

## LEAD AND COPPER RULE - WATER QUALITY PARAMETER SAMPLING

A small or medium public water supply system that exceeds the lead action level of 15 ppb and/or the copper action level of 1.3 ppm during any monitoring period must collect Water Quality Parameter (WQP) samples in addition to lead and copper source samples during the same monitoring period in which it exceeds an action level. The WQP monitoring is designed to assist each system develop optimal corrosion control treatment and help them determine whether treatment is properly operated and maintained. The results of all WQP samples must be submitted to the state in the same monitoring period in which the action level(s) was exceeded.

- A water system that exceeds the lead or copper action level on the basis of tap samples must collect one (1) lead/copper source water sample from each entry point to the distribution system within 6 months after the exceedance.
- WQP samples must be collected at each entry point to the distribution system **and** at sites in the distribution system that are representative of water quality throughout the system. Samples will be analyzed for:
  - pH
  - Alkalinity
  - Calcium
  - Conductivity
  - Temperature
  - Orthophosphate, when a phosphate-based inhibitor is used
  - Silica, when a silicate-based inhibitor is used
- WQP samples collected at entry points to the distribution system must be collected at locations **representative of each source** of water after treatment. Collect a total of two (2) samples (one sample per round) at each entry-point during the 6-month monitoring period in which you exceeded the action level.
- For water systems serving 500 or fewer people, identify **one** (1) sampling site representative of the water quality throughout the distribution system and collect a total of two (2) WQP samples (one sample per round). For water systems serving from 501 to 3,300 people, collect a total of two (2) WQP samples (one per round) at each of **two** (2) sampling sites located throughout your distribution system. Samples must be collected during the 6-month monitoring period in which you exceeded the action level.
- All WQP samples should be collected on different dates in the monitoring period to insure you have water quality data that is representative of seasonal changes.
- WQP samples in the distribution system may be collected from the same location as coliform and disinfectant residual samples. These samples should be collected in the following manner:
  - **Fully flush** the tap and collect the coliform sample.
  - Collect a sample to measure disinfectant residual.
  - Collect and analyze sample for temperature and pH.
  - Collect the samples for the other WQPs.
- When you collect each of the WQP samples for alkalinity, calcium, conductivity, orthophosphate, and silica you should take one (1) liter sample. Plastic or glass containers may be used when collecting WQP samples except if silica analyses are required (plastic must be used). Containers may be obtained from the State Health Lab or other certified laboratory.
- **Temperature and pH analyses must be conducted in the field.** pH measurements must be made with a pH electrode and meter within 15 minutes of sample collection. Measure temperature using either a hand-held thermometer or a combined temperature/pH electrode and meter.
- Within 6 months of exceeding an action level you must submit an optimal corrosion control treatment recommendation to the state.

Any questions concerning Water Quality Parameter sampling or 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.