Benefits of using Ozone and Bio together

Maximizing your returns

Ozone:

The use of ozone for water treatment has been well established and in use since 1893. It was discovered to be 10 times more effective than chlorine in the disinfection, decolorization and deodorization of water and it has the added benefit of being non toxic and non carcinogenic. By definition ozone (O3) is only three molecules of oxygen held together by an electrical charge. After treating the water it quickly reverts back into oxygen (O2). In fact it only stays ozone in the water for a very short time. It is inherently unstable and quickly loses the extra electron that holds the molecule together. That is why we have to continually add it to our reclaim water in order to keep it fresh. Before ozone was introduced, chlorine in the form of bleach or swimming pool tablets to kill the odor in recycled water. This had the effect of killing the bacteria that naturally occur to eat up contaminates in the water. It also caused corrosion of equipment, changed water PH, was dangerous to handle and store and had to be purchased on a continual basis.

Bioremediation:

Instead of killing the odor causing bacteria some innovative companies tried to encourage this bacteriological activity like they do in sewage treatment plants. Since 1962 Chemists and microbiologists have been working on patented strains of organisms that are designed to eat soaps and oil. The year 1989 and the Exxon Valdez oil spill accelerated the need to find micro-organisms that could not only eat up chemical wastes and oil but survive storage and shipping. Methods discovered in the 1990's allowed large colonies of these beneficial microbes to be stored in a deactivated state for years at a time. Today we utilize these highly effective strains to eliminate the build-up of soaps and oils in order to clean carwash water and remove odor causing contaminates. Bio remediation methods need lots of oxygen and they do not remove color. There was a myriad of products like bio tabs and septic tank blends that were designed to encourage this activity. Complex plumbing and tanking was needed as well as high levels of aeration to keep the bacteria alive. Once established these systems could work but were prone to calamity. They were in effect a pet that needed to be fed, and needed a stable environment to thrive. Changes in temperature, water PH, chemical use, or any alteration of their environment would cause a die off and odor.

Symbiosis:

When 0zone is used to treat the recirculated tank water several amazing things happen. First the ozone easily removes the color from the water. Secondly the ozone kills all bacteria in the recirculation line which means the good micro organisms in the reclaim tanks do not have to compete with other strains. Thirdly and most importantly the ozone quickly returns to oxygen which the Bio, living in the tanks, need to survive and thrive. These things in unison provide better quality water and cleaner reclaim tanks and equipment. Another benefit, users discover, is their water storage tanks are cleaner without the soap-scum-ring associated with reclaimed water and their pre-filter screens are no longer fouled with coalesced soap and wax residue. Watch and see how these two formerly competing technologies now work together saving you money by saving water.