Technical Expert Working Group Conference Call

Friday April 27, 2007
10:00 a.m. – 11:00 a.m.

CALL SUMMARY

Attendees:

EPA Region 3 and contractors: Rick Rogers, George Rizzo, Jennie Saxe, and Laura Dufresne

EPA ORD: Mark Rogers

The Washington Aqueduct: Tom Jacobus, Miranda Brown, Lloyd Stowe, Robert Hoffa, and Patty Gamby

DCWASA: Rich Giani

George Washington University: Marina Moses and Janet Phoenix

City of Falls Church: Bob Etris

DC Department of the Environment: William Slade

CDC: Chinaro Kennedy

Agenda

There were no changes or additions to the agenda. The meeting agenda is included as Attachment A to this call summary.

Summary of Discussions by Topic Area

1. Status of Chlorine Burn

The DC and Virginia systems are approximately three quarters of the way through the burn period. Rich Giani reported on water quality for DCWASA. There have been no total coliform hits since the transition to free chlorine. It took some time for free chlorine levels to stabilize in the system compared to most recent burns that were conducted three and four years ago. DCWASA has gotten taste and odor complaints, as many as 20 per day for the first 4 or 5 days of the burn period. Now they are receiving an average of 5 to 6 complaints per day. DCWASA protocol is to ask the resident to flush the water at the tap. If the odor does not go away, they send a flushing crew to the site. A single flushing crew has been dedicated to handling taste and odor complaints and responds to an average of 3 per day. All complaints are for a chlorine odor, which Rich Giani believes to be trichloramines. Both nitrite and ammonia readings are very low.

Bob Etris reported that Falls Church City received a few complaints of a chlorine smell, but more callers have been reporting discolored water from flushing. There has been nothing out of the ordinary.

Rich Giani noted that two homes have been profiled before and during the chlorine burn and will be profiled after the change back to chloramines (tentatively scheduled for the end of May). One home has a lead service line and the other does not.

2. Secondary Disinfectant Target Levels

Rick Rogers noted that total coliform positive counts are extremely low in the DC system, an order of magnitude lower than they have been in the past. He asked the group if there is still a desire to keep the chloramine residual concentration high (between 3 and 3.5 mg/L).

Rich Giani replied that he would not want to change the chloramine residual level now because DCWASA wants to compare post-chlorine burn conditions to pre-chlorine burn conditions. Changing the chloramine residual level would add an unnecessary variable. Rich noted, however, that DCWASA may be amenable to a reducing the chloramine residual in the future. He has noticed that ammonia levels have decreased in the system, reducing the amount of food available for nitrifying bacteria. The high chloramine residual may have helped to keep the bacteria concentrations down in the past, but between the chlorine burn and the lower ammonia levels, the high chloramine concentration may not be needed.

Lloyd Stowe questioned the benefits of reducing the chloramine residual levels, noting that it is still not clear why microbial activity is down in the DC system. Rick Rogers explained that in addition to cost savings, reducing the chloramine residual level in the distribution systems would reduce concentrations of disinfection byproducts. Laura Dufresne added that it would also reduce the amount of disinfectant entering area streams and rivers during unplanned discharge events such as main breaks. Rick Rogers stated that as long as the orthophosphate treatment and water main flushing programs continue and bacteria counts stay low, he doesn't see a reason for continuing to use such a high level.

3. Orthophosphate Target Dose

Rick Rogers reported on a conversation that he had with Mike Schock regarding the passivation process of the lead service lines in the DC system. Based on analysis of corrosion scales from lead service lines extracted in the summer of 2006, Mike believes that the new scale was approximately 30 percent complete at that time. He recommends that the orthophosphate dose be increased to hasten formation of the new lead scale.

Rich Giani noted that the orthophosphate dose was originally reduced because of problems with formation of an aluminum-phosphate precipitate in low-flow areas of the distribution system. Rich reported extremely low lead levels in DCWASA's most recent round of testing (of 62 samples, only 4 are greater than 15 ppb and no second draw samples greater than 15 ppb). For the four samples with lead levels greater the 15 ppb, three had very high iron. DCWASA did a plumbing survey and found that all four homes

had substantial amounts of galvanized piping. Rich believes that the old galvanized piping is the source of the high lead levels, not the lead service lines. As galvanized pipes age, they loose their zinc coating and can absorb lead, which can flake off into the water. Rich noted that DCWASA has not seen this issue in homes with galvanized piping that have copper service lines. He believes that based on the data, the orthophosphate is doing its job and there is no need to increase the dose

5. Flushing Programs

Rich Giani reported that DCWASA flushing crews have not seen anything out of the ordinary since the beginning of chlorine burn. Robert Etris reported the same for Falls Church.

6. Potomac Perchlorate Monitoring Study

EPA Region 3 is preparing to begin the perchlorate monitoring program. They are purchasing bottles, mailers, etc. and have requested comments on the Quality Assurance Programmatic Plan from the study participants.

7. Action Items, Agenda Items, and Other Issues

Rick Rogers said that he would forward pipe scale analysis results from Mike Schock to the group. Patty Gamby reported that CH2MHill has submitted their first draft report from the flow-through pipe loop studies. She will send a copy to the TEWG soon for review.

Rick Rogers noted that several groups in DC having been calling for a public meeting to discuss issues results of lead sampling in schools and the status of the corrosion control treatment. He believed that the DC Department of the Environment was planning to accommodate this request. Lisa Donahue and Karen Johnson would be attending from EPA Region 3. Rick said that he would pass along any information he received about the meeting to the entire TEWG.

Attachment A: Call Agenda

- Last minute items to add to the agenda
- Chlorine Burn - status of burn and water quality monitoring during the switch over (Aqueduct, WASA, VA Utilities)
- Secondary Disinfectant target levels - is there a reason and/or a desire to lower the target total chlorine residual levels?
- Orthophosphate target dose, precipitation in the D.S. and is there a way to increase the phosphate dose back up to ensure a complete passivation occurs more rapidly? (EPA) Flushing programs (both WASA and the VA utilities) - progress and are there any interesting observations with mains flushing during the free chlorine period?
- Potomac Perchlorate Monitoring Study - Status report – EPA
- Action Item summary
- Potential Agenda Items for next call