

SAINT PAUL REGIONAL WATER SERVICES				
PHYSICAL AND CHEMICAL ANALYSIS OF WATER				
Aug-21				
All results are in parts per million & Samples Measured are Dissolved Ions. Analytes with Nelac Lab Cert No. are Nelac Accredited analytes				
NELAP ACCREDITED TNI LABORATORY				
PHYSICAL WATER QUALITY				
	Reporting Limit	EFFLUENT	Method Reference	Nelac Lab Cert. No.
Color (Color Units)	4	<4	Hach Method 8025	
Loss Ignition (ppm)	84	<84	SM 2540 E	
Non-Volatile Salts (ppm)	84	120	SM 2540 E	
Temperature (°C)	NA	25	SM 2550 B-93	
Total Dissolved Solids (ppm)	140	170	SM 2540 C-2011	1999193
Turbidity (NTU)	0.020	0.032	EPA 180.1	1999193
CHEMICAL WATER QUALITY				
	Reporting Limit	EFFLUENT	Method Reference	Nelac Lab Cert. No.
Alkalinity-Total (ppm as CaCO ₃)	0.40	49	SM 2320B	
Carbonate Hardness (ppm as CaCO ₃)	0.40	49	SM 2340 C	
Dissolved Oxygen (ppm)	1.2	8.4	SM 4500-O G (20th)	
Hydrogen Ion-pH	0.04	8.85	SM 4500-H+ B - 2011	1999193
Non-Carbonate Hardness (ppm)	0.40	31	SM 2340 C	
Total Hardness (ppm as CaCO ₃)-EDTA method	0.40	80	SM 2340 C	
Total Organic Carbon (ppm as C)	2.00	3.98	SM 5310 B - 2011	1999193
Total Hardness (grains/Gal as CaCO ₃)-EDTA method is 4.68				
CHEMICAL WATER QUALITY - INORGANIC NONMETALS				
	Reporting Limit	EFFLUENT	Method Reference	Nelac Lab Cert. No.
Ammonia Nitrogen (ppm as N)	0.100	0.930	EPA 350.1	
				2001911 Subcontracted to Pace Analytical
Bromide (ppm as Br-1)	0.0003	<0.0003	EPA 300.0	
Chloride-Cl (ppm as Cl ⁻¹)	8	34	SM 4500-CL-B (20th)	
Chlorine Residual (ppm Cl as Cl ₂)	0.085	3.20	Hach 10101	
Fluoride-F (ppm as F ⁻¹)	0.08	0.75	EPA 9214	
Nitrate, Nitrite Nitrogen (ppm as N)	0.082	0.120	EPA 353.2	
Sulfate (ppm as SO ₄)	2.7	14.1	Hach 8051	
Sulfur-S (ppm as S)	2.7	4.7	Hach 8051	
Sulfide-S ²⁻ (ppm as S ²⁻)	0.020	<0.02	Hach 8131	
Total Phosphorus-P (ppm as P)	0.025	<0.05	EPA 365.1	
Total Nitrogen-N (ppm as N)	0.200	ND	SM 5310 B - Modified	
CHEMICAL WATER QUALITY - METALS				
	Reporting Limit	EFFLUENT	Method Reference	Nelac Lab Cert. No.
Aluminum-Al (ppm as Al)	0.0013	0.0172	EPA 200.8	1999193
Arsenic-As (ppm as As)	0.0001	0.0007	EPA 200.8	1999193
Cadmium-Cd (ppm as Cd)	0.0001	<0.0001	EPA 200.8	1999193
Calcium-Ca (ppm as Ca)	0.4000	53	SM 2340 C	
Copper-Cu (ppm as Cu)	0.0026	<0.0026	EPA 200.8	1999193
Hexavalent Chromium (ppm as Cr ⁶⁺)	0.0400	<0.04	Hach 8023	
Iron-Fe (ppm as Fe)	0.0633	<0.0633	EPA 200.8	
Lead-Pb (ppm as Pb)	0.0001	<0.0001	EPA 200.8	1999193
Magnesium-Mg (ppm as Mg)	0.4000	28	SM 2340 C	
Manganese-Mn (ppm as Mn)	0.0011	<0.0011	EPA 200.8	1999193
Silicon-Si (ppm as Si)	NA	NA	EPA 200.8	
Sodium-Na (ppm as Na)	0.0007	17.08	EPA 200.8	
Strontium-Sr (ppm as Sr)	0.0002	0.0642	EPA 200.8	
Zinc-Zn (ppm as Zn)	0.0027	<0.0027	EPA 200.8	1999193
MICROBIOLOGY WATER QUALITY				
	Number of Samples	EFFLUENT	Method Reference	Nelac Lab Cert. No.
Total Coliform Count 35°C/100 ml	248	Absent	SM 9223 B-2016 (IDEXX Colilert	1999193
E. Coli Count 35°C/100 ml	248	Absent	SM 9223 B-2016 (IDEXX Colilert	1999193