

SAINT PAUL REGIONAL WATER SERVICES

PHYSICAL AND CHEMICAL ANALYSIS OF WATER

April '15

All results are in parts per million & Samples Measured are Dissolved Ions

PHYSICAL WATER QUALITY

	Reporting Limit	EFFLUENT
Color (Color Units)	4	<4
Loss Ignition (ppm)	84	105
Non-Volatile Salts (ppm)	84	95
Temperature (°C)	0.02	9
Total Dissolved Solids (ppm)	75	200
Turbidity (NTU)	0.030	<0.03

CHEMICAL WATER QUALITY

	Reporting Limit	EFFLUENT
Alkalinity-Total (ppm as CaCO ₃)	0.40	53
Carbonate Hardness (ppm as CaCO ₃)	0.40	53
Dissolved Oxygen (ppm)	1.2	10.0
Hydrogen Ion-pH	0.04	8.99
Non-Carbonate Hardness (ppm)	0.40	36
Total Hardness (ppm as CaCO ₃)-EDTA method	0.40	90
Total Organic Carbon (ppm as C)	0.40	3.94

Total Hardness (grains/Gal as CaCO₃)-EDTA method is 5.25

CHEMICAL WATER QUALITY - INORGANIC NONMETALS

	Reporting Limit	EFFLUENT
Ammonia Nitrogen (ppm as N)	0.030	0.798
Chloride-Cl (ppm as Cl ⁻¹)	8	35
Chlorine Residual (ppm Cl as Cl ₂)	0.085	3.32
Fluoride-F (ppm as F ⁻¹)	0.08	0.83
Nitrate, Nitrite Nitrogen (ppm as N)	0.202	0.628
Sulfur-S (ppm as S)	2.7	3.0
Sulfide-S ²⁻ (ppm as S ²⁻)	0.020	<0.02
Total Phosphorus-P (ppm as P)	0.025	<0.025
Total Nitrogen-N (ppm as N)	0.008	1.08

CHEMICAL WATER QUALITY - METALS

	Reporting Limit	EFFLUENT
Aluminum-Al (ppm as Al)	0.006	0.008
Arsenic-As (ppm as As)	0.006	<0.006

Cadmium-Cd (ppm as Cd)	0.003	<0.003
Calcium-Ca (ppm as Ca)	0.40	21
Copper-Cu (ppm as Cu)	0.050	<0.05
Hexavalent Chromium (ppm as Cr ⁶⁺)	0.040	<0.04
Iron-Fe (ppm as Fe)	0.050	<0.05
Lead-Pb (ppm as Pb)	0.006	<0.006
Magnesium-Mg (ppm as Mg)	0.40	9
Manganese-Mn (ppm as Mn)	0.090	<0.09
Silicon-Si (ppm as Si)	0.84	4.74
Sodium-Na (ppm as Na)	0.079	18.80
Zinc-Zn (ppm as Zn)	0.050	<0.05