



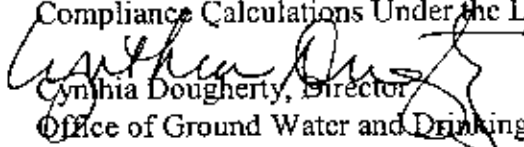
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR - 9 2004

OFFICE OF
WATER

MEMORANDUM

SUBJECT: Compliance Calculations Under the Lead and Copper Rule

FROM: 
Cynthia Dougherty, Director
Office of Ground Water and Drinking Water

TO: Jane Downing, Associate Director for Drinking Water Policy
EPA Region I

Region I asked the Office of Ground Water and Drinking Water to give an opinion on whether a 90th percentile lead level can be calculated even if the minimum required number of samples are not taken by a water system (or by any one or more of a series of consecutive systems where otherwise applicable monitoring requirements have been modified under 40 C.F.R. § 141.29) during a specific monitoring period. Yes, the 90th percentile level can and should still be determined. If the system does not take the required number of samples, it would incur a monitoring and reporting violation. In addition, if the 90th percentile of the samples actually taken is above the action level, then the system would have an exceedance, and would be triggered into further requirements.

The Lead and Copper Rule regulations do not require a minimum number of samples to calculate the 90th percentile. Rather, 40 C.F.R. § 141.80(c)(3) says, "The 90th percentile lead and copper levels shall be computed as follows:

- (i) The results of all lead or copper samples taken during a monitoring period shall be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result shall be assigned a number, ascending by single integers beginning with the number 1 for the sample with the lowest contaminant level. The number assigned to the sample with the highest contaminant level shall be equal to the total number of samples taken.
- (ii) The number of samples taken during the monitoring period shall be multiplied by 0.9.
- (iii) The contaminant concentration in the numbered sample yielded by the calculation in paragraph (c)(3)(ii) is the 90th percentile contaminant level.

The regulations state that the 90th percentile level is calculated based on "all the samples taken during a monitoring period" and do not state a requirement that the minimum required number of

samples must have been collected in order to calculate the 90th percentile level. This makes sense because, otherwise, a water system could conceivably avoid an action level exceedance triggering important public health protection steps, simply by its own failure to take the minimum required number of samples.

The Agency's intent is to prevent any masking of exceedences or violations due to a system's own failure to conduct proper monitoring. For example, to address this issue, language was added to the 2001 Arsenic Rule to clarify compliance calculations for chronic contaminants. This language states that "if a system fails to collect the required number of samples, compliance will be based on the number of samples collected." Although this language is drawn from the Arsenic Rule, the same concept applies to the Lead and Copper Rule and is consistent with the above-quoted language from 40 C.F.R. § 141.80(c)(3).

We recognize, however, that several guidance documents issued by EPA have been written to indicate that the 90th percentile cannot be calculated if less than the minimum number of samples were collected. While this may make sense when applied to the smallest systems that collect only 5 samples per sampling period – since taking fewer than 5 samples could simply be considered so few samples as to constitute an insufficient basis for triggering the required follow-up actions – this concern does not exist for systems that take more than 5 samples. Moreover, the view stated in these guidance documents is simply inconsistent with the language and intent of the regulations, as discussed above, and we intend to rescind any guidance inconsistent with the terms of this memorandum. In the meantime, of course, legal requirements are governed by the terms of the regulations rather than guidance materials and, therefore, a 90th percentile level can be calculated even if the system has collected fewer than the "minimum required number of samples."

I hope this answers your question. If you have other questions, please feel free to contact me or Ron Bergman, Associate Chief of the Drinking Water Protection Branch, at 202-564-3823.