

Trenton, Missouri Delivers Safety and Efficiency with On-Site Sodium Hypochlorite Production from the Process Solutions, Inc. Microclor™ System

Located in Northern Missouri, the city of Trenton and its more than 6,000 residents pride themselves on self-sufficiency and pragmatic decision making. During the spring of 2012, the utility embarked on the design and construction of chemical feed system upgrades at the existing water plant that would help the city manage the need for new capacity, better control of trihalomethanes (THM's) and improve operator safety by removing gaseous chlorine as a disinfectant.

As with many smaller communities, Trenton water utility personnel were anxious to remove the use of one-ton cylinders of pressurized chlorine gas for water disinfection. While gaseous chlorine is cost effective, operator safety and community relations often become deciding factors during the evaluation of existing disinfection practices. Trenton personnel and their engineer partner, Larkin Lamp Rynearson, explored both on-site sodium hypochlorite (bleach) generation and bulk bleach deliveries. Ultimately, the simplicity of on-site generation, the self-sufficiency afforded by only requiring salt and electricity to disinfect water and the easy storage of dilute (0.8%) bleach which did not degrade in hot summer months guided the team to design an on-site hypochlorite system (OSHG) for the new plant.

After visiting a number of facilities around the country, the design team felt strongly that the open-cell construction and ease of maintenance of the Process Solutions, Inc. Microclor™ OSHG system was the design that would work best in Trenton. In fact, the owner commented, "Low bids for cities do not always get you the equipment you want, so we did a pre-selected purchase after visiting other Microclor™ installations and talking to references."

"We had lots of new equipment on this project, and the Microclor™ equipment and its support team are absolutely the best of the best, in terms of reliable equipment and prompt service."

Steve Reid
Water Treatment Plant Manager
Trenton, MO

After a year and a half of operation, the 400 pound per day (chlorine equivalent) Microclor™ system has proven itself in terms of reliability and safety. The clear, vertically oriented cells and the system's open architecture allows for easy inspection and simplifies any minor maintenance required. Furthermore, operators appreciate the fact that no special hazardous materials training or equipment is required (other than safety glasses and gloves) to work around the Microclor™ system.



400 Pound Per Day Microclor™ system skid (left) and Hypo Storage tanks (right). Also includes 40 ton Salt Brine tank not shown.

