LETTERS

Responses to "Solving Public Pool Water Quality Problems", WC&P Nov. 2006

Author and Editorial Staff:

In regard to the subject article and for all the promise that the technology (chlorine generating systems) holds, a very significant shortcoming was not mentioned or addressed. As noted, these systems are brackish: the chemistry is very high in chloride (about 2,000 mg/L) and total salt (NaCl at 3,000 mg/L). Filter backwash (routine), rainwater overflow (intermittent) and pool draining (perhaps a five-year cycle) are going to be significant issues.

Salt and chloride are 'pass-through' pollutants for a wastewater treatment plant. Most California sewer treatment plants and municipal storm drain systems discharge to fresh-water watersheds and most inland California watersheds have state-regulated basin plans that set limits for pollutant concentrations (chlorides and salts are pollutants). Permits are issued by the state that set both mass- and concentration-based limits for discharge of effluent from wastewater treatment plants into these waters.

Wastewater treatment facilities aren't designed to treat salts or chlorides; what comes in the front door is going out the back. Most discharge permits have effluent limits for chloride. These are instantaneous (not averaged over time) limits that (depending on the watershed) may range from 100 to 200 mg/L. As can be quickly determined, discharge from swimming pools will have significant impacts on receiving water and/or reclaimed water quality. County sanitation districts of Los Angeles have prohibited these system discharges into their sewer system in the Santa Clarita/Newhall area.

Municipal storm drain systems that discharge urban run-off to these watersheds impact receiving water quality in an identical fashion. Whereas most current stormwater quality permits issued by the state to municipalities do not include numeric pollutant limits, it's fairly certain that will happen in the very near future.

I'm not attempting to be an alarmist, but regulation of chloride-rich waste streams will be forthcoming in many areas. I wouldn't want to be the vendor or contractor trying to explain to customers why this state-of-the-art system is obsolete, that draining his pool is illegal and that a parade of tanker trucks will need to be employed to pump out and haul away his too-hard pool water.

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Dear Editor:

Regarding Jonny Seccombe's article, *No Salt Softeners—Fact, Fiction or Fantasy*, in the October/06 edition, I have some concerns.

First is the use of the word *Fact* in the title. I do not consider it appropriate since no independent, disinterested testing facility that I know of has certified these devices to meet the German performance standard DVGW W-512 (W-512), if in fact it does.

The reference to testing by Dr. W. Abo Aoun and to research by Oxford University, in my opinion, does not qualify as independent, disinterested third parties in that, as stated in *About the company* both have either a "technology partnering agreement" or a "consultancy agreement" with the firm.

I object to the use of the term salt softeners in the article. The term 'salt regenerated water softener' is the term that should be used. In addition I object to the term 'no salt softener'. Their so-called technology is 'physical water treatment' or 'no chemical added treatment devices' and those terms should be used.

Finally, many water treatment original equipment manufacturers (OEMs) and component suppliers and manufacturers have gone to great lengths and expense to have their products certified to ANSI/NSF Standards. That an independent, disinterested third-party testing facility has certified that the product meets those standards is, I believe, a good thing for the buyers of water treatment systems and devices.

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Editor's note: *There are no ANSI/NSF standards for physical water treatment devices at this time. Seccombe and others in the UK industry are attempting to change that.*

To the Editor:

In the September 2006 issue of your magazine, the *Ask The Expert* section contained a question about UV technology. I appreciate the knowledge of the two qualified individuals who responded, but would appreciate the opportunity to provide some clarity.

A first expert suggested that the UV might remove the chlorine residual. This is not a concern in the given application, as the UV system is to be installed before final filtering and chlorination.

A second expert pointed out that a relatively high UV dose is required to inactivate Adenovirus Type 40. This assertion is correct; however, it is not a concern as the chlorine should easily take care of adenovirus. By the same token, the UV will inactivate any *Cryptosporidium* or *Giardia*, which are chlorine resistant. UV and chlorine are often used in conjunction as part of a multi-barrier strategy.

The letter writer, Darren, asked about the dose required: this is complicated. The answer depends on the water source, the jurisdiction, the type of facility and other factors. Lacking this information, we recommend a dose of 40mJ/cm^2, which is sufficient to provide treatment for a broad spectrum of microorganisms and should cover most regulatory requirements that he might run into.

Darren also inquired about standards. For smaller applications, I would consider looking for systems certified to NSF/ANSI Standard 55 Class A. For larger systems, I would speak to the equipment manufacturers.

I hope this provides some clarity for Darren and others looking to learn more about UV technology.

Sincerely,
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Send us your letters

We'd like to hear from you. Thoughts and opinions, praise and criticism run in our *Letters* department. We also eagerly accept unsolicited material—technical papers, case histories, new product releases, how-to articles, first person experiences and more.

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