

## **In The 'Zone - North Carolina Laundry Owner Lauds New Ozone System**

by Bob Nieman

When George Richardson decided he was going to build a self-service laundry in Charlotte, N.C., he also decided that he wasn't going to do it "halfway."

"I was bound and determined that, to the best of my ability, this was going to be a total, state-of-the-art laundromat, with every bell and whistle I could possibly think of," he said.

Richardson ended up constructed Mega-Wash, a 4,500-square-foot facility with 64 washers – ranging from 20-pound frontloaders to 80 pounders, and everything in between – and 74 dryers.

And perhaps Mega-Wash's most interesting and unique "bell and whistle" is its ozone laundry system.

"It's certainly obvious to me in studying the industry that there are three primary expenses involved in operating a laundromat," Richardson explained. "One of them is your occupancy cost. The second is labor. And the third is utilities. And not necessarily in that order. In my opinion, utilities are probably the single biggest expense.

"You're trying to get equipment that's going to be as energy efficient as possible," he added. "You've got hot water and hot air. That's what you're selling people."

This is the area in which Richardson felt an ozone system could help his business. Coincidentally, at a party just over a year ago, before Mega-Wash had opened its doors, Richardson's business partner met a man who worked for IndustrOzone, a company based in Raleigh, N.C., that installed ozone systems mainly in hotel, nursing home and hospital facilities.

The two men began chatting about their respective businesses, and the light bulb went off. The next day, Richardson spoke with IndustrOzone President Jim Konides as to the feasibility of running an ozone system within his coin laundry.

"Early on, we had a prototype system in our garage," Konides said. "We decided to hook up the ozone to our home washer. The results were very noticeable. They can best be described as our clothes having that extra fresh, clothesline-dried smell. The towels were softer and fluffier. There also was a dramatic reduction in drying times, especially on our towels and denim. We have seen the extra fluffiness time and again, especially from our hotel customers. We have even had complaints that customers ran out of shelf space because the towels were up to 50 percent fluffier. I always had, in the back of my mind, the desire to do an ozonated laundromat, but it needed the right setup."

The perfect opportunity presented itself in the form of Mega-Wash. What made it the right mix?

It was new construction with pvc water lines and commercial, programmable washers. The other key ingredient was Richardson's willingness to change his way of doing business.

"The toughest battle we have with a breakthrough technology like washing with cold ozonated water is getting people to give up their old way of thinking," Konides explained. "In every industry, there are a limited number of leaders and a majority of followers. George Richardson checked out IndustrOzone and decided to go with an ozone laundry system."

And he's never regretted that decision.

### **The Benefits**

"This system offers benefits both to the customer and the owner of the laundromat," Richardson said. "The benefits are pretty spectacular."

The first benefit, according to Richardson, is the ability to reduce the amount of water required in the wash cycle by 20 percent.

"Obviously, from one end of the country to the other, that may have a very significant impact on how much money you spend on water," Richardson said. "In Charlotte, the city will typically charge 150 percent of your water bill as your cost of sewer."

In other words, a 20 percent saving in water, for example, also will translate into an approximate 30 percent savings in sewer fees.

The second benefit, which is mainly an advantage for the customer, is the fact that ozone acts as sort of an "energizer" for detergent. Thus, enabling laundromat customers to use much less detergent and still get their garments just as clean.

"We ran a dozen different test loads of laundry," Richardson said. "We were washing 20-pound loads of heavy towels using one-eighth of a cup of liquid detergent and getting terrific results."

The third benefit is that ozone acts as a sanitizer and a disinfectant. As a result, washers don't need to be run at extremely high water temperatures.

"I don't mind telling the industry," Richardson said, "but I would hate to tell the general public because they wouldn't believe it – but I'm running my hot water at 95 degrees."

As a result, it's taking about 35 percent less natural gas to heat Mega-Wash's washers.

“Another benefit you get, which is a customer benefit, is that the ozone will wind up leaving the clothing smelling fresher,” Richardson said. “Walk outside after a thunderstorm and you’ll get that fresh air smell. Ozone imparts that to the clothing. It also winds up giving the clothing a much softer feel.”

The final major benefit is that ozone cuts the amount of drying time by about 30 percent, according to Richardson.

“We ran test load after test load,” he explained. “We were drying clothes for about 27 minutes to get them dry. But when we ran the same wash through the ozone water, our dry time went down to 18 minutes.”

Clearly this benefit would enable the laundry owner to turn his dryer temperature down, thus saving more on his natural gas bill.

### **Not Right for Everyone**

There are certain things to be aware of when ozone is being used in a laundry setting, according to Konides. Ozone is a powerful oxidizer and must be treated accordingly. At IndustrOzone, they make sure to use only ozone gas that has been dissolved in the customer’s cold water supply before entering the washer. Any undissolved ozone is stripped out and converted back to oxygen.

The only practical way to ozonate a self-service laundry is to pre-ozonate a reservoir of water in a holding tank, similar to how a hot water system works, but with cold ozonated water.

Also, over an extended period of time, ozone can affect certain metal pipes. Fortunately, in Mega-Wash’s case, the facility had already run pvc feeder lines to the washers. If not, they would have had to run feeder lines overhead and drop down to the washers from above. The Mega-Wash washers also worked well because their solenoid valves hold up well to ozone.

All frontload commercial washers work well with ozone, though some require a separate feed fitted with ozone-resistant solenoid valve, which can increase the installation. On the other hand, toploaders are not good candidates for ozone. The materials of construction on toploaders are typically not compatible with ozone, and it doesn’t lend itself well to programming. It is also helpful to have dryers where the temperature can be adjusted to take advantage of the reduced drying times.

### **The Bottom Line**

Using ozone, which is a naturally occurring gas and a potent sanitizer, a laundry can use a cold, ozonated water wash. The results: softer, whiter linens; fresh smell; reduced drying times; and, most importantly, substantial savings in both water/sewer and energy costs.

According to Konides, system costs for a self-service laundry would range from \$15,000 to \$30,000 installed and will typically payback in utility savings within 12 to 24 months.

Richardson sized his ozone system to handle Mega-Wash's peak periods. As a result, his system, which cost \$25,000 installed, runs at about 50 percent of capacity most of the time.

Even so, his utilities savings have been outstanding. "Originally, I had budgeted my utility costs to run about 24 percent," Richardson said. "They're 16.5 percent. My payback on the ozone system is 18 months."

In truth, the payback occurs every day George Richardson opens for business.