

## Atlanta Area Indoor YMCA Pool Here in Title Case

# Case Study

### Background

Can revolutionary new technologies tackle a facility's chronic air and water quality issues?

### The Problem

A popular YMCA pool outside of Atlanta commonly experienced heavy bather loads. Their 125,000 indoor gallon pool enjoyed a highly successful programming schedule, which attracted a wide variety of patrons including recreational, learn to swim and aspiring competitive swimmers.

The YMCA had spent a lot of time and money trying to maintain the best water quality possible but had chronic 2.0 PPM chloramine (combined chlorine) issues that fouled the indoor air, and sometimes provided eye and skin irritation for instructors and patrons alike.

Over the years, they had invested in a good mechanical equipment package, with a 5-hour turnover rate, well within the Health Department requirement. They utilized drinking water-grade permanent media filters flowing at 12.23 GPM/Sq Ft, normally a recipe for great water quality. But those measures alone did not resolve the issue.

They also utilized a state-of-the-art BECSys5 chemistry control system which maintained optimum chlorine and pH levels 24/7/365 with alerts of any out-of-range readings. They coupled that with a Pulsar® Calcium Hypochlorite feeder with a highly diluted muriatic acid system. Pulsar® systems are known to be self-shocking and provide perfect water balance, so that helped a bit.

They implemented an enzyme purge and daily enzyme feed regimen, known to help attack the root of the chloramine issues, and reduced the chloramine level to 1.5 PPM, still well above the optimum 0.0 - 0.2 PPM target levels. As a last-ditch effort, they implemented a daily feed of Purolyte®, a non-chlorine high strength oxidizer known to reduce chloramines, and that helped keep the air quality tolerable, but the problem persisted.



## The Solution

The YMCA approached Duffield Aquatics for a solution. Duffield has been one the USA's leading water treatment companies for over 50-years, and offers Complete Water Control, including pumping, filtration, controls, treatment, remote monitoring, and on-site training and service.

Duffield turned to Cryptolyte®, a leading-edge technology which had recently received EPA approval for remediation of a *Cryptosporidium* (Crypto) outbreak in as little as 30-minutes. The Cryptolyte® system is designed to "Control, Confirm, and Document" the entire process, spearheaded by a new plug-n-play upgrade to the BECSys system. It also provides nightly remediation for added safety from undetected releases. It utilizes a safe and effective high-strength oxidizer which works in concert with the existing Pulsar® system. During the extensive EPA testing & approval process, it was noted that indoor air quality was significantly improved as a result of the treatment process, so Duffield was confident they could resolve the issue once and for all.



## The Results

The Cryptolyte® trial was installed on the pool in February 2024, and the results were dramatic. The pool water soon reached a new level of water quality. There were major improvements in the water clarity, and the pool took on a clean blue-ish hue that had been previously missing.

At the same time, the chloramines went from 1.5 PPM to 0.0 PPM, and air quality improved immediately. The problem was finally resolved.

After operating for about a month, the facility experienced a fecal release. Using the Cryptolyte® process, the pool was able to reach the required CT value in less than 90-minutes. The pool was then dechlorinated and ready for use in record time. The previous process would have normally taken 10-20 hours at a high level of hyperchlorination, so the operators were ecstatic with how Cryptolyte® had resolved several major issues with one process.

The Cryptolyte® system has been functioning flawlessly since that time. The historical chlorine costs have been significantly reduced, auxiliary chemicals and associated cost have been eliminated and both the water quality and air quality have maintained the terrific levels since the onset of the trial.

Cryptolyte® provides EPA-approved remediation of *Cryptosporidium*, in <30-minutes, without the lengthy hyperchlorination process. It also provides nightly remediation for added security, and dramatically improves indoor air and water quality.