Special Announcement

National Aeronautics and Space Administration

Goddard Space Flight Center
Wallops Flight Facility
Wallops Island, Virginia 23337

No.

Date: February 28, 2020

Subject: IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Consumer Notice of Tap Water Results
Wallops Flight Facility Main Base

NASA Wallops Flight Facility operates a drinking water system that provides drinking water at the Main Base and throughout Wallops Mainland/Island locations. To ensure drinking water meets state and federal standards, drinking water is periodically sampled and analyzed for metals concentrations. WFF recently completed 2019 semiannual sampling for lead and copper in drinking water on the Main Base. All drinking water samples were collected from taps without using the water filters. The results of this round of sampling and analyses are as follows:

Table 1. Drinking Water Lead and Copper Concentrations

Sample Location	Sample Date	Copper (mg/L)	Lead (mg/L)
A-1	12/02/2019	0.232	**0.0294**
A-41	12/02/2019	0.238	0.00278
F-10	12/02/2019	0.126	0.00757
E-2	12/02/2019	0.251	0.00289
Q-29	12/11/2019	0.173	0.0135
CBFS	12/11/2019	0.548	<0.002
N-159	12/02/2019	0.190	0.00967
N-162	12/02/2019	0.132	<0.002
F-20	12/02/2019	0.120	<0.002
F-16	12/02/2019	0.253	0.00614
E-104	12/02/2019	0.0341	<0.002
D-1	12/02/2019	0.174	<0.002
F-3	12/02/2019	0.184	**0.0158**
F-160	12/02/2019	0.234	0.00480
E-107	12/02/2019	0.0413	<0.002
F-1	12/02/2019	0.300	<0.002
M-15	12/02/2019	0.163	<0.002
R-20	12/02/2019	0.182	0.00651
J-20	12/02/2019	0.241	<0.002
NOAA	12/02/2019	0.038	<0.002

The < symbol indicates lead and copper were not detected above the indicated analytical detection limits.
Shaded data represent the 90th percentile results from the monitoring period. Results in **BOLD** are above the action level.

What Does This Mean?

Under the authority of the Safe Drinking Water Act, the Environmental Protection Agency (EPA) set action levels for lead and copper in drinking water at 0.015 milligrams per liter (mg/L) and 1.3 mg/L, respectively. The action level is the concentration of a contaminant which, if exceeded, may trigger additional sampling, treatment, or other requirements. WFF must ensure that drinking water does not exceed these action levels at the '90th percentile sample' concentration. Since twenty samples were collected, the 90th percentile sample concentration is the third highest sample concentration (shown shaded in the table above). Individual sample concentrations that exceed the action level are shown in **bold in the table above**.

The 90th percentile copper concentration for the sampled locations was 0.253 mg/L, which is below the action level of 1.3 mg/L.

The 90th percentile lead concentration for the sampled locations was 0.0135 mg/L, which is below the action level of 0.15 mg/L.

The EPA also set Maximum Contaminant Level Goals (MCLG). These are the maximum contaminant levels in drinking water in which there is no known or expected risk to health. The MCLGs allow for a margin of safety. Because lead may pose serious health risks, the EPA set the lead MCLG at zero. The MCLG for copper is 1.3 milligram per liter (same as the action level).

What Do We Do at NASA Wallops Flight Facility?

As an extra measure, WFF has installed and maintains activated carbon filters on water fountains and kitchen sinks. A filter maintenance program is used to ensure the filters are effective. WFF's drinking water has been tested after filtration at the tap and demonstrated to be below federal and state drinking water action levels for lead and copper. Additionally, the WFF Facilities Management Branch uses a corrosion control plan which includes the addition of Zinc-Orthophosphate to drinking water to further reduce the pre-filter lead and copper levels in WFF's drinking water. Operations and maintenance personnel routinely flush water mains and interior building taps to further reduce any lead and copper.

You can call the "HELP" desk (x4357) to request that the activated carbon filters in your area be examined and replaced as necessary.

What Are The Health Effects of Lead?

According to EPA and the Virginia Department of Health (VDH), lead can cause serious health problems if too much enters your body from drinking water, or other sources. It can cause damage to the brain and kidneys and can interfere with the production of red blood cells that carry oxygen to all parts of the body. The greatest risk of lead exposure is to infants, young children, and pregnant women. Scientists have linked the effects of lead on the brain with lowered IQ in children. Adults with kidney problems and high blood pressure can be affected by low levels of lead more than healthy adults. Lead is stored in the bones and it can be released later in life. During pregnancy the child receives lead from the mother's bones, which may affect brain development.

References: www.epa.gov/lead or www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water#reducehome.

What Are The Sources of Lead?

According to EPA and VDH, lead is a common metal that has been in many consumer products but is now known to be harmful to human health if ingested or inhaled. It can be found in lead-based paint, air, soil, household dust, food, some types of pottery, and drinking water. EPA estimates that 10 to 20 percent of a person's potential exposure to lead over a lifetime may come from drinking water. Infants who consume mostly

formula mixed with lead-containing water can receive 40 to 60 percent of their exposure to lead from drinking water. Lead is rarely found in natural sources of water such as rivers, lakes, wells, or springs.

References:www.epa.gov/lead or www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water#reducehome.

What Can You Do To Reduce Exposure to Lead in Drinking Water?

According to EPA and VDH, lead may work its way into drinking water after the water enters the distribution system and is on its way to consumer's taps. This usually happens through the corrosion of materials containing lead in household plumbing. These materials include brass faucets, lead solder on copper pipes, lead pipes, or lead service lines connecting the water main to the inside plumbing. Lead pipes are no longer installed for service lines or in household plumbing, and lead solder has been outlawed in Virginia since 1985.

There are several steps to take to reduce your exposure to lead in drinking water. These include:

1. **Run your water to flush out lead.** If water hasn't been used for several hours, allow the water to run at the tap for 30 seconds up to 2 minutes before using it for drinking or cooking. This action flushes the lead-containing water from the pipes. The water you run from drinking water taps does not have to be wasted. You can use this water for cleaning purposes or for watering plants. You may want to keep a container of drinking water in your refrigerator, so you don't have to run water every time need it.

2. **Use cold water for cooking and preparing baby formula.** Do not cook with or drink water from the hot water tap, as lead dissolves more easily in hot water. Do not use water from the hot water tap to make baby food or formula.

3. **Do not boil water to remove lead.** Boiling water will not reduce lead.

4. **Look for alternative sources or treatment of water.** Consider purchasing bottled water or a water filter. Read the package to be sure the filter is approved for reducing lead, or contact the National Sanitation Foundation at 800-NSF-8010 or **www.nsf.org** for information on performance standards for water filters. If you choose to install a lead removal filter, be sure to maintain and replace the filter device in accordance with the manufacturer's instructions.

5. **Get your child tested.** Contact your local health department or healthcare provider to find out how you can get your child tested for lead, if there is a concern.

6. **Identify any plumbing fixtures containing lead.** Brass faucets, fittings, and valves manufactured before January 4, 2014, may contribute lead to drinking water, including those advertised as "lead free." Under current law, "lead free" means no more than 0.2 percent lead in solder and flux, and 0.25 percent lead for pipe, pipe fittings, and components. Visit the National Sanitation Foundation Web site at **www.nsf.org** to learn more about lead-containing plumbing fixtures.

For More Information

Call NASA WFF's Environmental Office at 757-824-1987. For more information on reducing lead exposure around your home, and the health effects of lead, visit EPA's web site at www.epa.gov/lead, www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water#reducehome, call the National Lead Information Center at 800-424-LEAD, or contact your personal health care provider.

Cynthia Y Stoltz for
David A. Reth
Director of Management Operations

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