



STATE OF WASHINGTON
DEPARTMENT OF HEALTH

OFFICE OF DRINKING WATER

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August 20, 2007

James Robert Deal
5105 200th Street SW, Suite 100
Lynnwood, Washington 98036-6397

Dear Mr. Deal:

Governor Gregoire asked me to respond to your August 4th letter about whether fluoridation results in contamination of drinking water by lead, mercury and arsenic.

The Department of Health's Office of Drinking Water protects the health of people in Washington State by regulating public water systems. When communities choose to fluoridate, our job is to make sure they do it safely. We welcome the opportunity to respond to your concerns.

All natural waters contain dissolved minerals. Most of the time, the concentration of these contaminants is far too low to endanger public health. When a dissolved mineral such as fluoride or arsenic exceeds a health-based standard, we require treatment to remove the contaminant.

All chemicals that are used to treat drinking water in Washington State, including fluoride compounds, must comply with American National Standards Institute/NSF International (ANSI/NSF) Standard 60. ANSI/NSF Standard 60 establishes allowable levels for impurities in water treatment chemicals. The allowable level for any contaminant is no more than 10 percent of the federally-established limit for water contaminants (the "maximum contaminant level").

NSF International compiled test data in 2000 for fluoridation chemicals. They reported that mercury was detected in a few samples (fewer than 5 percent), and the maximum amount of mercury found was 0.015 parts per billion (ppb), less than 1/100th of the maximum contaminant level. Similarly negligible amounts of lead were found. Arsenic was the most frequently detected impurity. At the time the test data were compiled in 2000, the maximum allowable level of arsenic in water treatment chemicals was 2.5 ppb. The highest concentration found in any sample was 1.66 ppb. The maximum allowable level is now even less, and the maximum contaminant level for arsenic was recently reduced from 50 ppb to 10 ppb.

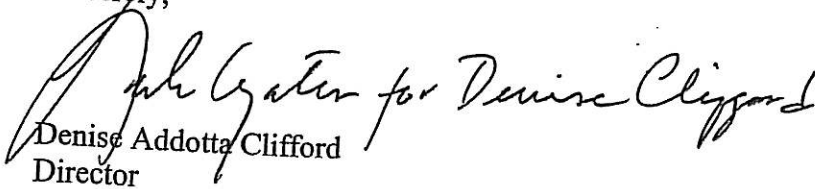
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In short, while adding fluoride chemicals to drinking water could add trace amounts of arsenic, lead, and mercury, the amount would be extremely small. Any amount added as a result of fluoridation would be practically indistinguishable from the natural background concentration for most drinking water sources.

You also wondered about fluoride's effect on the piping in Seattle schools. Since the early 1990s, water systems such as Seattle Public Utilities have been required to routinely monitor how corrosive their water is to plumbing. While fluoridation can change the pH of water, making it more corrosive, water systems must correct the pH of the water before it enters their distribution systems. Lead and other contaminants can dissolve into water that remains stagnant in pipes for long periods of time regardless of whether fluoride is added to the water or not.

I hope this addresses your concerns. If you have further questions, contact Mike Means, manager of our water quality section, at (360) 236-3178 or mike.means@doh.wa.gov.

Sincerely,


Denise Addotta Clifford
Director

cc: Mike Means, Manager, Water Quality Program