UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

DEC 11 2009

Thomas P. Jacobus
General Manager
Washington Aqueduct Division
U.S. Army Corps of Engineers
5900 MacArthur Boulevard, NW
Washington, DC 20016-2514

Dear Mr. Jacobus:

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 the Lead and Copper Rule (LCR) and the Long Term 2 Enhanced Surface Water Treatment Rule (LT2) for public water systems in the District. As requested by our correspondence of June 18, 2008 and your response of August 5, 2008, EPA has reviewed your documentation of the planned long term treatment change required by 40 CFR §141.90(a)(3). By this letter, EPA is approving the Washington Aqueduct's treatment changes which are planned to be phased in between January and June 2010. These treatment changes include addition of caustic soda feed for pH control at the Dalecarlia Treatment Plant; full conversion to caustic soda for pH control at the McMillan Treatment Plant; and conversion from liquid chlorine to sodium hypochlorite for disinfection at both treatment plants.

Review of planned treatment changes

Under the LCR (40 CFR §141.90(a)(3)), the primacy agency must review and approve a long-term change in treatment before it is implemented by the system. Additionally, pursuant to LT2 (40 CFR §141.708), the primacy agency must be notified prior to a system changing its disinfection practice; the notification shall include: a completed disinfection profile and benchmark for *Giardia lamblia* and viruses; a description of the proposed change in disinfection practice; and an analysis of how the proposed change will affect the current level of disinfection.

EPA requested and received information from the Washington Aqueduct sufficient to perform a review of the proposed treatment changes pursuant to the requirements of the LCR and LT2. EPA Region III and EPA's Technical Support Division in the Office of Ground Water and Drinking Water have considered an engineering review of the proposed treatment change by HDR, Inc. and requested and considered the views of EPA's Office of Research and Development and the DC Drinking Water Technical Expert Working Group. These reviews have found that the planned treatment changes are not anticipated to pose an adverse effect on optimized corrosion control treatment or the level of disinfection, provided that all other operating parameters are accounted for. In order to provide additional assurances that negative effects are not occurring as a result of these treatment changes, the Washington Aqueduct has committed to: purchase and maintain sodium hypochlorite in a manner which minimizes potential for contaminant formation; weekly monitoring of finished water for sodium; and close coordination with the District of Columbia Water and Sewer Authority (DCWASA) on review of its distribution system data

for lead and oxidation-reduction potential over the first year and a half of the treatment change implementation for early indicators of potential negative consequences. EPA expects the Washington Aqueduct to take appropriate steps in the event that the distribution system data exhibits any adverse trends.

Water quality parameters

In a June 16, 2006, letter to you and the previous Deputy General Manager of DCWASA, EPA set final ranges for all water quality parameters (WQP) for the Washington Aqueduct except pH. The pH WQP for the Washington Aqueduct was designated as interim until implementation of caustic soda feed for pH control at both treatment plants was complete. EPA will issue a final WQP designation for pH upon final implementation of the caustic soda feed at both treatment plants.

We have shared with the Washington Aqueduct all reviews commissioned by EPA to investigate potential impacts of these treatment changes and will continue to work with the Aqueduct on additional recommendations contained in those documents. One such recommendation involves increasing the minimum orthophosphate WQP from 0.5 mg/L to 2 mg/L, based on recent research and experiences of other water systems. A related recommendation involves optimizing coagulant dose to prevent accumulation of aluminum and precipitation of aluminum phosphate solids in the distribution system. EPA requests the Washington Aqueduct review the recommendations and provide EPA with an analysis to determine if any further WQP adjustments are required before final implementation of caustic soda feed at both treatment plants.

Thank you for your continued efforts and dedication to continuous improvement of drinking water quality in the District of Columbia, Arlington County, Virginia, and Falls Church, Virginia. If you or your staff require additional information, please contact William S. Arguto, Chief, Drinking Water Branch, at (215) 814-3367.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

cc: George S. Hawkins, Esq., General Manager, DCWASA
Hugh Eggborn, Office of Water Programs, Culpepper Field Office, Virginia Department of Health
Brenda Creel, Director of Environmental Services, City of Falls Church, Virginia
Robert Griffin, Acting Director, Arlington County Department of Environmental Services
Richard LaFreniere, Installation Environmental Program Manager, Naval Facilities Engineering Command Washington
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