

Minneapolis Water Works

Monthly Plant Effluent Water Analysis for: August 2016

Physical and Chemical Water Quality

| | <u>Plant Effluent Average Value</u> |
|--|-------------------------------------|
| Temperature, River Water Average (°C) | 26 |
| Total Organic Carbon (ppm* as C) | 5.90 |
| Total Dissolved Solids (ppm) | 169 |
| Turbidity (NTU) | 0.08 |
| Alkalinity-Total (ppm as CaCO ₃) | 48 |
| Ammonia Nitrogen (ppm as N) | 0.88 |
| Chlorine Residual (ppm Cl as Cl ₂) | 3.8 |
| Fluoride-F (ppm as F) | 0.70 |
| pH | 8.75 |
| Nitrate - NO ₃ (ppm as N) | 0.67 |
| Nitrite - NO ₂ (ppm as N) | < 0.015 |
| Phosphate-PO ₄ (ppm as PO ₄) | 0.96 |
| Sulfate - SO ₄ (ppm as SO ₄) | 27 |
| Total Hardness (grains per gallon) EDTA method | 5.2 |
| Total Hardness (ppm as CaCO ₃) EDTA method | 88 |

Chemical Water Quality - Inorganic Metals

| <u>Chemical Element</u> | <u>Plant Effluent Average Value</u> |
|--------------------------|-------------------------------------|
| Aluminum-Al (ppm as Al) | 0.09 |
| Arsenic-As (ppm as As) | Not Detected |
| Cadmium-Cd (ppm as Cd) | Not Detected |
| Calcium-Ca (ppm as Ca) | 30.1 |
| Chloride-Cl (ppm as Cl) | 26.5 |
| 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) | 0.7 |
| Manganese-Mn (ppm as Mn) | <0.01 |
| Silica-Si (ppm as Si) | 10.9 |
| Sodium-Na (ppm as Na) | 11.9 |
| Zinc-Zn (ppm as Zn) | Not Detected |

*ppm = parts per million