

Subject:	Arsenic testing and follow-up at TNC and State-Regulated water systems	Date:	6/14/2012
Unit:	Technical Services & Partners	Revised:	1/25/2016, BG
Purpose & Scope: Water quality alert processing for Transient Non-Community and State-Regulated water systems.			
Procedure/Process:			

Background: When the maximum contaminant level (MCL) for arsenic was lowered by the EPA in 2006, the MCL no longer applied to Transient Non-Community (TNC) and State-Regulated water systems. The reason for this drop in MCL was an increased concern of adverse health effects from exposure to chronic, low levels of arsenic in drinking water. Since chronic contaminants are of less concern in transient populations, which are found in TNC/State-Regulated categories, these systems were not required to comply with the MCL. However, the concern for public health still exists when the TNC/State-Regulated water system has full-time employees and/or residents. As a result, the Drinking Water Program has contacted certain TNC/State-Regulated water systems and asked that they test or re-test their water system for arsenic and provide information to customers if the results are elevated as described below.

All TNC/State Regulated water systems are required to test for arsenic one time at the entry point to the distribution per OAR 333-061-0030(2)(a)(iii). The systems contacted in this project fall into one of four categories:

- 1) TNC/State-Regulated systems that have never tested for arsenic according to DWP records.
- 2) TNC/State-Regulated systems that do not have viable test results due to the use of an invalid or discontinued methodology or were analyzed with a method detection limit at or above the current MCL.
- 3) TNC/State-Regulated systems that have viable results but exceed the chronic MCL (0.010 mg/L).
- 4) TNC/State-Regulated systems that have viable results but exceed the acute threshold of 0.050 mg/l.

Procedure:

DWP will be alerted to results exceeding the MCL and will contact the appropriate regulating agency who will then discuss actions and options with the system operator.

A. When a system exceeds the chronic MCL (0.010 mg/L), the following steps/ options must be discussed with the owner/operator:

- 1) Although not required, the system should be encouraged to begin quarterly testing in accordance with OAR 333-061-0036(2)(i)(A)&(B). The reason for additional testing is to account for potential variability that may occur within the laboratories or the methodologies (i.e. protection from “lab error”). Additional testing can also show seasonal variability in water quality.

- 2) A public notification alerting employees and residents, at a minimum, that the MCL has been exceeded and what the potential dangers are should be posted (see OAR 333-061-0042(2)(d) and the attached example).
- 3) A copy of the “Arsenic in Drinking Water FAQs” should be made available to system operators (attached).
- 4) Other options that can be discussed include:
 - a. The temporary use of a known safe water source (such as bottled water).
 - b. Develop or connect to a new safe water source.
 - c. Treatment options to remove or reduce the arsenic (see attached list of treatment types).

B. When a system exceeds the acute MCL (0.050 mg/L), the following steps/options must be discussed with the owner/operator:

- 1) Again, although not required, quarterly testing should be implemented in accordance with OAR 333-061-0036(2)(i)(A)&(B) for the reasons mentioned above.
- 2) A public notification alerting **all users** that the acute MCL has been exceeded and the water should not be used, and what the potential dangers are, must be posted (see OAR 333-061-0042(2)(d) and attached example). Acute health effects could include nausea, vomiting, and diarrhea. Specifically discuss the following acute health effects with the operator including: arsenic has the potential to accumulate in the body, and chronic high dose exposure could lead to skin conditions, peripheral neuropathy and anemia. Arsenic is a known human carcinogen and is associated with some cancers, such as, skin, bladder and lung.
- 3) The use of an alternative known safe water source, on a temporary basis (until the issue is resolved if possible), should be strongly encouraged.
- 4) A copy of the “Arsenic in Drinking Water FAQs” should be made available to system operators.
- 5) Other options to be pursued in order to help resolve the issue would include:
 - a) Developing or connecting to a new, known safe water source.
 - b) Treatment options for the removal or reduction of arsenic from the water (see attached list of treatment types).

C. When a TNC/State-Reg system has treatment installed for arsenic reduction, an arsenic sample must be collected annually under -0036(1)(g) to ensure the treatment system is operating properly. Without regular sampling, the treatment system could fail and the owners/consumers would not know it, leading to unwanted exposure.