UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
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Philadelphia, Pennsylvania 19103-2029

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JUN 14 2006

John T. Dunn, P.E.
Chief Engineer/Deputy General Manager
District of Columbia Water and Sewer Authority
5000 Overlook Avenue, SW
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Gentlemen:

The United States Environmental Protection Agency Region III ("EPA") has primacy for the Public Water System Supervision ("PWSS") Program in the District of Columbia. The primacy agency is responsible for implementing the PWSS Program and the National Primary Drinking Water Regulations ("NPDWRs"), including designation of optimal corrosion control treatment ("OCCT") under the Lead and Copper Rule ("LCR") for public water systems. By this letter, EPA is designating a final OCCT for the drinking water treatment and distribution system for the District of Columbia. EPA previously set interim water quality parameters ("WQP") and requirements for monitoring and reporting in its August 3, 2004 letter, subsequently modified the interim WQPs in an August 20, 2004 letter, and summarized interim WQPs for clarity in a September 8, 2004 letter.

EPA is now directing the Washington Aqueduct and the District of Columbia Water and Sewer Authority ("DC WASA") to perform monitoring to determine compliance with the WQPs set forth by this final OCCT designation. The Washington Aqueduct and DC WASA shall continue full monitoring for lead and copper (per 40 CFR §141.86) as well as perform monitoring for the WQPs as described herein and pursuant to 40 CFR §141.87. For purposes of this final OCCT designation, the six-month period referenced in 40 CFR §141.87(d) commenced January 2006.

The final OCCT designation described herein is based on data reported to EPA since the initiation of orthophosphate treatment on August 23, 2004. In its August 3, 2004 letter, EPA stated that the OCCT designation was considered an "interim" designation because it applied only to the passivation period. DC WASA and the Washington Aqueduct have submitted monthly reports of interim WQP data, and DC WASA has submitted data from routine lead and

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copper monitoring conducted pursuant to 40 CFR §141.86. On May 3, 2006, DC WASA certified achievement of a second consecutive six-month monitoring period under the LCR at or below the lead action level.

DC WASA has been performing interim WQP monitoring at total coliform rule (TCR) sampling sites and at twenty-five (25) supplemental sites, representative of dead-end and low flow areas of the distribution system, as required by EPA's interim designation. The Washington Aqueduct has been monitoring for interim WQPs in finished water leaving the Dalecarlia and McMillan treatment plants.

Per this final OCCT designation, EPA directs the Washington Aqueduct to continue monitoring for applicable final WQPs in finished water leaving the Dalecarlia and McMillan treatment plants per 40 CFR §141.87(c). The Washington Aqueduct is directed to submit to EPA the sampling schedule that will be used for WQP monitoring within two weeks of the date of this letter.

EPA also directs DC WASA to monitor for applicable WQPs in tap samples at twenty-five (25) predetermined locations in the distribution system no less than twice during each six-month monitoring period, per 40 CFR §141.87(c). EPA strongly encourages DC WASA to conduct WQP monitoring at tap sampling locations selected from TCR sampling sites and from the former supplemental sites that have yielded valuable information on the condition of the distribution system. DC WASA is directed to submit to EPA for review and comment a WQP monitoring plan consisting of a list of the distribution system sampling sites and the sampling schedule that will be used for WQP monitoring within two weeks of the date of this letter. Only samples taken pursuant to this WQP monitoring plan will be considered for purposes of determining compliance with 40 CFR §141.82 and §141.87. EPA requests notification in the event that DC WASA must change any of the distribution system WQP sites during a monitoring period. EPA may consider a request by DC WASA to allow reduced monitoring for WQPs after reviewing the data from the January – June 2006 and July – December 2006 monitoring periods.

As part of the interim OCCT designation, the initial dose of orthophosphate was set at the high end of normal operation in order to passivate the distribution system. As the interim designation was intended to cover the period of passivation, the final OCCT designation will apply as the orthophosphate dose is decreased to and achieves a final maintenance dose. EPA has learned that as of January 30, 2006, after consultation with its customers, the Washington Aqueduct decreased the orthophosphate dose to a level that will provide a 2 mg/L residual in the distribution system. EPA understands that the dose of orthophosphate will slowly be decreased to a final maintenance dose of approximately 0.5 – 1.5 mg/L, as measured in tap samples. The Technical Expert Working Group ("TEWG"), established in February 2004, has discussed this process and has identified decreasing the orthophosphate concentration to a lower maintenance dose as a common industry practice. Pipe loop experiments have not identified adverse effects of decreasing orthophosphate concentrations. Lead tap sampling data over the next year will be valuable in assessing the effects, if any, of this operational modification on lead levels in the distribution system. EPA highly recommends that DC WASA continue performing monthly

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home lead profile analyses throughout the orthophosphate reduction period and periodically thereafter.

We understand that the Washington Aqueduct plans to install caustic soda (sodium hydroxide) facilities for finer control of finished water pH ("pH trimming") at both treatment plants. EPA expects that the Washington Aqueduct will comply with the final pH WQP once caustic soda feed is operational at both treatment plants. Until that time, the interim pH WQP applies to the Aqueduct.

Please see the enclosure for a summary of the WQP monitoring and reporting requirements for the Washington Aqueduct and DC WASA associated with the final OCCT designation. The supplemental monitoring, required by the interim OCCT designation and performed according to DC WASA's November 8, 2004 supplemental monitoring plan, is not required as part of the final OCCT. Pursuant to 40 CFR §141.82(h), EPA may modify its OCCT determination in the future to ensure that the system continues to implement optimized corrosion control treatment.

EPA commends DC WASA and the Washington Aqueduct on their commitment to continue their rigorous water quality monitoring programs. Thank you for your continued efforts and dedication to continuous improvement of drinking water quality in the District of Columbia. If you or your staff require additional information, please contact Richard Rogers, Water Protection Division, EPA Region III at (215) 814-5711.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division
EPA Region III

Enclosure

cc: Hugh Eggborn, Office of Water Programs, Culpepper Field Office, Virginia Department of Health
Robert Etris, Director of Public Utilities, City of Falls Church, Virginia
Randolph Bartlett, Arlington County Department of Public Works
William Brown, Ronald Reagan National Airport
Gregg Pane, District of Columbia Department of Health
Thomas Lewis, Naval District Washington
Charles Rimbach, Bolling Air Force Base

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ENCLOSURE

Water Quality Parameter Monitoring and Reporting for Optimal Corrosion Control Treatment Designated June 14, 2006

Washington Aqueduct

Water quality parameters (WQPs) for water entering the distribution system:

	WQP	
pH	7.7 ± 0.1	(interim: 7.7 ± 0.3‡)
Orthophosphate	0.5 – 5.0 mg/L*	

‡ EPA expects that the Washington Aqueduct will comply with the final pH WQP once caustic soda feed is operational at both treatment plants. Until that time, the interim pH WQP applies to the Aqueduct.

* Dose necessary to reach this residual (as dissolved orthophosphate) in tap samples. Any deviations from this range will be evaluated on a case-by-case basis. Reports shall indicate whether the applied dose is measured as total or dissolved orthophosphate.

Monitoring shall be conducted according to the frequency and other requirements in 40 CFR §141.87. The Washington Aqueduct is directed to submit to EPA the sampling schedule that will be used for WQP monitoring within two weeks of the date of this letter. Compliance shall be assessed pursuant to 40 CFR §141.82(g).

WQP excursions shall be reported to EPA no later than 10 days after the end of the month in which the excursion occurs. WQP reports shall be submitted to EPA within ten (10) days of the end of each six-month monitoring period.

DC WASA

Water quality parameters (WQPs) for locations in the distribution system selected pursuant to 40 CFR §141.87:

	WQP
pH	≥7.2
Orthophosphate residual	0.5 – 5.0 mg/L
Free ammonia nitrogen	Monitor & report
Nitrite nitrogen	Monitor & report

Orthophosphate shall be measured as dissolved orthophosphate. Any deviations from the orthophosphate WQP range will be evaluated on a case-by-case basis.

Monitoring shall be conducted at no less than 25 sampling locations and at a frequency of no less than two times every six month period, according to the requirements in 40 CFR §141.87.

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DC WASA shall submit within two weeks of the date of this letter to EPA for review and comment a WQP monitoring plan consisting of a list of the distribution system sampling sites and the sampling schedule that will be used for WQP monitoring. Only samples taken pursuant to this WQP monitoring plan will be considered for purposes of determining compliance with 40 CFR §141.82 and §141.87. DC WASA shall notify EPA in the event that DC WASA must change any of the distribution system WQP sites during a monitoring period.

Compliance shall be assessed pursuant to 40 CFR §141.82(g).

WQP excursions shall be reported to EPA no later than 10 days after the end of the month in which the excursion occurs. WQP reports shall be submitted to EPA within ten (10) days of the end of each six-month monitoring period.

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