

## Anti-Lead Chemical Changed in D.C. Water Plan

In April 2004, it was reported that lead contamination had been detected in 43 drinking fountains and sinks in DC-area schools. Since lead in drinking water is strictly monitored by the EPA (Environmental Protection Agency) and the Drinking Water Act to 15 parts per billion (ppb), each school water outlet with high lead was disabled. The EPA action level for single water outlets is 20 ppb in order to isolate specific locations for concern.

Lead is of particular concern to the developing fetus, infants and young children because it can cause irreversible mental and physical development. Of the 454 students from 10 DC-area schools tested thus far, two students at Wilkinson Elementary School in Southeast Washington, D.C. showed blood levels of lead above the Federal Standard. Both students are under medical care.

Zinc orthophosphate had been approved by the EPA for use by the Army Corps of Engineers who operate the water treatment plants that service Northwest Washington and parts of Northern Virginia. Concerns that the zinc orthophosphate may overload the sewage treatment plants caused a shift to use phosphoric acid to treat the water for lead removal.

Although lead was banned from plumbing materials in 1998, "lead free" is defined as pipes, fittings and pumps containing less than 8% lead and solder and flux containing less than 0.2% lead. Lead may be leached from plumbing by pure water and weak organic acids in the presence of oxygen.

Low levels (parts per million) of phosphoric acid will react with lead to form an insoluble coating on the internal surfaces of the water distribution system. Once this coating is formed, observed lead levels drop rapidly.

Sources: D'Vera Cohn, Washington Post, May 27, 2004, page B01

Environmental Protection Agency ([www.epa.gov](http://www.epa.gov))