

## Environmental Control at Indoor Pool:

## Parks District Uses New ECS System to Eliminate Chronic Air Quality Problems At High School Pool.

**CUSTOMER:** BUFFALO GROVE HIGH SCHOOL, BUFFALO GROVE, ILLINOIS

**EQUIPMENT:** USFILTER'S STRANCO PRODUCTS ECS SYSTEM

**INSTALLED:** MAY 1999

**BACKGROUND:** Maintaining balanced water chemistry was a long-term problem at the Buffalo Grove, Ill., High School indoor swimming pool, operated by the Buffalo Grove Parks District. Swim team members utilizing the 150,000 gallon pool consistently complained of foul-smelling air and irritated eyes, skin and sinuses caused by the formation of undesirable chlorine byproducts. Air quality was so poor that swimmers were constantly coughing as they came up for air and breathed in chloramines on the surface of the water. The difficulties encountered in trying to lower high combined chlorine levels (1+ ppm) were compounded by the 27-year-old pool's lengthy hours of operation and heavy bather load. "Our pool is a multi-use facility," said Buffalo Grove Facilities Operations Supervisor Bob Shiel. During the school year, the high school utilizes the pool from 6:00 a.m. until 6:00 p.m. Then, the Parks District takes over the pool for swim team practices and competitions until around 11:00 p.m."

Facility management took numerous steps to try to alleviate the problem, including superchlorinating the pool, increasing air flow in the facility and installing an expensive ionizer, but combined chlorine levels continued to run high and air quality remained poor. "We could never shut down the pool for the three or four days necessary for effective superchlorination," said Shiel. "Blowing air over the top of the pool did little to alleviate the problem and the ionizer proved to be a maintenance headache." Then, while attending an aquatics conference, district management heard about a new process control system designed to provide precise control of pool water chemistry and air quality in indoor aquatic facilities.

**ACTION STEPS:** The Buffalo Grove Parks District installed USFilter's Stranco Products Strantrol® ECS (Environmental Control System). The state-of-the-art process control system controls not only the rate of oxidation, but also the types of oxidation reactions that take place in pool water. The facility also switched from gaseous chlorine to calcium hypochlorite.

**RESULTS:** After the ECS system was installed, the pool's water balance was optimized to achieve a Ryznar Index of 6.5. The formation of volatile chloramines is prevented by the optimized and controlled rate of oxidation of all organic nitrogen compounds that enter the pool and serves as the basis of the ECS technology. In less than two weeks of operation, the pool odor problems were eliminated. Combined chlorine levels in the pool water now run at extremely low levels. "We have not had any complaints of foul-smelling air since installing the new ECS system," said Shiel. "Our confidence level is so high that we added three ECS systems to a new facility that is in the process of being built."

In addition, with the switch to calcium hypochlorite, the facility installed a CHF-150 calcium hypochlorite feeder from USFilter's Stranco Products. The low-maintenance CHF-150 precisely feeds disinfectant on actual demand.

**FOR MORE INFORMATION:**

Represented by:



Stranco Products  
P.O. Box 389  
Bradley, IL 60915 U.S.A.  
800.882.6466 tel  
815.932.8154 tel  
815.932.1760 fax  
<http://www.stranco.com>  
e-mail: [stranco@usfilter.com](mailto:stranco@usfilter.com)