

## Indiana American Water Eliminates Gaseous Chlorine at Hidden Lake WTP in Warsaw, Indiana

In 2000, Indiana American Water, a subsidiary of American Water Company, purchased the Warsaw Indiana system which serves a population of over 16,000. Indiana American then completed a Comprehensive Planning Study that included a number of upgrades and improvements to enhance the reliability, safety and water quality of the system.

One key aspect of the system upgrades was the construction of a modern 6 million gallon per day capacity water treatment plant to replace the four existing outdated facilities. The design-build team of Hazen & Sawyer and River City Construction was selected for the \$25 million project. The aggressive delivery schedule allowed only 16 months for design and construction. The project was completed under budget and on time.



*Microclor™ OSHG systems with Encore® metering pumps in foreground*

In addition to removing iron and manganese, the new treatment plant would also utilize on-site hypochlorite generation (OSHG) for water disinfection in order to eliminate “the need for storing gaseous chlorine cylinders on site.” The team chose the Process Solutions Microclor™ OSHG system configured with dual MC-200 (each capable of producing 200 pounds per day of chlorine equivalent) units to meet not only the current 6 MGD capacity, but also the contemplated 9 MGD ultimate capacity. Encore® chemical metering pumps were selected for the reliability and superior suction lift capability provided by their non-lost-motion mechanism.



*Dual 200 PPD Microclor™ OSHG systems*

The Microclor™ system is truly a next generation hypochlorite generation system that combines the latest rectifier and controls technology with an efficient and innovative electrolytic cell array that vents hydrogen byproduct safely and quickly away from the bleach production.

The Microclor™ open design allows easy access for maintenance and upgrades by operations staff or company personnel. The generation of safe 0.8% hypochlorite from simple salt and electricity provided not only desired resiliency, but was also consistent with the “green building” intent of the project team.