Minneapolis Water Works
Monthly Plant Effluent Water Analysis for:
November 2016

Physical and Chemical Water Quality

	Plant Effluent Average Value
Temperature, River Water Average (°C)	8.9
Total Organic Carbon (ppm* as C)	4.04
Total Dissolved Solids (ppm)	164
Turbidity (NTU)	0.07
Alkalinity-Total (ppm as $CaCO_3$)	49
Ammonia Nitrogen (ppm as N)	0.81
Chlorine Residual (ppm Cl as Cl_2)	3.8
Fluoride-F (ppm as F)	0.67
pH	8.91
Nitrate - NO_3 (ppm as N)	1.12
Nitrite - NO_2 (ppm as N)	<0.015
Phosphate-PO_4 (ppm as PO_4)	0.84
Sulfate - SO_4 (ppm as SO_4)	23.6
Total Hardness (grains per gallon) EDTA method	4.9
Total Hardness (ppm as $CaCO_3$) EDTA method	83

Chemical Water Quality - Inorganic Metals

Chemical Element	**Plant Effluent Average Value**
Aluminum-Al (ppm as Al)	0.01
Arsenic-As (ppm as As)	Not Detected
Cadmium-Cd (ppm as Cd)	Not Detected
Calcium-Ca (ppm as Ca)	28.3
Chloride-Cl (ppm as Cl)	28.7
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)	3.39
Manganese-Mn (ppm as Mn)	<0.01
Sillca-Si (ppm as Si)	7.45
Sodium-Na (ppm as Na)	13.6
Zinc-Zn (ppm as Zn)	Not Detected

*ppm = parts per million