

Technical Expert Working Group Conference Call

Friday, January 13, 2006
10:00 a.m. – 11:30 a.m.

CALL SUMMARY

Attendees:

EPA Region 3 and contractors: Rick Rogers, George Rizzo, Jennie Saxe, Steve Reiber, Laura Dufresne, Karen Sklenar

The Aqueduct and contractors: Tom Jacobus, Elizabeth Turner, Miranda Brown, Nicolle Boulay, Patricia Gamby

DCWASA and contractors: John Dunn, Rich Giani, Maureen Donnelly, and John Civardi,

The meeting was led by Rick Rogers

Agenda

There were no changes or additions to the agenda. The meeting agenda is enclosed below as Attachment A.

Summary of Discussions by Topic Area

I. WASA Lead Results

At the time of the call, DCWASA had submitted their LCR compliance report to EPA Region 3, where it was still under review. If the report is approved by EPA, the results (below the action level for the second consecutive monitoring period) trigger a change in monitoring requirements. EPA plans to meet with WASA to discuss water quality parameter monitoring.

Rich Giani presented additional information on lead monitoring results. The peak lead concentrations in their compliance sampling program have gone down (the highest was 51 ppb, and the next highest was 28 ppb). Results from lead profiles, including water hammer samples, are below the action level.

II. Update on WASA Pipe Loops

Rich Giani reviewed the most recent DC WASA pipe loop data that he had sent to workgroup members before the call. He said that Loop 1, the control loop, is holding steady at between 5 and 10 ppb. Loop 3, the simulated chlorine burn, is in its second week after the conversion back from free chlorine to chloramines. Rich noted that lead levels are starting to increase slightly, but it is too early to draw conclusions. WASA began adding approximately 1.6 mg/L of stannous chloride to Loop 5 on December 27th. They have seen a slight increase in lead, which

was predicted by the manufacturer to happen during the first month of testing. Loop 6 is still slightly higher than the control loop, but lead levels are decreasing slowly over time.

III. Update on Aqueduct's Pipe Loops

Nicolle Boulay presented the most recent results of the Aqueduct pipe loop studies. Charts showing the results, along with a summary memo, were distributed to TEWG members before the call. Nicolle reiterated the following findings, as summarized in the memo:

- The pipe loop conditioning phase began on January 7, 2005. During this phase, the pipe loops were exposed to Washington Aqueduct finished water;
- On March 7, the pipe loops were put in automatic mode and were fed chemically-conditioned water, according to the Pipe Loop Plan.
- We have about 10 months of lead data. The dissolved lead data appears to have stabilized in all loops.
- The temperature of the water fed to the loops has continued to decrease since August.
- The total lead in Racks 1 (Zinc Orthophosphate) and 7 (Finished Water) appears to have stabilized.
- On September 5th, in Rack 3 we switched from chloramines to free chlorine. On September 12th, we lowered the phosphate concentration in Rack 2 from a target of 3 mg/L to a target of 2 mg/L.
- On November 4th, in Rack 3 we switched from free chlorine to chloramines. On November 14th, in Rack 2 we switched from a target phosphate concentration of 2 mg/L to 1 mg/L.
- The switch from 2 mg/L phosphate and then to 1 mg/L phosphate did not have a significant impact on lead levels over a 3 month period.
- The switch from chloramines to chlorine in Rack 3 reduced lead levels from about 10 mg/L to about 4 mg/L. The switch back to chloramines from chlorine has not had a significant impact on lead levels (they have remained around 4 mg/L).

Patty Gamby added that the Aqueduct has noticed a downward trend in lead levels at lower temperatures. Rick Rogers noted that tap sampling results from DCWASA don't seem to show a seasonal influence. Rich Giani said that, according to Mike Schock, the orthophosphate tends to work a little bit better in the summer months compared to the winter months.

IV. Discussion on spring chlorine burn

Patty Gamby reported that the Aqueduct's overall conclusion based on the pipe loops is that a chlorine burn will not have a detrimental impact on lead levels. WASA personnel responded that they are very concerned about even the smallest increase in lead levels, since they are so near the action level. WASA personnel also expressed doubt that a chlorine burn was really needed. Rich Giani added that if they decide to do the burn, he would request that it happen early in the spring (March or April) so that an LCR compliance sampling round does not

immediately follow the burn period. WA offered to coordinate future discussions related to the chlorine burn option.

V. Discussion on reducing the orthophosphate dose

The Aqueduct has reached general agreement that, based on their recent pipe loop results, the WASA system can tolerate a reduction in the orthophosphate dose. They proposed a very gradual reduction, either by 0.5 mg/L or even 0.1 mg/L increments. Rich Giani reported that he drew a similar conclusion based on the WASA pipe loop data (he did not see any change in lead concentrations when the orthophosphate dose was reduced). Steve Reiber noted that an orthophosphate concentration of 3.5 mg/L for 1 year is the highest sustained treatment dose of which he is aware. He expressed concern with the potential for other solids to form at such a high orthophosphate dose. In his experience, other systems have reduced the orthophosphate dose in larger increments (e.g., 1 mg/L increments) and not seen any negative impacts. Steve's belief is that a reduction in orthophosphate, at increments even greater than proposed by the Aqueduct, would not have a negative impact on long term lead release rates.

Rich Giani noted that if the Aqueduct lowers the orthophosphate dose, WASA will watch the system closely and alert WA immediately if there are any problems. He suggested that they reduce the dose soon to give the system time to stabilize before a possible chlorine burn.

Rick Rogers added that EPA does not have to approve the proposed change in orthophosphate dose.

The Aqueduct will contact Vern Snoeyink to see if he has any concerns regarding a reduction in orthophosphate dose. They will develop a proposal for their customers to consider.

VI. Suggested Items for Next Call

The next call will be held on Friday, February 24, 2006.

**Attachment A
Proposed Agenda from EPA Region 3
TEWG Meeting
January 13, 2006**

- I. WASA's lead results and optimization status**
- II. Update on WASA pipe loops (including discussion of phosphate dose reduction)**
- III. Update on WA pipe loops**
- IV. Discussion on spring chlorine burn**
- V. Suggested Items for Next Call**