

Preventing Chlorination Mishaps

By Mike Stanzel, Circuit Rider

Looking back through my collection of articles from the past 10 years, there were several that were focused on chlorination. Here comes another one for the simple fact that when chlorination is required, there is no room for error. It needs to be done RIGHT.

I have assisted two systems the past couple months with two completely different scenarios. There was a serious potential problem at each one that luckily was avoided with assistance from NeRWA.

System #1 is a small town with a brand new maintenance man recently appointed by the Mayor who was waiting to take the grade 4 certification class. He was taking samples under the direction of the water operator from a nearby town who was serving as their temporary operator until Mr. John Doe got licensed.

Well, the first round of coliform samples came back positive for coliform, as well as, the repeats. It was suggested by the Mayor that they immediately start chlorinating, which they did. Well, being new to the water business, John Doe went and bought bleach, filled the jug, plugged in the chlorinator and then decided to call me a few hours later. Luckily I was only an hour away so I headed there to check things out.

The 5 main issues I found were:

1. The chlorine pump was plugged into a main outlet and running continuously.
2. The dosage set on the pump was incorrect.
3. There was no means of measuring the amount of chlorine used.
4. The pump tubing was bad (luckily) so no chlorine was being pumped.
5. There was no way of determining a chlorine residual.

These problems were all addressed and corrected with a simple 2 hour visit. In no way do I fault Mr. John Doe with this for the simple fact that he has no experience and thought he was doing the right thing. I do give him kudos for calling me to check it out.

Chlorination can be tricky even for the experienced operators mainly because they don't do it very often at all. I have worked with operators who have been operating 20 plus years and have never set up a chlorinator.

The next system is a completely different scenario. This is a large Rural Water District that had some coliform issues and received an Administrative Order from DHHS for 30 days of mandatory chlorination. Here the operators have multiple years of experience and are very knowledgeable, but their system is compiled of wells, numerous towers, a large booster station and miles upon miles of transmission main.

We were able to assist them with the installation of 4 chlorine pumps and ensure a chlorine residual was achieved. The potential problem that this system faced was that they received some inaccurate information that inevitably could have led to an extended period of chlorination.

When an AO is given, you **MUST** maintain at least a .20mg/l residual at the furthest point in your system. You also **MUST** keep track of the amount of chlorine being injected and fill out the proper forms required by the DHHS at the end of the chlorination period. And, lastly, you **MUST** take and record a chlorine residual a minimum of 7 DAYS PER WEEK during your entire chlorination period. Failure to do any of these may result in disciplinary action from the department.

So, please do not be afraid to call NeRWA if you are not 100% sure on setting up a chlorinator.