

## **Is It An Issue of Air Quality or Water Quality?**

I read with interest the article "The Air in There" (November/December 2004). The air quality in an indoor swimming pool, water park or spa is not an air quality problem. It is a water quality problem. As chlorine is added to water, hypochlorous acid (free chlorine) is formed. The free chlorine reacts with the waste brought in by the swimmers. Many reports suggest that 1 liter of bather waste is added per hour. Bather waste is the greatest amount of any chemical added daily to a typical pool - 200 bathers equals 50 gallons (200 liters) of waste. Water parks may have as many as 200 plus bathers per hour; therefore the volume of waste quickly adds up and creates the odor and eye burn all too familiar with indoor swimming pools. The combined chlorine, which is formed by the free chlorine reacting with the bathers waste, forms many compounds, some of which are hazardous to the swimmer and pool staff.

The removal of chloramines/trihalometbanes-chloroform / nitrogen trichloride is the greatest fiduciary responsibility that a pool operator has next to bacteriological cross infection. THMs have been determined to be carcinogenic and nitrogen trichloride causes stress corrosion in facilities – even on stainless steel.

The solution to poor air quality is "GPWQ": Good Pool Water Quality. Filtration-agglomeration-oxidation has been proven through the use of TCDO (a stabilized liquid form of chlorine dioxide) to improve air quality in indoor swimming facilities large or small.

Competitive swimmers absorb chloroform rapidly through the skin and off the pool surface. The concern of asthma sufferers has prompted the medical profession to identify

poor pool water as a potential source of causing asthma.

The process of adding more chlorine increases the production of more harmful by-products.

Thus, the recommendation of trying to blow the air around with deck fans is a total waste of time and money. The problem is coming out of the water, and the solution is treating the pool water correctly.

A giant step forward is to adopt a strict policy that everyone must shower before entering the pool. Swimmers should also be required to shower after they use the toilet facilities.

Hiring individuals who truly know what is taking place in an indoor facility is the next step to reducing or eliminating the problem completely.

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