

June 3, 2016

Re: Requirements and Recommendations for Community Water Systems (Population \leq 50,000)
Under the Lead and Copper Rule

Dear Public Water Supplier:

This letter is intended to remind you of your responsibilities under the Lead and Copper Rule (LCR) and to provide some recommendations for improving public health protection and consumer confidence. The purpose of the LCR is to protect public health by minimizing lead and copper levels in drinking water, primarily by making water less corrosive. The LCR establishes an action level of 0.015 mg/L for lead and 1.3 mg/L for copper. An action level exceedance is not a violation but can trigger other requirements that include water quality parameter monitoring, corrosion control treatment, source water monitoring/treatment, public education, and lead service line replacement.

The following requirements and recommendations fall into three categories: sample site selection, monitoring and reporting, and optimized corrosion control treatment.

Sample Site Selection:

As per §109.1103(g), all systems monitoring under the LCR are required to develop a sample site location plan that includes the following elements:

- A materials evaluation of the distribution system
- Lead and copper tap sample site locations
- Water quality parameter sample site locations
- Certification that proper sampling procedures are used

As part of the materials evaluation, water suppliers are required to review several sources of information (including plumbing codes, permits, and records in the files of each municipality) in order to identify a sufficient number of lead and copper tap sampling sites. The materials evaluation shall be updated, as necessary, to ensure a sufficient number of sampling sites.

Water suppliers are required to select all Tier 1 sample sites for both initial and reduced monitoring. Tier 1 sample sites consist of single family structures that have one or more of the following:

- Copper pipes with lead solder installed after 1982
- Lead pipes
- Lead service lines

If lead service lines exist, at least 50 percent of the sample sites shall be sites with lead service lines.

The use of Tier 2 or Tier 3 sites must be properly documented along with a justification of why a sufficient number of Tier 1 sites are not available. An acceptable justification would be that Tier 1

sites do not exist, or that homeowners at Tier 1 sites refused to participate in the monitoring program. An incomplete materials evaluation is not an acceptable justification.

If Tier 2 or Tier 3 sample sites must be used, the sites shall consist of the following:

- Tier 2 sites shall consist of buildings, including multi-family residences, that have one or more of the following:
 - Copper pipes with lead solder installed after 1982
 - Lead pipes
 - Lead service lines
- Tier 3 sites shall consist of single family structures that contain copper pipes with lead solder installed before 1983

If additional compliance samples are collected above the minimum required number of samples, the samples should be from the highest risk sample sites in order to avoid diluting the sampling pool.

As per §109.1107(a)(1), the sample site location plan must be submitted to the Department of Environmental Protection (DEP) prior to initial monitoring or upon request. DEP notified all water suppliers in 2004 to submit any remaining sample site location plans. Additionally, water suppliers are responsible for updating the plan within the first 10 days following the end of each applicable monitoring period as follows:

- Identify lead and copper tap sample sites that are different from sites sampled during previous monitoring periods
- Identify any changes to water quality parameter sample sites from sites sampled during previous monitoring periods
- Update the sample procedure certification

In addition to the above-mentioned requirements, both DEP and the U.S. Environmental Protection Agency (EPA) strongly recommend that water suppliers increase transparency by posting on their public website the sample site location plan and materials evaluation (including the locations of lead service lines), together with any updated inventory or map of lead service lines and lead plumbing in the system. These plans should be posted for the 2016 - 2018 monitoring cycle. If a public website is not available, the sample site location plan and materials evaluation should be made available to the public upon request. Homeowner names and exact addresses may be redacted for privacy purposes.

Monitoring and Reporting:

As per §109.1103(h), the LCR specifies lead and copper tap sample collection procedures that include the following:

- Each sample must be a first-draw sample that is 1 liter in volume and has stood motionless in the plumbing system of each sampling site for at least 6 hours.

- Samples from residential housing shall be collected from the cold water kitchen tap or bathroom sink tap. First-draw samples from a nonresidential building shall be collected at an interior tap from which water is typically drawn for drinking.
- First-draw samples may be collected by the water supplier or by residents (if the residents are properly instructed of the sampling procedures).
- The water supplier must make every reasonable effort to collect tap samples from the same sampling sites that were used for initial monitoring. If an original sampling site is not available, a tap sample may be collected from another sampling site in the sampling pool as long as the new site meets the same targeting criteria, and is within reasonable proximity to the original site.

EPA recently posted new guidance on lead and copper tap sample collection procedures. A copy of this guidance, *Clarification of Recommended Tap Sampling Procedures for Purposes of the Lead and Copper Rule* is enclosed for your reference and includes the following:

- Water suppliers should **NOT** recommend the removal or cleaning of aerators prior to or during the collection of lead and copper tap samples because this practice could mask the added contribution of lead at the tap.
- Water suppliers should **NOT** include a pre-stagnation flushing step in the sampling instructions for homeowners because pre-stagnation flushing may potentially lower the lead levels as compared to when it is not practiced.
- Lead and copper tap samples should be collected using wide-mouth bottles because wide-mouth bottles allow for a higher flow rate during sample collection -- which is more representative of the flow that a consumer may use to fill up a glass of water.

DEP concurs with this guidance and strongly recommends that you update your sample collection procedures for the 2016 - 2018 monitoring cycle.

As a result of recent events and national media coverage, many water systems have been conducting additional first-draw lead and copper testing or are responding to customer requests for additional sampling. ***Please note that these sample results must be reported to DEP.*** Some of the results may also be included in the 90th percentile compliance value calculation. If a sample is collected from a site that meets the sample site location and sample collection criteria during an LCR compliance monitoring period, the results would be included in the 90th percentile compliance value calculation and should be reported as sample type 'D.' Any other first-draw sample result that does not meet the required criteria should be reported as sample type 'S' – these are NOT included in any 90th percentile compliance value calculation. A copy of EPA's 2004 memo on *Clarification of Requirements for Collecting Samples and Calculating Compliance* is also enclosed for your reference.

Finally, both DEP and EPA strongly recommend that you enhance your efforts to ensure that residents promptly receive lead sampling results from their homes, together with clear information on lead risks and how to abate them, and that the general public receives prompt information on high lead levels in your drinking water system.

Optimized Corrosion Control Treatment:

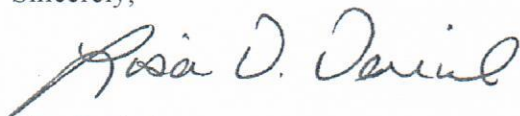
As per §109.1102(b), all water systems are required to optimize corrosion control treatment (OCCT), and maintain OCCT at all times to ensure public health protection. This includes before, during, and after making a modification or change in source water or treatment.

Any changes in source water or treatment must be approved by DEP via a permit or permit amendment prior to making the change. As per §109.602(a), PWS Permit Module 1 – Completeness Report (3900-PM-BSDW0254b) and the Instructions for PWS Permit Application (3900-PM-BSDW0254a), the application must include an assessment of simultaneous compliance with the LCR and other rules. Evaluating simultaneous compliance may involve a system-wide assessment prior to changing sources or treatment facilities. You may also be required to conduct additional lead and copper tap or other compliance monitoring to assess baseline and post-change water quality.

Changes in source water include the addition or removal of sources or interconnections. It may include changes in flow or blending ratios if these changes have the potential to affect water quality parameters or OCCT. Finally, it may also include the use of permitted but unused sources that may not have been included in any previous LCR monitoring or evaluation of OCCT. It is imperative that any changes in sources and/or treatment are fully assessed and approved by DEP prior to making the change.

In closing, the LCR was first promulgated in 1989 and has undergone several revisions since then. The rule is arguably one of the most complex rules and is often difficult to understand. However, lead in drinking water is a serious health concern and we trust that you share our commitment to protecting public health. If you have any questions regarding your responsibilities under the LCR or the requirements and recommendations included in this letter, please feel free to contact your local DEP district office.

Sincerely,



Lisa Daniels
Director
Bureau of Safe Drinking Water

Enclosures

cc: DEP District Office