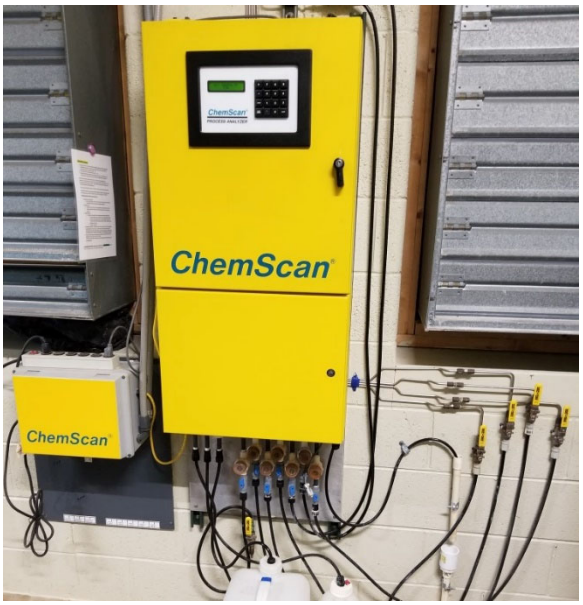
Success Stories

Multi Sample Nitrate Analyzer Keeps Ion Exchange Process in Compliance



Customer Profile

Whiting is a suburb of Stevens Point Wisconsin. The Village is home to 1750 residents and operates a public works department plus water and wastewater utilities for the community and surrounding unincorporated areas.

Featured Product
ChemScan UV-3150

Overview
The regional water supply is from groundwater which is naturally high in Nitrate due to a shallow water table and a history of farming. The groundwater, which is otherwise very high quality, requires treatment in order to remove enough Nitrate to meet state health requirements. Whiting was one of the first communities in Wisconsin to install an ion exchange treatment system that features complete treatment of a bypass loop with a means to combine the treated water fraction with the untreated raw water fraction to produce a final blend under the 10 mg/l limit for drinking water.

Challenge
An early model ChemScan UV-3150 Analyzer was installed in January 1994 after an extensive demonstration test. The original system monitored three sample lines, including raw water, treated water and the final blend. This was far superior to other systems that could only monitor one location. Not only could the ChemScan system effectively monitor all three sample lines, the analyzer could also have a separate calibration for each sample line. But a downside was that the outputs were not directly connected to the blend control computer, even though the analyzer had that capability. Also, the analyzer only monitored the combined output from five ion exchange tanks, so it was not able to recognize if an individual tank was malfunctioning or in need of regeneration based on the amount of Nitrate in the output from an individual tank.

> The analyzer “has been a jewel,” and “works day in and day out, without asking for much from us.”

Nick Schmeiser, Director of Public Works and Utilities, Whiting, Wisconsin.

Solution

The original ChemScan UV-3150 Analyzer was retired in 2004 after 10 years of service. An updated ChemScan UV-3150 was installed in 2004 to replace the original system. The new analyzer has an internal manifold with seven sample lines so that the raw water and the blend could continue to be analyzed as before, but now each individual ion exchange tank had its own dedicated sample line into the analyzer. In addition, the new analyzer was set up to communicate directly with the ion exchange control system. This allows each tank to be individually monitored.

Nick Schmeiser, Director of Public Works and Utilities notes that “with seven sample lines we can look at specific tanks if the blend is off spec and know exactly where the problem is coming from”. The analyzer can also receive signals from the control system if any tank is off line or being regenerated, allowing the out of service line to be skipped. The analyzer “has been a jewel,” according to Schmeiser, and “works day in and day out, without asking for much from us.” Whiting performs an operator initiated Auto Clean every two weeks and maintains the zero standard and cleaning solution levels. Cost of operation has been “nil, just a few replacement parts” shipped overnight by ChemScan. “This helps us in our normal operation and helps us stay in compliance. ChemScan is one company I can sit back and say good things about,” noted Schmeiser.

Similar ChemScan Analyzer systems were installed in many US communities throughout the Southwest and Midwest with similar groundwater Nitrate issues. These systems have a similar history of long term service with low operating cost and accurate results from dedicated sample lines.

ChemScan, Inc.
2325 Parklawn Dr. Suite I
Waukesha, WI 53186
PH 262-717-9500

ChemScan.com