

**Corrosion Control Treatment Recommendations  
Recognized and Deemed Acceptable by the Lead & Copper Rule  
(40 CFR Part 141, Subpart I – Control of Lead and Copper)**

The Lead & Copper Rule is rather prescriptive when it comes to what can be defined as acceptable Corrosion Control Treatment (CCT) recommendations. First, acceptable CCT is described as being systemic; that is, it must treat drinking water corrosivity system-wide. Second, acceptable recommendations are limited to the three (3) options – or some combination thereof – listed in (c) (i), (ii) and (iii) below:

**§ 141.82 Description of corrosion control treatment requirements.**

Each system shall complete the corrosion control treatment requirements described below which are applicable to such system under §141.81.

**(a) System recommendation regarding corrosion control treatment. Based upon the results of lead and copper tap monitoring and water quality parameter monitoring, small and medium-size water systems exceeding the lead or copper action level shall recommend installation of one or more of the corrosion control treatments listed in paragraph (c)(1) of this section which the system believes constitutes optimal corrosion control for that system.** The State may require the system to conduct additional water quality parameter monitoring in accordance with §141.87(b) to assist the State in reviewing the system's recommendation.

*(b) State decision to require studies of corrosion control treatment (applicable to small and medium-size systems).* The State may require any small or medium-size system that exceeds the lead or copper action level to perform corrosion control studies under paragraph (c) of this section to identify optimal corrosion control treatment for the system.

*(c) Performance of corrosion control studies.* (1) Any public water system performing corrosion control studies shall evaluate the effectiveness of each of the following treatments, and, if appropriate, combinations of the following treatments to identify the optimal corrosion control treatment for that system:

**(i) Alkalinity and pH adjustment;**

**(ii) Calcium hardness adjustment; and**

**(iii) The addition of a phosphate or silicate based corrosion inhibitor at a concentration sufficient to maintain an effective residual concentration in all test tap samples.**

The question arises often whether replacing older plumbing and fixtures that have failed lead and/or copper testing with plastic piping and newer “virtually lead-free” fixtures can serve as an acceptable CCT recommendation. Although plumbing and fixture replacement are not recognized in the Rule, under circumstances where water quality parameters indicate that drinking water is not corrosive the Vermont Drinking Water and Groundwater Protection Division may consider plumbing and fixture replacement as a valid CCT recommendation and strategy.

Preventive maintenance procedures like periodic flushing of the distribution system can help avoid lead and copper exceedance, but cannot be accepted as a CCT recommendation without simultaneous replacement of problematic plumbing and/or fixtures or application of at least one of the three strategies referenced previously and included in the Rule.

Because a first-time exceedance for lead or copper at the 90<sup>th</sup> percentile calls only for the submittal of a CCT recommendation and not for installation of approved treatment there is much to be said for analyzing water quality parameters in order to determine which CCT strategy makes the most sense in light of your system's particular design and water chemistry. With this information you can employ targeted fixture replacements in concert with preventative maintenance protocols in order to avoid a second exceedance – which triggers the requirement for installation of approved CCT.

A system that is told it must install CCT is given twenty-four (24) months to do so. If the system is able to avoid exceedance the action level(s) for two (2) consecutive six-month periods the clock is stopped on installment – either terminating or postponing the requirement to install CCT. With a third exceedance the clock is restarted, leaving twelve (12) months for the installation of previously approved CCT.

*For answers to questions regarding the Lead & Copper Rule, please call the Vermont Drinking Water and Groundwater Protection Division at (802) 828-1535.*

This guidance sheet and related environmental information are available electronically via the internet. For information visit us through the Vermont Homepage at <http://dec.vermont.gov/> or visit DWGWPD directly at <http://dec.vermont.gov/water>

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