



Suburban Property Inspections

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MERCURY FACT SHEET

Brief Overview:

Category:	Metals
Acceptable Level:	0.002 mg/L MCL, Primary Drinking Water Standard
Source:	Natural occurring, Industry
Effect:	Short and Long-term Health Effects
Follow up:	Test for Mercury and other metals
Treatment:	Coagulation/Filtration, Granular Activated Carbon, Lime softening, Reverse Osmosis

Details:

Source: Mercury is a liquid metal found in natural deposits as ores containing other elements. Electrical products such as dry-cell batteries, fluorescent light bulbs, switches, and other control equipment account for 50% of mercury used.

Mercury is a naturally occurring element found in air, water, and soil. Mercury can exist in elemental, inorganic, or organic forms. The most common forms of mercury existing in the environment are metallic mercury, mercuric sulfide, mercuric chloride, and methylmercury. Microorganisms (bacteria and fungi) and other natural processes can change mercury from one form to another.

In the past, mercury was used primarily as a fungicide, antibacterial agent, paint dye, and preservative. It has since been replaced by safer and more effective agents. Today, one-third to two-thirds of the mercury released is the result of human related activity. Approximately 80 percent of mercury released by humans is from the fossil fuel combustion, mining, and smelting. Released as elemental mercury, the compound combines with other inorganic compounds and settles on lands and in streams. Fifteen percent of human released mercury is released to the soil from fertilizers, fungicides, and municipal solids wastes, and the remaining 5 percent is released from industrial wastewater.

The consumption of contaminated fish is one of the bigger causes of mercury poisoning in addition to exposure in the workplace. Permanent damage to the brain, kidneys, and nervous system often result from the ingestion of high mercury doses. Organic mercury compounds are especially dangerous because they adsorb into the body much more readily than elemental or inorganic mercury. Mercury poisoning in children or a developing fetus are more extreme; often affecting brain and nervous system development.

Because of human related activities, mercury can be detected in both groundwater and surface water supplies. Treatment of mercury is often the result of human related releases (to air or soil) and not to naturally occurring mercury in the groundwater.

Effect: Short-term: EPA has found mercury to potentially cause the following health effects when people are exposed to it at levels above the MCL for relatively short periods of time: kidney damage

Follow up: Treat and re-test for metals.

Treatment: Coagulation/Filtration, Granular Activated Carbon, Lime softening, Reverse Osmosis

Following installation of this system, the consumer should have the treated water tested for mercury to verify mercury reduction is being achieved and the system is functioning properly.

For more information visit the USEPA website.

For further technical assistance, call Suburban Property Inspections at 1-866-866-6700, or call the U. S. Environmental Protection Agency Safe Drinking Water Hotline at 1-800-426-4791.



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