

Minneapolis Water Works

Monthly Plant Effluent Water Analysis for:

December 2019

Physical and Chemical Water Quality

	<u>Plant Effluent Average Value</u>
Temperature, River Water Average (°C)	2.1
Total Organic Carbon (ppm* as C)	3.92
Total Dissolved Solids (ppm)	146
Turbidity (NTU)	0.04
Alkalinity-Total (ppm as CaCO ₃)	48
Ammonia Nitrogen (ppm as N)	0.87
Chlorine Residual (ppm Cl as Cl ₂)	4.0
Fluoride-F (ppm as F)	0.67
pH	9.03
Nitrate - NO ₃ (ppm as N)	0.99
Nitrite - NO ₂ (ppm as N)	<0.015
Phosphate-PO ₄ (ppm as PO ₄)	0.92
Sulfate - SO ₄ (ppm as SO ₄)	26.7
Total Hardness (grains per gallon) EDTA method	4.80
Total Hardness (ppm as CaCO ₃) EDTA method	82

Chemical Water Quality - Inorganic Metals

<u>Chemical Element</u>	<u>Plant Effluent Average Value</u>
Aluminum-Al (ppm as Al)	Not Detected
Arsenic-As (ppm as As)	Not Detected
Cadmium-Cd (ppm as Cd)	Not Detected
Calcium-Ca (ppm as Ca)	29.7
Chloride-Cl (ppm as Cl)	27.7
Chromium (ppm as Cr)	<0.01
Copper-Cu (ppm as Cu)	<0.01
Iron-Fe (ppm as Fe)	Not Detected
Lead-Pb (ppm as Pb)	Not Detected
Magnesium-Mg (ppm as Mg)	4.06
Manganese-Mn (ppm as Mn)	<0.01
Silica-Si (ppm as Si)	9.73
Sodium-Na (ppm as Na)	15.9
Zinc-Zn (ppm as Zn)	<0.01

*ppm = parts per million