MATANUSKA-SUSITNA BOROUGH
Public Works Department
Operations & Maintenance Division
1420 S. Industrial Way • Palmer, AK 99645

Public Notice

Talkeetna Water System

PWSID# 225032

Our water system recently violated drinking water standards. Our permit requires no more than 10 ug/L or 10 micrograms of arsenic per liter. In December, our system tested at 14.8 ug/L and in January it tested at 13 ug/L. A faulty pump failed to add a chemical in the water to remove the naturally-occurring arsenic. That pump was rebuilt and recalibrated on Jan. 21. This incident was not an emergency in the short term. As our customers, you have a right to know what happened and what we are doing to correct this situation.

The latest testing of the water shows 3 micrograms per liter. More definitive tests will be taken on Jan. 25, and results returned Feb. 1. Arsenic is a naturally-occurring element widely distributed in the earth's crust. When groundwater flows through these arsenic deposits, the arsenic is released into the water.

The treatment plant was installed in 2012 to reduce the amount of naturally-occurring arsenic in the water.

Before 2006, The US Environmental Protection Agency had defined 50 parts per billion as allowable in safe drinking water. With the new regulations, that amount was reduced to 10 parts per billion as a maximum contaminant level, or a few drops in an Olympic-sized swimming pool.

Talkeetna Water System is required to routinely monitor for drinking water contaminants. Our routine Arsenic sample result from December 2015 was 14.8 ug/L, which exceeded the maximum contaminant level (MCL) for arsenic. We collected a confirmation sample in January 2016 with a result of 13 ug/L, which also exceeded the maximum level of 10 ug/L.

The United States Environmental Protection Agency (U.S.EPA) lowered the MCL for arsenic in drinking water from 0.05 milligrams per liter (mg/l) to 0.01 mg/l (i.e., from 50 parts per billion to 10 parts per billion). The MCL is intended to provide added protection against the possible health risks associated with long-term exposure to this contaminant.

Further analysis of the water indicated ferric chloride, a chemical added to the water which allows arsenic removal by filtering, was not being pumped into the treatment vessels. The utility rebuilt the ferric chloride injection pump on January 21 to correct this problem. After rebuilding and calibrating the pump, arsenic tests were performed on the untreated water and on the treated water. The untreated water tested at13 ug/L and the treated water tested at 3 ug/L, which is well within the EPA limits. These tests were done using test strips which have lower sensitivity than tests conducted by a certified laboratory. To verify the arsenic levels meet EPA standards, a sample of the treated water for laboratory analysis will be taken on January 25 and the results are expected on February 1.

What should I do? What does this mean?

This is not an immediate public health risk. If it were, you would have been notified immediately. However, studies have shown that the more you are exposed to arsenic over time, the higher the risk becomes for experiencing health effects. Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.

You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor.

People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on arsenic exposure are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791.

Potential Health effects of contaminants for Arsenic:

Irritation of the stomach and intestines, decreased production of red and white blood cells, skin changes and lung irritation. Increased chances of the development of skin cancer lung cancer, liver cancer, and lymphatic cancer. Can cause infertility and miscarriages with women. Can cause heart disruptions, brain damage.

The following is a more detailed timeline of the events: On December 16, 2015 a treated water sample was taken for the annual arsenic level test. The results were reported on December 30 at 14.8 ug/L, which exceeds the ADEC permit parameters of 10 ug/L. After receiving the results another sample was taken on January 5 and the results were received on January 14, the test results were 13 ug/L which is still out of compliance with ADEC permitted levels but not at a level that is dangerous for short term consumption. The utility immediately contacted VEI Consultants on January 14. VEI Consultants did the original calibration of the treatment plant and assisted the utility in troubleshooting the problem. VEI advised the utility to inspect the ferric chloride pump and check for iron in the treatment system which would indicate the presence of ferric chloride. Inspection of the pump was done on January 15 and it was determined that the ferric chloride pump was not operating properly. Tests of the water inside the treatment vessels also showed very little iron indicating ferric chloride was not being properly metered into the system. A rebuild kit for the chlorine pump was express ordered and shipped from Pennsylvania. The rebuild kit arrived on January 20, the pump was rebuilt and the plant recalibrated on January 21. After the rebuilding of the pump and recalibration, the untreated and treated water were tested using test strips. The arsenic level of the untreated water was 14 ug/L and the treated result was 3 ug/L. A sample for laboratory analysis will be taken on January 25. The results of this sample are expected to be reported on Feb. 1.

We will continue to conduct routine quarterly monitoring in accordance with the Drinking Water Regulations 18 AAC 80. For more information please contact: Jennifer Ballinger, 907-861-7753, email j.ballinger@matsugov.us

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly. You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being posted by _____.

State Water System ID#225032 Date:_____