Case Study
WTP #2

Liquid Oxygen Supply For Ozone Generation

1-800-400-4683
P/N 14650119

Highlights:

Location —Duchesne County, Utah
Scope of Project:

- Engineering & manufacture of turnkey system at Chart's MN facility
- (1) 6,000 gal LOX storage tank, sized for maximum design flow usage for 23 days without refilling.
- Electric-actuated valves
- Flow spec: 1,170 SCFH using (2) Thermax ambient air vaporizers.
- Integrated switcher valve system for 24/7 vaporizer operation
- Project Completion: early 2011

Application:

New water treatment plant designed to double the area's water output from 4 to 8 million gallons per day. Pre-treatment of water was changing from chlorine to ozone using liquid oxygen.

Project Background:

Chart was requested to develop the cryogenic liquid oxygen (LOX) storage system and was depended upon to advise end-user on selection of components for the Duchesne Valley plant.

Significant Accomplishments:

Chart was able to accommodate some unusual requests in the design. The plant required very specific electric-actuated valves (instead of the typical air-actuated valves). Chart's engineers worked with client to help them implement custom piping using T316 Steel for all tubing and piping as site specific requirement upgraded from T304 standard.

The ozone generation system was completed as promised, and within budget.

System Configuration:

Chart's (1) 6,000 gal vessel and components for a turnkey solution was plugged seamlessly into the entire water treatment system. Contractor has a single-source accountability for their entire oxygen supply system. All components were factory tested and designed for ease of installation.

Full factory built skid module designs reduced the on-site install effort and eliminated fighting with field installation issues.