

City of Lawrenceburg, Kentucky Installs Next Generation On-Site Hypochlorite Generation System and Enjoys Reliable Operation Since 2012



Located between Louisville and Lexington, Lawrenceburg boasts the advantages of a rural lifestyle with access to urban centers. With a large percentage of the city's treated water involved with the production of the region's famous bourbon, the Lawrenceburg staff takes water quality especially seriously.

When the new water plant was constructed in 2004, the staff and designers wanted to avoid the safety issues of gas chlorine and concentrated commercial bleach for disinfection and decided to move ahead with a design that included on-site generated hypochlorite (OSHG). OSHG uses electricity and sodium chloride (table salt) to produce a safe 0.8% concentration of bleach. With a throughput of between 2.3 and 1.8 million gallons per day, the plant was designed with a 40 ton brine tank and two 1000 gallon hypochlorite storage tanks. After start-up, problems such as leaks and electrical problems plagued the three OSHG skids. At one point, the staff purchased surplus equipment from neighboring plants to scavenge parts.

Nevertheless, Lawrenceburg remained convinced that OSHG made sense. In 2012, the staff worked with Process Solutions (a division of UGSI Solutions), to design and install a replacement Microclor® OSHG process. Two 160 pound-per-day (equivalent chlorine) skids were installed in less than 60 days by plant staff and involved using commercial bleach during the changeover. The Microclor® OSHG system is designed with a series of vertical electrolytic cells that passively vent byproduct hydrogen away from the system and includes a simple rectifier design that makes operation and maintenance easy compared to other systems. In the event of a cell problem, a cell can be removed and the system can continue to operate at a lower capacity until the issue is resolved.

Recognizing that minor problems can always occur, the city entered into a service contract that included service and training as required for new staff. The new Microclor® OSHG system has been operating reliability since installation.

"Microclor® OSHG has been more reliable than our experience with the previous manufacturer. UGSI Solutions has been responsive with spare parts and on-site technical service when needed." – Larry Hazlett, WTP Supervisor, Lawrenceburg, KY



Dual 160 PPD Microclor® OSHG units in Lawrenceburg, KY