

LEAD AND COPPER SAMPLING PROTOCOL

The Environmental Protection Agency's lead and copper regulations require all community and non-transient, non-community water systems to determine lead and copper levels to which customers may be exposed. Initially, two consecutive 6-month sampling periods are required.

- The **lead action level is 15 ppb** measured in the 90th percentile. The **copper action level is 1.3 ppm** measured in the 90th percentile.
- Systems serving **less than 100 people are required to collect five (5) samples per period**; systems serving from 101 to 500 people are required to collect ten (10) samples; and systems serving from 501 to 3,300 people are required to collect Twenty (20) samples.
- When 5 samples are collected, the average of the 4th and 5th highest sample values recorded is the 90th percentile; when 10 samples are collected, the 2nd highest sample value recorded is the 90th percentile; and when 20 samples are collected, the 3rd highest sample value recorded is the 90th percentile.
- Water samples collected for lead and copper analyses must be **first draw** samples collected at single-family residences and should always be drawn from either the **cold-water kitchen tap** or the **cold-water bathroom tap**:

Always collect the first draw

Always collect a one-liter sample in one container only

Always allow the water to **stand at least 6 hours** (i.e. no flushing, showering, etc.) before sampling

Sampling sites may not include faucets that have point-of-use or point-of-entry treatment devices designed to remove inorganic contaminants.

- If you are a community water system, lead and copper tap water samples must be collected from sampling locations that meet one of the following criteria:

Tier 1. Single family structures that contain: 1) lead pipes or 2) copper pipes with **lead solder** installed after 1982, and/or 3) are served by lead service lines.

Tier 2. Buildings and multiple-family residences that contain: 1) lead pipes, or 2) copper pipes with **lead solder** installed after 1982, and/or 3) are served by lead service lines. **Tier 2 may only be used if at least 20% of dwellings are multiple family.**

Tier 3. Single family structures that contain copper pipes with **lead solder** installed before 1983.

Other. If you do not have enough Tier 1, 2, or 3 sites, you must use representative sites to meet minimum sampling requirements. A site is representative if its plumbing is similar to that of other sites in your system.

When a sufficient number of Tier 1 sites do not exist or are inaccessible, you must complete your sampling pool with Tier 2 sites. When a sufficient number of Tier 1 and 2 sites are not available, you must complete your sampling pool with Tier 3 sites. If you do not have enough Tier 1, 2, or 3 sites, you must use representative sites to meet minimum sampling requirements. When you collect tap water samples from Tier 2 or 3 sites you must explain why you could not identify a sufficient number of Tier 1 sites, and notify the state by July 1, 1993. You will be required to supply supporting documentation.

- If you are a non-transient non-community water system, lead and copper tap water must be collected from sampling locations that meet one of the following criteria:

Tier 1. Buildings that contain: 1) copper pipes with **lead solder** installed after 1982, and/or 2) are served by lead service lines.

Tier 2. Buildings that contain copper pipes with **lead solder** installed before 1983.

Any questions concerning the lead and copper rule may be answered by contacting the Drinking Water Program - South Dakota Department of Environment and Natural Resources at 773-3754.