



Project Profile

Water Treatment Applications in North Dakota Ethanol Plant

The Facility

The Tharaldson Ethanol Plant is located in Casselton, ND. The facility gets its feed water from the city tertiary treatment plant. The system we have supplied treats this water to boiler water quality standards. The system supplied for this project ties directly into the main DCS and all the instruments are Fieldbus enabled.

Scope of Service

2 Units of Sodium Exchange Softener – 300 GPM of product each.

1 Unit of Reverse Osmosis – 240 GPM of product each used in the main power plant.

Design Water Analysis

Ammonium as NH ₄	0.11
Potassium	0.71
Sodium as Na	1.33
Magnesium as Mg	0.11
Calcium as Ca	0.18
Strontium as Sr	0
Barium as Ba	0
CO ₃	0
HCO ₃	2.38
Nitrate as NO ₃	1.41
Chloride as Cl	1.29
Fluorine as F	0.01
Sulfate as SO ₄	0.01
Boron	0
SiO ₂	0.05
CO ₂	82.82
TDS	8.42
pH	4.78s