



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

Mr. John Dunn, P.E.  
Deputy General Manager and Chief Engineer  
District of Columbia Water and Sewer Authority  
5000 Overlook Avenue, S.W.  
Washington, D.C. 20032

NOV 16 2004

Dear Mr. Dunn,

On August 3, 2004, the U.S. Environmental Protection Agency Region III (EPA) approved, pursuant to 40 C.F.R. § 141.82, optimal corrosion control treatment on an interim basis for the District of Columbia's water supply. A condition of that approval is that the District of Columbia Water and Sewer Authority (WASA) flush its entire water distribution system in a unidirectional manner, by the onset of freezing weather this year. It was recently brought to our attention that the unidirectional flushing of WASA's distribution system will not be completed by the time anticipated cold weather sets in.

There were several reasons why EPA required this flushing to take place. All of these tie back to ensuring public health is protected from lead exposure as fully and quickly as possible. EPA's reasoning relates to maximizing the effectiveness of the corrosion inhibitor orthophosphate in reducing lead levels in the drinking water as quickly as possible. The built up sediment and debris in the water mains can exert a chemical demand on the orthophosphate, reducing the amount of this corrosion inhibitor that reaches customers' lead-bearing plumbing components. This could prolong the amount of time it takes for the orthophosphate to reduce lead levels in tap water. Flushing mains can also help reduce the amount of nitrification that occurs in the distribution system by removing excessive biofilm growth. Nitrification can result in pH depression in localized areas which, in turn, can exacerbate lead corrosion.

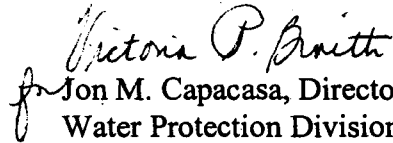
Orthophosphate concentrations, pH and free ammonia can all be negatively impacted by a lack of water main flushing. These constituents are regulated in WASA's distribution system as water quality parameters (WQP) under the Lead and Copper Rule (LCR). If these parameters fall outside the range set by EPA in our August 3, 2004 and September 8, 2004 letters more than nine total days in six months, WASA would incur a violation of the treatment technique for lead. Enclosed is a guidance document that describes how compliance is calculated for WQPs.

EPA recognizes that water main flushing during winter months can create a public hazard on streets and sidewalks due to ice formation. As a result, EPA understands that water main flushing in the District cannot continue while there is a risk of the water freezing on the streets. Since flushing is an important element in ensuring maximum effectiveness of the orthophosphate



in reducing lead levels, WASA must, as soon as practical, complete the flushing of its entire distribution system. Please submit to EPA by December 15, 2004 a progress report of work accomplished to date, and a written plan to complete the flushing of WASA's water distribution system as expeditiously as possible in 2005. If you have any questions, please contact me or have your staff call Rick Rogers at (215) 814-5711.

Sincerely,

  
for Jon M. Capacasa, Director  
Water Protection Division

Enclosure

cc: **Jerry N. Johnson**, District of Columbia Water and Sewer Authority  
**Thomas Jacobus**, Washington Aqueduct  
**Doreen Thompson**, District of Columbia Department of Health