



Catherine E. Heigel, Director

Promoting and protecting the health of the public and the environment

March 29, 2016

Mr. Joel Beauvais
Deputy Assistant Administrator
US Environmental Protection Agency
Washington, D.C. 20460

Re: Your Letter dated February 29, 2016
Lead in Drinking Water, South Carolina Response

Dear Deputy Assistant Administrator Beauvais:

The information requested in your referenced letter is provided below. Included are responses to your specific questions, as well as additional information about the status of lead in drinking water in South Carolina and the response of the South Carolina Department of Health and Environmental Control. The structure and location of the drinking water program within the state health agency allows for a robust response to the concerns about lead in drinking water. As the public water systems pay the Department a fee for conducting compliance laboratory sampling and analysis, we have excellent quality controls over the data and flexibility to go beyond Lead and Copper Rule (LCR) requirements to help protect public health.

The Department currently monitors 695 PWS for lead and copper in accordance with the federal Lead and Copper Rule. I can report that 667 of these PWS (96%) have had no exceedance of the lead action level in the past five years. Lead in drinking water has been detected in 28 PWS (4%) over the past five years, of which 24 are small, rural systems serving less than 3,300 customers, and 4 are medium, rural systems serving between 3,301 and 50,000 customers.

1. Confirm that the state's protocols and procedures for implementing the LCR are fully consistent with the LCR and applicable guidance

The Department has primacy for the enforcement of the Safe Drinking Water Act in the state. We have recently reviewed our protocols and procedures and has determined that they are consistent with the requirements of the Lead and Copper Rule.

2. Use relevant EPA guidance on LCR sampling protocols and procedures for optimizing corrosion control.

The Department has updated its sampling protocols and procedures to match the recently issued EPA guidance (dated February 2016). The protocols and procedures for determining and implementing optimum corrosion control are consistent with the requirements of the Lead and Copper Rule.

3. *Post on your agency's public website all state LCR sampling protocols and guidance for identification of Tier 1 sites (at which LCR sampling is required to be conducted).*

The identification of Tier 1 sampling sites is outlined in the Lead and Copper Rule. This was required when the rule first went into effect. The Department has not produced any additional guidance on determining sample site Tiers. Any change of a sampling site Tier must be noted on the sample collection form completed by the homeowner. Any site that no longer meets the criteria for a Tier 1 sample site is removed from the sample pool and replaced by another site that does meet the Tier 1 sample site criteria in the LCR. The sampling protocol is posted on our agency website.

4. *Work with PWSs – with a priority emphasis on large systems – to increase transparency in implementation of the LCR by posting on their public website and/or on your agency's website the following:*

a. *The materials inventory that systems were required to complete under the LCR, including the locations of lead service lines, together with any more updated inventory or map of lead service lines and lead plumbing in the system.*

Public water systems were required to complete material surveys in the early 1990s. These surveys were used to determine Tier 1 sample sites to be used for LCR sample collection. The surveys themselves were not submitted to the Department and may, or may not, still exist with the public water systems after more than 20 years. However, the Department has shared EPA's request to publish this material with the SC AWWA Water Utility Council and through multiple presentations given before public water system personnel at a state-wide conference, as well as regional LCR focused workshops.

b. *LCR compliance sampling results collected by the system, as well as justification for invalidation of LCR samples.*

All LCR compliance information is available on the agency's website through Drinking Water Watch. Individual sample results are not currently available online. Compiling and listing individual sample results for all public water systems would require some additional work effort on a recurring basis. The Department will investigate the practicality of doing this considering current workload and staff availability. All lead action level exceedances in the past five years have been posted on the agency website.

5. *Enhance efforts to ensure that residents promptly receive lead sampling results from 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 drinking water systems.*

The Department is enforcing the notification requirements based on the time limits established in the LCR. In addition, the Department has gone beyond LCR requirements by changing our procedures to calculate the 90th percentile at the time that sample results are received from the laboratory rather than waiting until the end of the monitoring period as specified by the LCR. All time limits for submittal of public education and other requirements will be based on the notification of monitoring results rather than the end of the monitoring period as specified in the LCR.

Procedural safeguards and quality control measures allow the Department to provide oversight of any significant change by a PWS that might contribute to elevated lead in drinking water. Any change in a PWS water source would have to be reviewed, evaluated and approved first by the Department. Also, any changes in treatment would have to be permitted to ensure that the changes to the treatment process do not adversely affect lead levels. The Department contracts with a certified laboratory to conduct analyses under the Lead and Copper Rule so sample results are sent directly to the Department. Our agency determines when sampling is required and ensures bottles are supplied by the laboratory to the PWS.

The Department has implemented the following additional actions to address lead in drinking water:

- As a combined health and environmental protection agency, we have access to reported blood lead levels. Our health and environmental staff cooperated to conduct an in-depth analysis to compare reported elevated blood lead levels to the areas (census tracts) located near the 28 PWS which had samples above the action level in the past five years. Based on our analysis, we concluded that there is no correlation between reported elevated blood levels and these water systems.
- In cooperation with SC Rural Water Association, we are conducting a study of each of the 28 PWS with a lead action level exceedance in the past five years to determine, if possible, the reason for the exceedance. The natural water quality and corrosive nature of the source water will be evaluated, along with the potential presence of lead lines or lead solder in copper piping. Sampling procedures will also be evaluated. Under the rule, individual homeowners often are responsible for taking the sample, which may introduce the opportunity for sampling error and results that are not representative of actual water quality. The goal of the study is to determine if affordable treatment options are available to use to reduce lead below the action level.
- We are creating an Office of Rural Water, which will be dedicated to studying the water and wastewater related challenges facing rural communities, providing these communities with technical support and identifying resources to address these issues.
- We have gone beyond the requirements of the rule to eliminate 9 year monitoring schedules allowed under the rule and limit those to 3 years. All schools and daycares that are subject to the rule are now on annual monitoring. The Department is also conducting additional sampling and providing special technical assistance at the schools with lead exceedances.
- We will determine compliance immediately upon receipt of the laboratory results rather than waiting until the end of the monitoring period as provided in the rule, again going above and beyond minimum rule requirements to help inform drinking water customers of any exceedance in a timely manner.
- Lead and Copper Rule workshops are being held across the state to educate PWS about the rule requirements, available technical assistance, and how to best communicate the monitoring results to their customers to reduce risk.
- Although large PWS are not experiencing exceedances of lead action levels, we are working with their professional member organizations to encourage these water systems to be transparent with their data and take steps necessary to address any concerns their customers may have.
- Through coordination of our health and environmental areas, we will continue to evaluate any potential correlation between lead drinking water levels and blood lead levels.
- Our web site has been updated to include more information on lead exposure in homes and ways for residents to prevent this exposure (lead in paint, etc.).

We look forward to working with EPA to make improvements to the LCR, and will be happy to participate in any working groups or discussions hosted by EPA. If you have any further questions, please let me know.

Sincerely,

A handwritten signature in blue ink that reads "Myra C. Reece". The signature is written in a cursive style with a large initial "M".

Myra C. Reece
Director
Environmental Affairs

CC: Jim Giattina, EPA Region 4