

## **LEAD AND COPPER**

**RULE:** 15A NCAC 18C Section .1507 – “Corrosion Control and Lead and Copper Monitoring”

**Note:** The Federal Rule provisions of 40 CFR 141.42, and 40 CFR 141.80 through 40 CFR 141.91 (Subpart I) are incorporated into Section .1507 of NC’s Regulations by reference. NC also provided requirements for control and adjustment of pH in Section .1507(a), and exempted community travel trailer parks, campgrounds and marina slips that do not serve 25 or more of the same persons more than 6 months/year from the provisions of the Rule.)

**APPLIES TO:** Community and non-transient non-community (NTNC) systems

### **SAMPLING REQUIREMENTS:**

- **Types of Sampling:** Rule requires three different types of sampling:
  - User Tap Lead & Copper – applies to all community and NTNC systems [40 CFR 141.86]
  - Water Quality Parameters – all large systems and any system with an action level exceedance [40 CFR 141.87]
  - Source Water Lead & Copper - any system with an action level exceedance [40 CFR 141.88]
- **Sampling Location:** Samples are taken at locations defined by the Rule:
  - User Tap Lead & Copper – targeted tier level distribution sites and known lead service line locations [40 CFR 141.86(a)]
  - Water Quality Parameters – entry point(s) and distribution sites [40 CFR 141.87(a)]
  - Source Water Lead & Copper – entry point(s) [40 CFR 141.88(a)]
- **Number of Samples Required:** Determined by population and monitoring status:
  - User Tap Lead & Copper – [40 CFR 141.86(c)]
  - Water Quality Parameters – [40 CFR 141.87(a)]
  - Source Water Lead & Copper – [40 CFR 141.88(a)]
- **Monitoring (or Sampling) Frequency:**
  - Initial Lead & Copper Tap Monitoring – Six-month compliance periods; referred to as “standard tap monitoring”. [40 CFR 141.86(d)]
  - Routine Lead & Copper Tap Monitoring – N/A
  - Increased Lead & Copper Tap Monitoring – Water systems on reduced monitoring revert back to “standard monitoring” for all three types of sampling if an exceedance occurs, and must take the required actions to reduce lead and or copper levels at user tap. [40 CFR 141.80 through 141.91].
  - Reduced Lead & Copper Tap Monitoring - Annual or triennial monitoring periods, depending on sampling results for lead and copper and/or water quality parameters. Compliance period is June 1 through September 30. Large water systems must have written approval for any reduction of monitoring [40 CFR 141.86(d)(4)].
  - Waiver for Lead & Copper Tap Monitoring (if applicable) – nine year waiver available for small systems that meet the requirements of 40 CFR 141.86(g).

#### **NOTE:**

- Water Quality Parameter Monitoring schedules are structured similarly to Lead & Copper Tap sampling. Initial monitoring is on a six-month compliance schedule with provisions for reduced monitoring on an annual or triennial basis.
- Source Water Monitoring is required if a system exceeds the lead or copper action level.
- Water Quality Parameter monitoring or source water monitoring schedules are also dependent on treatment installed by the system with State approval.

- **Any Additional/Special Sampling Requirements:**
  - User Tap Lead & Copper – Samples must be “first draw”, and must be 1 liter in volume. Sample water must be from a kitchen tap or bathroom sink, possess no point of use (POU) or point of entry (POE) devices, and must have stood motionless in the pipes for at least six hours. [40 CFR 141.86(a) and 141.86(b)]
  - Water Quality Parameters – A water quality parameter sample set generally consists of two properly labeled 500 mL sample bottles. Tap must be well flushed before collection, and pH and temperature must be measured immediately. Samples must be collected at sites that are representative of the entire distribution system (which includes coliform sampling sites). No POU or POE devices. [40 CFR 141.87]
  - Source Water Lead & Copper – Samples must be from entry points, and must be 1 liter in volume. Sample water must be representative of all sources used, after any treatment techniques that may be applied. [40 CFR 141.88]
- **Actions That Are Always Required After an Exceedance Occurs**
  - Standard Monitoring for Tap Lead & Copper [40 CFR 141.86(d)(4)]
  - Standard Monitoring for Water Quality Parameters [40 CFR 141.87]
  - Standard Monitoring for Source Water Lead & Copper [40 CFR 141.88]
  - Distribute Lead Public Education (lead exceedance only) [40 CFR 141.85]
  - Develop and Submit a Corrosion Control Treatment Recommendation [40 CFR 141.81 and §141.82]
  - A Corrosion Control Study is also required for large systems [LCR Guidance Manual]
- **Actions That May Be Required After an Exceedance Occurs**
  - Installation of corrosion control treatment to adjust pH, alkalinity, hardness, and possibly implement the use of a corrosion inhibitor, according to approved recommendation [40 CFR 141.81 and 141.82]
  - Lead service line replacement may be required if sample results continue to exceed action level [40 CFR 141.84]
  - Installation of source water treatment according to approved recommendation [40 CFR 141.83]

**INCOMING REPORT/PLAN SUBMITTALS FROM SYSTEMS TO THE STATE:**

- **Analytical Results for All Compliance and Non-compliance Samples** MUST be submitted to the State by NC certified laboratories in required format. (15 NCAC 18C Section .1525; [40 CFR 141.31])
- **Sample Siting/Location Plans:** [40 CFR 141.86] Each system must maintain a sample siting plan as defined in 40 CFR 141.86. Any changes to targeted tier sites must be reported to PWSS. Sampling plans do not require approval from PWSS.
- **Waiver Applications:** For small systems only [40 CFR 141.86(g)]
- **Quarterly Status Reports and Corrective Action Plan Following MCL Violations:** N/A
- **Other Misc. Submittals if triggered by conditions of the rule:** [40 CFR 141.90]
  - 90<sup>th</sup> percentile summary results
  - Optimal Corrosion Control Treatment recommendation
  - Documentation of distribution of Lead Public Education materials
  - Source Water Treatment recommendation, if required
  - Changes to Lead & Copper Tap and Source Water sampling locations
  - Certification of completion of installation of treatment
  - Lead Service Line Replacement status, if required

## **OUTGOING ENFORCEMENT/REPORTS/APPROVALS FROM STATE TO SYSTEMS:**

- **Violation Letters:** Includes monitoring/reporting violations and failure to perform required follow-up actions, etc. Note: Action Level Exceedance does not constitute a violation. Exceedance triggers the requirement for systems to perform certain actions within a specified time frame. Failure to complete these actions results in treatment technique violations.
- **Administrative Orders**
- **Administrative Penalties**
- **Exceedance Letters:** Action Level exceedance letters are mailed to systems specifying the required actions and allowable time frame.
- **Approvals:**
  - OCCT Recommendations
  - Sample Invalidation Requests
  - Reduced Monitoring Requests
  - Nine Year Waiver Request for Tap Lead & Copper Monitoring
  - Optimal Water Quality Parameter Designation
  - Maximum Permissible Source Water Lead & Copper Levels, if treatment is required
  - Lead Service Line Replacement requirements, if necessary

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