Total Thallium	0	0		0	13	13.0	265	
Image: Pollutants CCT (min): 57.027 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A Pollutants Conc (ug/L) Stream CV Trib Conc (ug/L) Fate Coef WQ Obj (ug/L) WLA (ug/L) Comments Total Dissolved Solids (PWS) 0 0 0 500,000 500,000 N/A Chloride (PWS) 0 0 0 250,000 250,000 N/A Sulfate (PWS) 0 0 0 250,000 250,000 N/A Fluoride (PWS) 0 0 0 0 250,000 250,000 N/A Total Aluminum 0 0 0 5.8 5.6 114 Total Antimony 0 0 0 2,400 2,400 48,942 Total Barium 0 0 0 0 3,100 3,100 63,218 Total Boron 0 0 N/A N/A N/A N/A	Total Zinc	0	0		0	119.904	122	2,480	Chem Translator of 0.986 applied
Pollutants Conc (upl.) Trib Conc (upl.) Fate Coef WQC (upl.) WQ Obj (upl.) WLA (µpl.) Comments Total Dissolved Solids (PWS) 0 0 0 500,000 500,000 N/A Chloride (PWS) 0 0 0 250,000 250,000 N/A Sulfate (PWS) 0 0 0 250,000 250,000 N/A Fluoride (PWS) 0 0 0 0 250,000 250,000 N/A Total Aluminum 0 0 0 0 5.8 5.8 114 Total Arsenic 0 0 0 2400 2400 2400 2404 Total Barium 0 0 0 0 3,100 3,100 3,216 Total Cadmium 0 0 0 0 N/A N/A Total Barium 0 0 0 N/A N/A N/A Total Barium 0 0 N/A N/A <td< td=""><td><i>⊡ тнн</i> сс</td><td>T (min): 57.</td><td>.027</td><td>PMF:</td><td>1</td><td>Ana</td><td>alysis Hardne</td><td>ess (mg/l):</td><td>N/A Analysis pH: N/A</td></td<>	<i>⊡ тнн</i> сс	T (min): 57.	.027	PMF:	1	Ana	alysis Hardne	ess (mg/l):	N/A Analysis pH: N/A
Total Dissolved Solids (PWS) 0 0 500,000 500,000 N/A Chloride (PWS) 0 0 0 250,000 250,000 N/A Sulfate (PWS) 0 0 0 250,000 250,000 N/A Fluoride (PWS) 0 0 0 250,000 250,000 N/A Fluoride (PWS) 0 0 0 250,000 N/A N/A Total Aluminum 0 0 0 5.8 5.6 114 Total Arsenic 0 0 0 2.400 2.400 48,942 Total Barium 0 0 0 3,100 3,100 63,218 Total Cadmium 0 0 0 N/A N/A N/A	Pollutants	Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Chloride (PWS) 0 0 0 250,000 250,000 N/A Sulfate (PWS) 0 0 0 250,000 250,000 N/A Fluoride (PWS) 0 0 0 250,000 250,000 N/A Total Aluminum 0 0 0 N/A N/A Total Animony 0 0 5.8 5.6 114 Total Arsenic 0 0 10 10.0 204 Total Barium 0 0 0 2,400 2,400 48,942 Total Boron 0 0 0 N/A N/A Total Cadmium 0 0 0 N/A N/A Total Cadmium 0 0 N/A N/A N/A	Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Sulfate (PWS) 0 0 0 250,000 250,000 N/A Fluoride (PWS) 0 0 0 2,000 N/A N/A Total Aluminum 0 0 0 0 10 10 N/A Total Aluminum 0 0 0 5.8 5.6 114 Total Arsenic 0 0 0 10 10.0 204 Total Barium 0 0 0 3,100 3,100 63,216 Total Cadmium 0 0 0 N/A N/A Total Cadmium 0 0 0 N/A N/A	Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Fluoride (PWS) 0 0 2,000 2,000 N/A Total Aluminum 0 0 0 N/A N/A N/A Total Aluminum 0 0 0 5.8 5.6 114 Total Arsenic 0 0 0 10 10.0 204 Total Barium 0 0 0 2,400 2,400 48,942 Total Boron 0 0 0 3,100 63,216 Total Cadmium 0 0 0 N/A N/A Total Chromium (III) 0 0 0 N/A N/A	Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Total Aluminum 0 0 N/A N/A N/A Total Antimony 0 0 0 5.6 5.8 114 Total Arsenic 0 0 0 10 10.0 204 Total Barium 0 0 0 2,400 2,400 48,942 Total Boron 0 0 0 3,100 63,216 Total Cadmium 0 0 0 N/A N/A Total Chromium (III) 0 0 0 N/A N/A	Fluoride (PWS)	0	0		0	2,000	2,000	N/A	
Total Antimony 0 0 5.8 5.6 114 Total Arsenic 0 0 0 10 10.0 204 Total Barium 0 0 0 2,400 2,400 48,942 Total Boron 0 0 0 3,100 362,18 Total Cadmium 0 0 0 N/A N/A Total Chromium (III) 0 0 N/A N/A N/A	Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Arsenic 0 0 10 10.0 204 Total Barium 0 0 0 2,400 2,400 48,942 Total Boron 0 0 0 3,100 3,100 63,216 Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A	Total Antimony	0	0		0	5.6	5.6	114	
Total Barium 0 0 2,400 2,400 48,942 Total Boron 0 0 - 0 3,100 3,100 63,216 Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A	Total Arsenic	0	0		0	10	10.0	204	
Total Boron 0 0 0 3,100 63,216 Total Cadmium 0 0 0 N/A N/A N/A Total Chromium (III) 0 0 0 N/A N/A N/A	Total Barium	0	0		0	2,400	2,400	48,942	
Total Cadmium 0 0 0 N/A N/A Total Chromium (III) 0 0 0 N/A N/A	Total Boron	0	0		0	3,100	3,100	63,216	
Total Chromium (III) 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	

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Hexavalent Chromium	0	0	0	N/A	N/A	N/A	
Total Cobalt	0	0	0	N/A	N/A	N/A	
Total Copper	0	0	0	N/A	N/A	N/A	
Dissolved Iron	0	0	0	300	300	6,118	
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	20,392	
Total Mercury	0	0	0	0.050	0.05	1.02	
Total Nickel	0	0	0	610	610	12,439	
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	4.89	
Total Zinc	0	0	0	N/A	N/A	N/A	

CRL C	CT (min): 19	.230	PMF:	1	Ana	alysis Hardne	ess (mg/l):	N/A Analysis pH: N/A
Pollutants	Conc (ug/L)	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		0	N/A	N/A	N/A	
Total Barium	0	0		0	N/A	N/A	N/A	
Total Boron	0	0		0	N/A	N/A	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	
Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Mercury	0	0		0	N/A	N/A	N/A	
Total Nickel	0	0		0	N/A	N/A	N/A	
Total Phenols (Phenolics) (PWS)	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	N/A	N/A	N/A	
Total Silver	0	0		0	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	

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Recommended WQBELs & Monitoring Requirements

No. Samples/Month: 4

	Mass	Limits		Concentra	tion Limits		Í		
Pollutants	AML	MDL	AMI	MDI	IMAX	Units	Governing	WQBEL	Comments
1 olidiano	(lbs/day)	(lbs/day)	2001E	MDC.	in the second	011105	WQBEL	Basis	Comments
Total Aluminum	Report	Report	Report	Report	Report	µg/L	5,262	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
Fluoride (PWS)	N/A	N/A	Discharge Conc < TQL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	48,942	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	32,628	µg/L	Discharge Conc < TQL
Total Cadmium	5.59	µg/L	Discharge Conc < TQL
Total Chromium (III)	1,783	µg/L	Discharge Conc < TQL
Hexavalent Chromium	114	µg/L	Discharge Conc < TQL
Total Cobalt	387	µg/L	Discharge Conc ≤ 10% WQBEL
Total Copper	101	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	6,118	µg/L	Discharge Conc < TQL
Total Iron	30,589	µg/L	Discharge Conc ≤ 10% WQBEL
Total Lead	66.3	µg/L	Discharge Conc < TQL
Total Manganese	20,392	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	1.02	µg/L	Discharge Conc < TQL
Total Nickel	1,080	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	102	µg/L	Discharge Conc < TQL
Total Silver	28.1	µg/L	Discharge Conc < TQL
Total Thallium	4.89	µg/L	Discharge Conc < TQL
Total Zinc	864	µg/L	Discharge Conc ≤ 10% WQBEL

Model Results

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Outfall 004:

Instructions Discharge Stream Facility: Ridley Creek WTP NPDES Permit No.: PA0052159 Outfall No.: 004 Major Sewage / Industrial Waste Wastewater Description: traveling screen backwash Evaluation Type: **Discharge Characteristics** Partial Mix Factors (PMFs) Complete Mix Times (min) Design Flow Hardness (mg/l)* pH (SU)* (MGD)⁴ AFC CFC THH CRL Q₇₋₁₀ Qh 139 7.5 1 0 if left blank 0.5 if left blank 0 if left blank 1 if left blank Max Discharge Daily Criteri Chem Hourly Strea Fate Trib Stream **Discharge Pollutant** Units FOS m CV Conc Conc Conc CV CV Coeff a Mod Transl Total Dissolved Solids (PWS) 316 mg/L -Chloride (PWS) 87.2 mg/L Group Bromide mg/L < 0.2 Sulfate (PWS) 33.9 mg/L Fluoride (PWS) 0.36 mg/L Total Aluminum 30 µg/L Total Antimony 0.2 µg/L Total Arsenic < 1 µg/L Total Barium 91 µg/L Total Beryllium µg/L < 1 Total Boron < 200 µg/L Total Cadmium < 0.2 µg/L Total Chromium (III) < 3 µg/L Hexavalent Chromium µg/L < 0.25 Total Cobalt 0.2 µg/L Total Copper 11 µg/L 2 Free Cyanide µg/L Group Total Cyanide µg/L 32 < Dissolved Iron 20 µg/L Total Iron µg/L < 20 < Total Lead µg/L 1 Total Manganese 2 µg/L Total Mercury µg/L < 0.2 Total Nickel 1.8 µg/L Total Phenols (Phenolics) (PWS) µg/L < 2 Total Selenium < 1 µg/L Total Silver < 0.3 µg/L Total Thallium < 0.1 µg/L Total Zinc 192 µg/L Total Molybdenum µg/L Acrolein µg/L < Acrylamide < µg/L < Acrylonitrile µg/L

Discharge Information

Bromoform

Benzene

c /1c /2022

<

<

µg/L

µg/L

n--- 4

	Carbon Tetrachloride	µg/L	<		-					
	Chlorobenzene	uo/l		\vdash		 				+
	Chlorodibromomothano	ug/l	/	⊨	-				==	÷
	Chloroothonomethane	pg/L	-		-	 				
	Chloroethane	µg/L	<	 -						+
	2-Chioroethyl Vinyl Ether	µg/L	<							\Rightarrow
	Chloroform	µg/L	<							
	Dichlorobromomethane	µg/L	<							
	1,1-Dichloroethane	µg/L	<	-	-					
0	1,2-Dichloroethane	µg/L	<							
9	1.1-Dichloroethvlene	ua/L	<							
5	1.2-Dichloropropane	ug/L	<		-					
ō	1.3-Dichloropropylene	ugl	<	 -						+
	14 Diovana	ual	-	 ⊨	-					
	T,4-Dioxarie	Pyrc			-					+
	Etnyibenzene	µg/L	<	 <u> </u>						+
	Methyl Bromide	µg/L	<		-					
	Methyl Chloride	µg/L	<							
	Methylene Chloride	µg/L	<							
	1,1,2,2-Tetrachloroethane	µg/L	<		-					
	Tetrachloroethylene	µg/L	<							
I	Toluene	ug/L	<							T
	1.2-trans-Dichloroethylene	uo/l	<		-					+
	1.1.1-Trichlomethane	uo/l	<							+
	1.1.2.Trichlomothano	nal	-							Ŧ
	T, T, 2- Trichloroethane	pgr	~		_					+
	Irichloroethylene	µg/L	<							
	Vinyl Chloride	µg/L	<		-					
	2-Chlorophenol	µg/L	<							
	2,4-Dichlorophenol	µg/L	<							
	2,4-Dimethylphenol	µg/L	<		-					
	4.6-Dinitro-o-Cresol	ug/L	<							
4	2 4-Dinitrophenol	uo/l	<							Ť
8	2.Nitrophonol	ugil	2		-	 				+
2	4 Nitrenhand	Pg/L	-	 -		 				+
0	4-Nitrophenol	µg/L	-		-				=	÷
	p-Chloro-m-Cresol	µg/L	<		-					
	Pentachlorophenol	µg/L	<							
	Phenol	µg/L	<		-					
	2,4,6-Trichlorophenol	µg/L	<							
	Acenaphthene	µg/L	<							
	Acenaphthylene	ug/L	<		-					Ŧ
	Anthracene	uo/l	<							+
	Benzidine	ugl	<							T
	Benzo(a)Anthraesee	ug/L		 ⊨	-					++
	Benzo(a)Printiadene	Pg/L		 -			 	 		+
	Benzo(a)Pyrene	µg/L	<		-					Ŧ
	3,4-Benzofluoranthene	µg/L	<			 				
	Benzo(ghi)Perylene	µg/L	<							
	Benzo(k)Fluoranthene	µg/L	<							
	Bis(2-Chloroethoxy)Methane	µg/L	<							
	Bis(2-Chloroethyl)Ether	µg/L	<							
	Bis(2-Chloroisopropyl)Ether	µg/L	<							
	Bis(2-Ethylhexyl)Phthalate	ua/L	<							
	4-Bromonhenyl Phenyl Ether	ug/l	<							T
	Public Report Obtinate	ug/l	-	-						
	2 Chlomosophithalana	Pg/L		 -						+
	2-Chloronaphinalene	Pg/L			1				—	Ŧ
	4-Chiorophenyi Phenyi Ether	µg/L	<							
	Chrysene	µg/L	<							
I	Dibenzo(a,h)Anthrancene	µg/L	<		1					1
	1,2-Dichlorobenzene	µg/L	<		-					
	1,3-Dichlorobenzene	µg/L	<							
6	1,4-Dichlorobenzene	µg/L	<		1					
ġ.	3.3-Dichlorobenzidine	ug/L	<							
5	Diethyl Phthalate	uo/l	<							+
l di	Dimethyl Phthalate	uci	-							+
1 🗸 1	Lancury: Filulaidue	Part	-							+
Ŭ	Di a Rutal Datasta	1100	0	-					the second day of the second d	
Ŭ	Di-n-Butyl Phthalate	µg/L	<							+

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1	2,6-Dinitrotoluene	µg/L	<	-		-					
	Di-n-Octyl Phthalate	µg/L	<								
	1.2-Diphenylhydrazine	ug/L	<								
	Fluoranthene	ug/L	<								=
	Fluorene	ug/L	<								+
	Hexachlorobenzene	ua/L	<							T	
	Hexachlorobutadiene	uo/l	<	-	╞═┼					+	
	Hexachlorocyclonentadiene	ual	6				 				
	Hexachloroothano	ug/L	-		\square		 		 		
	Indeped 1.2.2 ed/Purson	ug/L	-	-							-
	Indeno(1,2,3-cd)Fyrene	pg/L ug/l	\geq			<u> </u>	 		 		
	Neekikelees	Pg/L	-				 		 		
	Napritraiene	µg/L	~								
	Nitrobenzene	µg/L	<				 				
	n-Nitrosodimethylamine	µg/L	<								
	n-Nitrosodi-n-Propylamine	µg/L	<		╞═┼						
	n-Nitrosodiphenylamine	µg/L	<								
	Phenanthrene	µg/L	<								
	Pyrene	µg/L	<	_		-					
	1,2,4-Trichlorobenzene	µg/L	<								
	Aldrin	µg/L	<								
	alpha-BHC	µg/L	<								
	beta-BHC	µg/L	<								
	gamma-BHC	µg/L	<								
	delta BHC	ug/L	<	-						=	=+
	Chlordane	uo/l	<								
	4 4-DDT	ugl	<							+	+
	44-DDE	ug/L	2	-		<u> </u>					
	4,4-000	Pg/L	\geq			<u> </u>	 		 		
	4,4-000	µg/L	-				 				
	Dielarin alaba Fadaaulfaa	µg/L	~			<u> </u>	 			+	
	aipna-Endosuitan	µg/L	<			<u> </u>	 		 		
	beta-Endosulfan	µg/L	<								
ē.	Endosulfan Sulfate	µg/L	<								
2	Endrin	µg/L	<								
ō	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	<		H					Ħ	===
	PCB-1254	ua/L	<								
	PCB-1260	ug/L	<								
	PCBs Total	uo/l	<			<u> </u>					
	Toyanhana	ug/l	2			-					-
	2.3.7.8-TCDD	pg/L	e								
	Gross Alpha	nCi/l	-							+	-
	Total Pata	pOIL pOil	-			-					-
1	Dadium 008/000	point point	~								
Inc	Radium 220/228	poi/L	<							+	
5	Total Strontium	µg/L	<				 				
-	Total Uranium	µg/L	<								
	Osmotic Pressure	mOs/kg									
						-					
			_		<u> </u>						

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Stream / Surface Water Information

Ridley Creek WTP, NPDES Permit No. PA0052159, Outfall 004

Instructions	Discharge	Stream
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Receiving Surface Water Name: Ridley Creek

Location	Stream Code*	RMI*	Elevation (ft)*	DA (mi ²)*	Slope (ft/ft)	PV	VSV (N	Vith //GD	draw))	val	Apply Fish Criteria*
Point of Discharge	000621	7.5	99.5	30							Yes
End of Reach 1	000621	4.8	75	33.3							Yes

Statewide Criteria

Great Lakes Criteria
 ORSANCO Criteria

Q 7-10

Location	PMI	LFY	Flow	Flow (cfs)		Width	Depth	Velocit	Time	Tributa	ary	Stream		Analysis	
Location	T SIVII	(cfs/mi ²)*	Stream	Tributary	Ratio	(ft)	(ft)	y (fps)	(days)	Hardness	pН	Hardness*	pH*	Hardness	pН
Point of Discharge	7.5	0.1	4.5									86.4	7		
End of Reach 1	4.8	0.1	7.65												

No. Reaches to Model: 1

Q,

Location PMI		LFY	Flow	(cfs)	W/D	Width	Depth	Velocit	Time	Tributa	ary	Stream	m	Analys	sis
Location	1 SIVII	(cfs/mi ²)	Stream	Tributary	Ratio	(ft)	(ft)	y (fps)	(days)	Hardness	pН	Hardness	pН	Hardness	pН
Point of Discharge	7.5														
End of Reach 1	4.8														

Stream / Surface Water Information

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Ridley Creek WTP, NPDES Permit No. PA0052159, Outfall 004

Instructions	Results	RETURN TO INPUTS	SAVE AS PDF	PRINT) (All) Inputs	O Results	🔿 Limits

Hydrodynamics

Wasteload Allocations

✓ AFC CC	T (min): 1	15	PMF:	0.618	Ana	lysis Hardne	ss (mg/l):	105.2 Analysis pH: 7.12
Pollutants	Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	750	750	2,099	
Total Antimony	0	0		0	1,100	1,100	3,078	
Total Arsenic	0	0		0	340	340	951	Chem Translator of 1 applied
Total Barium	0	0		0	21,000	21,000	58,765	
Total Boron	0	0		0	8,100	8,100	22,667	
Total Cadmium	0	0		0	2.115	2.25	6.28	Chem Translator of 0.942 applied
Total Chromium (III)	0	0		0	593.902	1,879	5,259	Chem Translator of 0.316 applied
Hexavalent Chromium	0	0		0	16	16.3	45.6	Chem Translator of 0.982 applied
Total Cobalt	0	0		0	95	95.0	266	
Total Copper	0	0		0	14.096	14.7	41.1	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	N/A	N/A	N/A	
Total Lead	0	0		0	68.241	87.1	244	Chem Translator of 0.784 applied
Total Manganese	0	0		. 0	N/A	N/A	N/A	
Total Mercury	0	0		0	1.400	1.65	4.61	Chem Translator of 0.85 applied
Total Nickel	0	0		0	488.741	490	1,370	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	3.510	4.13	11.6	Chem Translator of 0.85 applied
Total Thallium	0	0		0	65	65.0	182	
Total Zinc	0	0		0	122.320	125	350	Chem Translator of 0.978 applied

Model Results

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CFC	CCT (min): 39	.246	PMF:	1	Ana	alysis Hardne	ess (mg/l):	99.857 Analysis pH: 7.08
Dellaterte	Orean	Stream	Trib Conc	Fate	WQC	WQ Obj	180 8 (0tr
Pollutants	Conc	CV	(µg/L)	Coef	(µg/L)	(µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	N/A	N/A	N/A	
Chloride (PWS)	0	0		0	N/A	N/A	N/A	
Sulfate (PWS)	0	0		0	N/A	N/A	N/A	
Fluoride (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	220	220	860	
Total Arsenic	0	0		0	150	150	586	Chem Translator of 1 applied
Total Barium	0	0		0	4,100	4,100	16,026	
Total Boron	0	0		0	1,600	1,600	6,254	
Total Cadmium	0	0		0	0.246	0.27	1.06	Chem Translator of 0.909 applied
Total Chromium (III)	0	0		0	74.027	86.1	336	Chem Translator of 0.86 applied
Hexavalent Chromium	0	0		0	10	10.4	40.6	Chem Translator of 0.962 applied
Total Cobalt	0	0		0	19	19.0	74.3	
Total Copper	0	0		0	8.945	9.32	36.4	Chem Translator of 0.96 applied
Dissolved Iron	0	0		0	N/A	N/A	N/A	
Total Iron	0	0		0	1,500	1,500	5,863	WQC = 30 day average; PMF = 1
Total Lead	0	0		0	2.513	3.18	12.4	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	3.54	Chem Translator of 0.85 applied
Total Nickel	0	0		0	51.943	52.1	204	Chem Translator of 0.997 applied
Total Phenols (Phenolics) (PWS	6) O	0		0	N/A	N/A	N/A	
Total Selenium	0	0		0	4.600	4.99	19.5	Chem Translator of 0.922 applied
Total Silver	0	0		0	N/A	N/A	N/A	Chem Translator of 1 applied
Total Thallium	0	0		0	13	13.0	50.8	
Total Zinc	0	0		0	117.995	120	468	Chem Translator of 0.986 applied
☑ ТНН	CCT (min): 39	.246	PMF:	1	Ana	alysis Hardne	ess (mg/l):	N/A Analysis pH: N/A
Pollutants	Conc	Stream CV	Trib Conc (µg/L)	Fate Coef	WQC (µg/L)	WQ Obj (µg/L)	WLA (µg/L)	Comments
Total Dissolved Solids (PWS)	0	0		0	500,000	500,000	N/A	
Chloride (PWS)	0	0		0	250,000	250,000	N/A	
Sulfate (PWS)	0	0		0	250,000	250,000	N/A	
Fluoride (PWS)	0	0		0	2,000	2,000	N/A	
Total Aluminum	0	0		0	N/A	N/A	N/A	
Total Antimony	0	0		0	5.6	5.6	21.9	
Total Arsenic	0	0		0	10	10.0	39.1	
Total Barium	0	0		0	2,400	2,400	9,381	
Total Boron	0	0		0	3,100	3,100	12,117	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0		0	N/A	N/A	N/A	

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Hexavalent Chromium	0	0		0	N/A	N/A	N/A	
Total Cobalt	0	0		0	N/A	N/A	N/A	
Total Copper	0	0		0	N/A	N/A	N/A	
Dissolved Iron	0	0		0	300	300	1,173	
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	3,909	
Total Mercury	0	0		0	0.050	0.05	0.2	
Total Nickel	0	0		0	610	610	2,384	
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	0.94	
Total Zinc	0	0		0	N/A	N/A	N/A	
CRL CCT (min): 22.477 PMF: 1 Analysis Hardness (mg/l): N/A Analysis pH: N/A								N/A Analysis pH: N/A
Pollutants	Conc	Stream	Trib Conc	Fate	WQC	WQ Obj	WLA (µg/L)	Comments
	(ug/L)	CV	(µg/L)	Coer	(µg/L)	(µg/L)		
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	
Fluonde (PWS)	0	0		0	N/A	N/A	N/A	
Total Aluminum	0	0		<u> </u>	N/A	NVA	N/A	
Total Antimony	0	0		0	N/A	N/A	N/A	
Total Arsenic	0	0		<u> </u>	N/A	NVA	N/A	
Total Banum	0	0		<u> </u>	N/A	NVA	N/A	
Total Boron	0	0		<u> </u>	N/A	NVA	N/A	
Total Cadmium	0	0		0	N/A	N/A	N/A	
Total Chromium (III)	0	0			NA	INA	IN/A	
Hexavalent Chromium	0	0			N/A	N/A	N/A	
Total Conner	0	0		<u> </u>	NA	INA	N/A	
Disselved less	0				IN/A	IN/A	IN/A	
Total Imp	0	0		0	N/A	N/A	N/A	
Total Ion				<u> </u>	N/A	INA	N/A	
Total Lead	0	0			N/A	N/A	N/A	
Total Manganese	0	0		0	N/A	N/A	N/A	
Total Nickal	0	0		-	N/A	N/A	N/A	
Total Phonols (Phonolias) (PWP)	0	0			N/A	N/A	N/A	
Total Solonium	0	0		0	N/A	N/A	N/A	
Total Selenium	0	0		-	NVA NVA	IN/A	N/A	
Total Silver	0	0		0	N/A	N/A	N/A	
Total Inallium	0	0		-	N/A	N/A	N/A	
I otal Zinc	0	0		0	N/A	N/A	N/A	

6/16/2023

Recommended WQBELs & Monitoring Requirements

No. Samples/Month: 4

	Mass	Limits		Concentra	Concentration Limits					
Pollutants	AML	MDL	AMI MDI				Governing	WQBEL	Comments	
r ondraints	(lbs/day)	(lbs/day)	AME	MDL	IMAA	OTILS	WQBEL	Basis	Connents	
Total Copper	Report	Report	Report	Report	Report	µg/L	26.3	AFC	Discharge Conc > 10% WQBEL (no RP)	
Total Zinc	1.87	2.92	224	350	561	µg/L	224	AFC	Discharge Conc ≥ 50% WQBEL (RP)	

Other Pollutants without Limits or Monitoring

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

Pollutants	Governing WQBEL	Units	Comments
Total Dissolved Solids (PWS)	N/A	N/A	PWS Not Applicable
Chloride (PWS)	N/A	N/A	PWS Not Applicable
Bromide	N/A	N/A	No WQS
Sulfate (PWS)	N/A	N/A	PWS Not Applicable
Fluoride (PWS)	N/A	N/A	PWS Not Applicable
Total Aluminum	1,345	µg/L	Discharge Conc ≤ 10% WQBEL
Total Antimony	N/A	N/A	Discharge Conc < TQL
Total Arsenic	N/A	N/A	Discharge Conc < TQL
Total Barium	9,381	µg/L	Discharge Conc ≤ 10% WQBEL
Total Beryllium	N/A	N/A	No WQS
Total Boron	6,254	µg/L	Discharge Conc < TQL
Total Cadmium	1.06	µg/L	Discharge Conc < TQL
Total Chromium (III)	336	µg/L	Discharge Conc < TQL
Hexavalent Chromium	29.2	µg/L	Discharge Conc < TQL
Total Cobalt	74.3	µg/L	Discharge Conc ≤ 10% WQBEL
Total Cyanide	N/A	N/A	No WQS
Dissolved Iron	1,173	µg/L	Discharge Conc ≤ 10% WQBEL
Total Iron	5,863	µg/L	Discharge Conc < TQL
Total Lead	12.4	µg/L	Discharge Conc < TQL
Total Manganese	3,909	µg/L	Discharge Conc ≤ 10% WQBEL
Total Mercury	0.2	µg/L	Discharge Conc < TQL
Total Nickel	204	µg/L	Discharge Conc ≤ 10% WQBEL
Total Phenols (Phenolics) (PWS)		µg/L	Discharge Conc < TQL
Total Selenium	19.5	µg/L	Discharge Conc < TQL
Total Silver	7.41	µg/L	Discharge Conc < TQL
Total Thallium	0.94	µg/L	Discharge Conc < TQL

Model Results

6/16/2023

Proposed Effluent Limitations and Monitoring Requirements

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

		Effluent Limitations										
Parameter	Mass Units	; (lbs/day) ⁽¹⁾		Concentrat	Minimum ⁽²⁾	Required						
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Measurement Frequency	Sample Type				
Flow (MGD)	Report	Report Daily Max	XXX	XXX	XXX	XXX	1/week	Estimate				
pH (S.U.)	XXX	xxx	6.0 Inst Min	XXX	xxx	9.0	1/week	Grab				
TRC	xxx	xxx	xxx	0.5	XXX	1.2	1/week	Grab				
TSS	xxx	XXX	XXX	30	60	75	1/week	Grab				
Total Aluminum	XXX	xxx	XXX	4.0	8.0	10	1/week	Grab				
Total Iron	XXX	xxx	xxx	2.0	4.0	5	1/week	Grab				
Total Manganese	XXX	XXX	XXX	1.0	2.0	2.5	1/week	Grab				

Proposed Effluent Limitations and Monitoring Requirements

Outfall 002, Effective Period: Permit Effective Date through Permit Expiration Date.

		Effluent Limitations										
Parameter	Mass Units	(lbs/day) ⁽¹⁾		Concentrat	Minimum ⁽²⁾	Required						
	Average Monthly	Average Weekly	Minimum	Average Monthly	Daily Maximum	Instant. Maximum	Measurement Frequency	Sample Type				
Flow (MGD)	Report	Report Daily Max	xxx	xxx	xxx	xxx	Daily when Discharging	Estimate				
pH (S.U.)	XXX	xxx	6.0 Inst Min	XXX	XXX	9.0	Daily when Discharging	Grab				
TRC	XXX	XXX	XXX	0.5	XXX	1.2	Daily when Discharging	Grab				
TSS	XXX	XXX	XXX	30	60	75	Daily when Discharging	Grab				
Total Aluminum	XXX	XXX	xxx	4.0	8.0	10	Daily when Discharging	Grab				
Total Iron	XXX	XXX	XXX	2.0	4.0	5	Daily when Discharging	Grab				
Total Manganese	XXX	XXX	XXX	1.0	2.0	2.5	Daily when Discharging	Grab				

Proposed Effluent Limitations and Monitoring Requirements

Outfall 004, Effective Period: Permit Effective Date through Permit Expiration Date.

		Monitoring Requirements						
Devenuetor	Mass Units	(lbs/day) ⁽¹⁾		Concentra	Minimum ⁽²⁾	Required		
Farameter	Average Monthly	Average Weekly	Minimum	Average Monthly	Maximum	Instant. Maximum	Measurement Frequency	Sample Type
Flow (MGD)	Report	Report Daily Max	xxx	XXX	XXX	XXX	Daily when Discharging	Estimate
pH (S.U.)	XXX	xxx	6.0 Inst Min	XXX	XXX	9.0	Daily when Discharging	Grab
TRC	XXX	XXX	XXX	0.5	XXX	1.2	Daily when Discharging	Grab
Total Copper	XXX	XXX	XXX	XXX	Report Daily Max	XXX	1/quarter	Grab
Total Zinc	XXX	xxx	xxx	XXX	Report Daily Max	XXX	1/quarter	Grab