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Environmental Protection Agency

40 CFR Parts 141 and 142

Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper; Proposed Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Parts 141 and 142

[FRL–6001–4]

RIN–2040–AC27

Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper

AGENCY: Environmental Protection Agency.

ACTION: Notice of data availability with request for comments.

SUMMARY: On April 12, 1996, the Environmental Protection Agency (EPA) published proposed minor revisions to the National Primary Drinking Water Regulations (NPDWRS) for Lead and Copper (61 FR 16348). EPA is providing additional information that the Agency is considering for public review and comment. The Agency also is soliciting comment on several additional options that EPA is considering for adoption into the final regulatory revisions.

DATES: Written comments should be postmarked or delivered by hand by June 22, 1998.

ADDRESSES: Send written comments to the Lead and Copper Rule Comment Clerk, Water Docket (MC–4101), Environmental Protection Agency, 401 M Street, SW, Washington, DC 20460. Please submit an original and three copies of your comments and enclosures (including references). If you wish to hand-deliver your comments, please call the Docket at (202) 260–3027 between 9 a.m. and 4 p.m., Monday through Friday, excluding Federal holidays, to obtain the room number for the Docket. Please see Supplementary Information under the heading ''Additional Information for Commenters'' for detailed filing instructions, including electronic submissions.

The record for this rulemaking has been established under docket name National Primary Drinking Water Regulations for Lead and Copper. The record includes supporting documentation as well as printed, paper versions of electronic comments. The record is available for inspection from 9 a.m. to 4 p.m., Monday through Friday, excluding legal holidays at the Water Docket, 401 M Street, SW, Washington, DC 20460. For access to the Docket materials, please call (202) 260–3027 to schedule an appointment.

FOR FURTHER INFORMATION CONTACT: The Safe Drinking Water Hotline, toll free 1–800–426–4791. The Safe Drinking Water Hotline is open Monday through Friday, excluding Federal holidays, from 9 a.m. to 5:30 p.m. Eastern Time. For technical inquiries, contact Judy Lebowich, Standards and Risk Management Division, Office of Ground Water and Drinking Water, EPA (MC–4607), 401 M Street SW, Washington, DC 20460; telephone (202) 260–7595. Please see Supplementary Information under the heading ''Additional Data and Analyses'' for information on obtaining access to the references cited in this Notice at EPA Regional Office locations.

SUPPLEMENTARY INFORMATION:

Regulated Entities

Entities potentially regulated by the Lead and Copper Minor Revisions Rule are public water systems that are classified as either community water systems (CWSs) or non-transient non-community water systems (NTNCWSs). Regulated categories and entities include:

Category	Examples of regulated entities
Industry	Privately-owned CWSs and NTNCWSs.
State, Tribal, and Local Governments.	Publicly-owned CWSs and NTNCWSs.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by the Lead and Copper Minor Revisions Rule. This table lists the types of entities that EPA is now aware could potentially be regulated by the Lead and Copper Minor Revisions Rule. Transient non-community water systems (TNCWSs) may also be regulated by the Lead and Copper Rule in the future depending on EPA's assessment of the data referenced in this notice pertaining to the short-term health effects of lead in drinking water at TNCWSs and the public comments received in response to today's notice. Other types of entities not listed in the table could also be regulated. To determine whether your facility is regulated by the Lead and Copper Minor Revisions Rule, you should carefully examine the applicability criteria in §§ 141.3 and 141.80(a) of title 40 of the Code of Federal Regulations. If you have questions regarding the applicability of the Lead and Copper Minor Revisions Rule to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Additional Information for Commenters

To ensure that EPA can read, understand and therefore properly respond to your comments, the Agency requests that commenters follow the following format: Type or print comments in ink, and cite, where possible, the paragraph(s) in this Notice to which each comment refers. Please use a separate paragraph for each issue discussed and limit your comments to the issues addressed in today's Notice.

If you want EPA to acknowledge receipt of your comments, enclose a self-addressed, stamped envelope. No facsimiles (faxes) will be accepted. Comments also may be submitted electronically to ow-docket@epamail.epa.gov. Electronic comments must be submitted as a WordPerfect 5.1, WordPerfect 6.1, or ASCII file avoiding the use of special characters and forms of encryption and must be transmitted by midnight June 22, 1998. Electronic comments must be identified by the docket name, number, or title of the **Federal Register**. Comments and data also will be accepted on disks in WordPerfect 5.1, WordPerfect 6.1, or ASCII file format. Electronic comments on this notice may be filed online at many Federal Depository Libraries.

List of Abbreviations Used in This Document

(b)(1) system—a small or medium-sized water system that is deemed to have optimized corrosion control pursuant to 40 CFR 141.81(b)(1)

(b)(2) system—a water system that is deemed to have optimized corrosion control pursuant to 40 CFR 141.81(b)(2)

(b)(3) system—a water system that is deemed to have optimized corrosion control pursuant to 40 CFR 141.81(b)(3)

D/DBP—disinfectants and disinfection byproducts

LCR—Lead and Copper Rule

NPDWRs—National Primary Drinking Water Regulations

NTNCWS—non-transient non-community water system

OWQP—value or range for a water quality parameter that has been designated by the State as representing optimal corrosion control

SDWIS—Safe Drinking Water Information System

TNCWS—transient non-community water system

WQP—water quality parameter

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A. Additional Data and Analyses

On April 12, 1996, the Environmental Protection Agency (EPA) published proposed minor revisions to the NPDWRs for Lead and Copper (61 FR 16348). EPA is making available for public review and comment additional data and analyses associated with two of the topics discussed in that proposal: (1) The continued exclusion of TNCWSs from coverage under the LCR; and (2) the requirement for water systems subject to reduced monitoring under the rule to collect tap water samples for lead and copper during the months of June through September.

The new data and analyses are cited below. In addition to being available for review by anyone in the LCR Docket, EPA has a limited number of copies available to provide to requesters. A single set of materials pertaining to each of the above topics may be ordered free-of-charge, while supplies last, by calling the Safe Drinking Water Hotline at 1–800–426–4791 and providing the following document information.

- EPA Publication #EPA 815–B–97–003. December 1997. Information Pertaining to Lead in Drinking Water at Transient Non-Community Water Systems. (This document contains all of the materials cited below under the heading of *Exclusion of TNCWSs.*)
- EPA Publication #EPA 815–B–97–004. December 1997. The Effect of Temperature on Corrosion Control. (This document contains all of the materials cited below under the heading of *Timing of Monitoring for Systems Subject to Reduced Lead and Copper Tap Monitoring.*)

These materials also are available for viewing at the following Regional locations.

I. John F. Kennedy Federal Building, One Congress Street, Boston, MA 02203–001. Contact: Ellie Kwong, Phone: (617) 565-3604.
II. 260 Broadway, New York, NY 10007–1866. Contact: Taj Khan, Phone: (212) 637–3826.
III. 841 Chestnut Building, Philadelphia, PA 19107. Contact: Ed Hotham, Phone: (215) 566–5778.
IV. AFC-Tower 9th Floor, 61 Forsyth Street, SW, Atlanta, GA 30303. Contact: Region 4 Library, Phone: (404) 562–8190.
V. 77 West Jackson Boulevard, Chicago, IL 60604–3507. Contact: Miguel Del Toral, Phone: (312) 886–5253.
VI. Fountain Place, 12th Floor, Suite 1200, 1445 Ross Avenue, Dallas, TX 75202–2733. Contact: Dave Reazin, Phone: (214) 665–7501.
VII. 726 Minnesota Avenue, Kansas City, KS 66101. Contact: Elizabeth Murtagh-Yaw, Phone: (913) 551–7440.
VIII. 999 18th Street Suite 500, Denver, CO 80202–2466. Contact: Marty Swickard, Phone: (303) 312–7021.
IX. 75 Hawthorne Street, San Francisco, CA 94105. Contact: Roger Yates, Phone: (415) 744–1843.
X. 1200 Sixth Avenue, Seattle, WA 98101. Contact: Region 10 Library, Phone: (206) 553–1289.

1. Exclusion of TNCWSs

In the preamble to the April 12, 1996, proposal, EPA indicated that the Agency was in the process of collecting additional data relevant to the exclusion of TNCWSs from coverage under the LCR and that the Agency would make that data available for public review and comment prior to the promulgation of a final rule. EPA is providing the following additional information pertaining to the short-term health effects of lead and the likely occurrence of high levels of lead in drinking water at TNCWSs for public review and comment in fulfillment of that commitment. Based upon review of these documents, which are listed below, the Agency continues to support the position articulated in the proposed minor revisions (61 FR 16349 first column) that the exclusion of this category of public water systems from coverage under the LCR should be maintained. EPA solicits comment on whether the data cited below should alter this position.

Agency for Toxic Substances and Disease Registry (ATSDR), 1992. Toxicological Profile for Lead. U.S. Department of Health and Human Services, Public Health Services, Atlanta, GA. TP-92/12. Pages 9, 65, 66, 98, and 99.
Giridhar, J. and Isom, G.E. 1990. Interaction of Lead Acetate with Atrial Natriuretic Factor in Rats. *Life Science*, 46(8):569–576.
Hindmarsh, J.T. 1986. The Porphyrias: Recent Advances. *Clinical Chemistry*, 32(7):1255–1263.
Karmakar, N., Saxena, R., and Anand, S. 1986. Histopathological Changes Induced in Rat Tissues by Oral Intake of Lead Acetate. *Environmental Research*, 41(1):23–28.
Khan, A.J., Patel, U., Rafeeq, M., Myerson, A., Kumar, K., and Evans, H.E. January 1983. Reversible Acute Renal Failure in Lead Poisoning. *Journal of Pediatrics*, 102(1):147–149.
Nakhoul, F., Kayne, L.E. Brautbar, N., Hu, N., McDonough, A., Eggena, P., Golub, M.S., Berger, M. Chang, C., Jamgotchian, N., and Lee, D.B.N. 1992. Rapid Hypertensinogenic Effect of Lead: Studies in Spontaneously Hypertensive Rat. *Toxicol In. Health*, 8(1–2):89–102.
U.S. Environmental Protection Agency. December 1995. A Survey Study of Lead in Drinking Water Supplied by Transient Water Systems. Prepared by R.P. Maas, S.C. Patch, D.M. Morgan, and G.M. Brown, Environmental Quality Institute, The University of North Carolina at Ashville. Technical Report # 95–019.
U.S. Environmental Protection Agency. March 20, 1996. Note from Jeff Cohen to Judy Lebowich and Connie Bosma entitled: Analysis of UNC-Ashville Survey of Lead at Transient Systems.
U.S. Environmental Protection Agency. November 3, 1997. Effects from Short-Term Lead Exposure. Health and Ecological Criteria Division, Office of Science and Technology, Office of Water.

EPA solicits public comment on these data as well as any additional data relevant to the continued exclusion of transients from coverage under the rule that commenters may wish to submit.

2. Timing of Monitoring for Systems Subject to Reduced Lead and Copper Tap Monitoring.

In the April 12, 1996, notice, EPA proposed a revision to § 141.86(d)(4)(iv) that would allow seasonal NTNCWSs subject to reduced monitoring that do not operate between the months of June and September to collect lead and copper tap water samples during their warmest months of operation. Several commenters suggested that all water systems be allowed greater flexibility in the timing of collection of lead and copper tap water samples on the basis that the ambient outdoor temperature is not the only variable that may significantly affect tap water levels of lead and copper. The Agency agrees that it may be appropriate to provide such flexibility and is providing for public review and comment the following documents which present data and analyses pertaining to the effect of temperature on lead and copper leaching.

Colling, J.H., Croll, B.T., Whincup, P.A.E., and Harward, C. June 1992. Plumbosolvency Effects and Control in Hard Waters. *Journal IWEM*, 6(3):259–268.
Dodrill, D.M., and Edwards, M. July 1995. Corrosion Control on the Basis of Utility Experience. *Journal AWWA*, 74–85.
Edwards, M., Schock, M.R., and Meyer, T.E. March 1996. Alkalinity, pH, and Copper Corrosion By-Products Release. *Journal AWWA*, 81–94.
Rezania, L.W. and Anderl, W.H. 1996. Copper Corrosion and Iron Removal Plants. Conference Paper. Section of Drinking Water Protection, Minnesota Department of Health.
U.S. Environmental Protection Agency. An Evaluation of the Secondary Effects of Enhanced Coagulation, With Emphasis on Corrosion Control. Conference Paper prepared by D.A. Lytle, M.R. Schock, and R.J. Miltner, Treatment and Technology

Evaluation Branch, Water Supply and Water Resources Division, National Risk Management Research Laboratory.

U.S. Environmental Protection Agency. December 19, 1996. Memo from Michael R. Schock, Treatment and Technology Branch, Water Supply and Water Resources Division, National Risk Management Research Laboratory, to Jeffrey B. Kempic of the Office of Ground Water and Drinking Water, entitled: Seasonal Monitoring Revision. (**Note:** References 5, 6, and 7 cited in the memo are not provided for public review and comment. The Agency is not factoring the data contained in these studies into its decision making.)

Wagner, I. June 18–22, 1988. Effects of Inhibitors on Corrosion Rate and Metal Uptake. Proceedings of American Water Works Conference.

In light of the data presented in the documents cited above, the Agency is considering allowing any water system subject to reduced monitoring to collect lead and copper tap water samples during the months of normal operation when lead levels are likely to be the highest, or as otherwise designated by the State, instead of prescribing the specific months during which reduced monitoring may occur. EPA recognizes that it will be difficult in many cases to predict beforehand whether a given water chemistry coupled with physical factors will cause the highest values at a particular time. There may be instances, however, where monitoring data from similar systems or prior monitoring or survey experience at a particular system is available that would suggest when the most appropriate monitoring time(s) will occur. In the absence of such data, the Agency believes it could still be appropriate to provide States and systems flexibility to decide when to schedule sample collection within the monitoring period.

EPA recognizes that water systems already monitoring for lead and copper at the tap on an annual or triennial frequency may feel locked in to collecting samples during the months of June through September in order either to avoid collecting samples sooner than they otherwise would have to or to avoid a monitoring violation for not sampling on time. For example, assume a water system is monitoring triennially and last collected samples during the months of June through September 1997. If it were determined that it would be more appropriate for the system to collect samples during the months of December through March, it might be assumed that the system would need to collect the next round of samples six months early (December 1999 through March 2000) in order to avoid incurring a monitoring violation for not collecting the next round of samples by September 2000.

This assumption, however, is not necessarily accurate. If this option is promulgated, it is not the Agency's intent to force systems already on a reduced monitoring schedule to continue to collect samples during the summer months if some other sample collection time makes more sense. In such cases, EPA believes it may be appropriate to give States the discretion to determine the need for, and timing of, a transitional monitoring period. For example, in the situation described above, the State may determine that it would be better to extend the schedule to March 2001 for that one round of monitoring. Such a decision may be appropriate in those instances where the current monitoring period would end before system could collect samples in the new time frame and the State has determined, based on the system's consistently low tap water lead and copper levels, that extending the one monitoring period is unlikely to result in an increased risk to public health.

EPA solicits public comment on these data, the appropriateness of revising the requirements for the collection of samples under reduced monitoring as discussed above, and whether there is a need for the rule to explicitly provide States the flexibility to establish a transitional monitoring period.

B. Additional Regulatory Options EPA is Considering

The Agency is soliciting public comment on two additional regulatory options being considered in conjunction with requirements pertaining to the maintenance of optimal corrosion control treatment, a new regulatory option regarding notification of residents of buildings served by lead service lines where only a portion of the service line is to be replaced, and two additional regulatory options being considered in conjunction with State reporting requirements. These options are described below.

1. Requirement that Systems Operate Optimal Corrosion Control Treatment

Section 141.80(d) requires all water systems to install and operate optimal corrosion control treatment. The method by which a system demonstrates compliance with this requirement depends on its size and the results of initial monitoring. The four basic pathways are summarized below.

(1) A small or medium-size system may be deemed to have optimized corrosion control if it can demonstrate for two consecutive 6-month monitoring periods that it does not exceed either the lead or the copper action level pursuant to § 141.81(b)(1). This demonstration can be made whether or not treatment is actually physically present. Such systems demonstrate ongoing compliance with the requirement to operate and maintain optimal corrosion control through annual or once-every-three-year (triennial) monitoring for lead and copper at the tap.

(2) A system may demonstrate to the State's satisfaction, pursuant to § 141.81(b)(2), that it has already completed activities equivalent to the rule's corrosion control treatment steps. The State must designate OWQPs for such a system which then demonstrates compliance through routine WQP monitoring.[1]

(3) A system may demonstrate to the State's satisfaction, pursuant to § 141.81(b)(3), that very little corrosion is occurring in the distribution system.[2] In some cases, a system may be deemed to have optimized corrosion control even if no corrosion control treatment is physically present. In other cases, a system may be deemed to have optimized corrosion control if it had previously installed corrosion control treatment prior to conducting initial lead and copper tap monitoring. Currently, such systems are not required to do any routine monitoring; however, EPA proposed on April 12, 1996, to require these (b)(3) systems to monitor for lead and copper at the tap no less frequently than triennially.

(4) A system may complete the corrosion control treatment steps specified in § 141.81(d) for large systems or § 141.81(e) for small and medium-size systems. As a part of this process, the system is required to install the optimal corrosion control treatment designated by the State[3] and to complete two rounds of follow-up monitoring. Unless the system meets the criteria of § 141.81(b)(1) based on the results of the follow-up monitoring, the State then designates OWQPs; the system demonstrates it is maintaining optimal corrosion control through routine monitoring of these WQPs.

While EPA does not require the designation of OWQPs or routine WQP monitoring for (b)(1) systems or for (b)(3) systems, the Agency believes it is essential that the State requires these utilities to implement appropriate process control mechanisms to assure proper and consistent operation of any corrosion control treatment that is in place at the time the system is deemed to be optimized that is or subsequently

[1] Note: EPA proposed on April 12, 1996, to clarify this requirement for routine WQP monitoring.

[2] Section 141.81(b)(3) does not currently include any conditions pertaining to copper. EPA proposed on April 12, 1996, to also require systems to meet the copper action level to be eligible for the a (b)(3) exception of installing optimal corrosion control treatment.

[3] In many cases, ''installation of optimal corrosion control treatment'' will require the physical installation of a new treatment process. In other cases, ''installation'' may be achieved through adjustment to existing treatment process(es) already in place. In a few instances, the State may determine that optimal corrosion control already exists and that no further treatment changes are necessary.

installed. These process control mechanisms may involve some WQP monitoring but, in some instances, may be in the form of daily logs or other information routinely provided to the State (or available to the State upon request). The Agency believes it is more appropriate to give States the flexibility to define the specific process control requirements than to prescribe these requirements in a national regulation, since most States routinely require certain treatment and operational control verifications as a condition of a system's operating permit.

EPA is concerned, however, that a (b)(1) system or a (b)(3) system may misinterpret the absence of specific Federal process control requirements as meaning that it has a license to ''turn off,'' or depart from, optimal corrosion control treatment in the absence of required monitoring under the LCR. EPA therefore is considering wording changes to the introductory paragraph of § 141.81(b) and to § 141.82(g) to clarify that all water systems are required to operate and maintain optimal corrosion control even if there are no specific Federal requirements for the system to monitor for WQPs.

Currently, the introductory paragraph of § 141.81(b) reads:

A system is deemed to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in this section if the system satisfies one of the following criteria: * * *

EPA is considering revising it to read as follows:

A system is deemed to have optimized corrosion control and is not required to complete the applicable corrosion control treatment steps identified in this section if the system satisfies one of the criteria specified in paragraphs (b)(1) through (b)(3) of this section. All systems deemed to have optimized corrosion control under this paragraph shall continue to operate and maintain any optimal corrosion control treatment in place at the time the system is deemed to have optimized corrosion control and any requirements that the State determines appropriate to ensure such treatment is maintained.

The first sentence of § 141.82(g) currently reads:

All systems shall maintain water quality parameter values at or above minimum values or within ranges designated by the State under paragraph (f) of this section in each sample collected under § 141.87(d).

It would be revised to read as follows:

All systems optimizing corrosion control under this subpart shall continue to operate and maintain any such treatment, including maintaining water quality parameters at or above minimum values or within ranges designated by the State under paragraph (f) of this section, in each sample collected under § 141.87(d).

These wording revisions do not add any new requirements; rather they clarify EPA's original intent that systems deemed to have optimized corrosion control continue to maintain any treatment in place to ensure that lead and copper levels remain minimal. The Agency does not believe there will be any change in regulatory burden as a result of this clarification.

EPA solicits public comment on this clarification.

2. Monitoring for WQPs After the Installation of Corrosion Control Treatment

Water systems subject to routine WQP monitoring requirements must collect WQP samples at each entry point to the distribution system once every two weeks (biweekly). Although EPA did not request public comment on the issue of compliance with OWQPs, several commenters expressed concern that the current approach for determining water system compliance with OWQPs could trigger inappropriate violations and recommended that EPA change the approach. After reviewing these comments, EPA is considering a regulatory change to modify the definition of what constitutes a WQP violation.

Under the current regulation, any system that has an excursion from the State-designated OWQP range is allowed to take a confirmation sample within three days. Section 141.82(g) defines an OWQP violation as follows:

* * * If the water quality parameter value of any sample is below the minimum value or outside the range designated by the State, then the system is out of compliance with this paragraph. As specified in § 141.87(d), the system may take a confirmation sample for any water quality parameter value no later than 3 days after the first sample. If a confirmation sample is taken, the result must be averaged with the first sampling result and the average must be used for any compliance determinations under this paragraph. States have discretion to delete results of obvious sampling errors from this calculation.

Some systems, especially large surface water systems, conduct WQP monitoring more frequently than required by the LCR in order to maintain effective process control. Because § 141.87(f) requires that these ''diagnostic'' monitoring results also be considered, § 141.87(f) can complicate OWQP compliance determinations. Section 141.87(f) reads as follows:

Additional monitoring by systems. The results of any monitoring conducted in addition to the minimum requirements of this section shall be considered by the system and the State in making any determinations (i.e., determining concentrations of water quality parameters) under this section or § 141.82.

Since § 141.82 describes OWQP compliance, any ''diagnostic'' monitoring results also must be factored into the compliance determination.

The current regulatory language requires that even a minor excursion from the State-designated OWQPs be identified as a violation, even when it may not reflect a problem in the operation of treatment or be of any public health concern. Rather than assigning a violation to a situation which may not be a public health concern, EPA is considering modifying the confirmation sample approach in the existing rule by eliminating the language in §§ 141.82(g) and 141.87(d) on confirmation samples and replacing it with a provision allowing a repeat sample that would need to be taken within three days. Instead of basing compliance on the average of the original and confirmation samples, compliance would be determined based solely on the results of the repeat sample, if one is collected, or on the results of the first sample if a repeat sample is not collected. This would preclude an attempt by a system to overcompensate with a treatment correction (that might adversely impact other treatment processes) just to ensure that the average of the two samples would be within an acceptable range.

The revised regulatory provisions EPA is considering also provide better process control than the current regulation. EPA is concerned that the averaging approach in the current rule could allow systems that are not adequately controlling some WQPs to remain in compliance. The following example illustrates the concern. A State sets a WQP pH range of 7.3–7.8 for a system that uses a caustic feed pump at the wellhead or at the end of a water plant feeding into the system. If the pump is not well controlled, it is possible that the pH can be 6.9 one day and 8.4 three days later when the confirmation sample is taken. Under the procedure in the current rule, the average (7.65) is within the range, but adequate process control is not being maintained. Variability in pH values can commonly occur with lime feed treatment at many small and some medium-sized treatment plants. The goal of OWQP monitoring is to ensure good process control. The current approach, however, has the potential to reward poor process control, as seen in this example.

Under the new option EPA is considering, the third and fourth sentences in § 141.82(g) would be revised to read as follows:

As specified in § 141.87(d), the system may take a repeat sample for any water quality parameter value no later than 3 days after the first sample. If a repeat sample is taken, compliance determination under this paragraph will be based solely on the results of the repeat sample; if a repeat sample is not taken, compliance determination under this paragraph will be based on the results of the first sample.

The third and fourth sentences in § 141.87(d) would be revised to read as follows:

The system may take a repeat sample for any water quality parameter value no later than 3 days after the first sample. If a repeat sample is taken, any compliance determination under § 141.82(g) must be based solely on the results of the repeat sample; if a repeat sample is not taken, the result of the first sample must be used for an compliance determination under § 141.82(g).

This approach parallels the repeat sampling approach in the Total Coliform Rule and is one of the reasons for changing the terminology from ''confirmation samples'' to ''repeat samples.'' Another reason for changing the terminology is to avoid confusion with confirmation samples under the NPDWRs for organic and inorganic chemicals where averaging of results is still required.

EPA does not believe that it is necessary to change § 141.87(f) as a part of this option. That is, systems and States would continue to be required to factor the results of any monitoring conducted in addition to the minimum requirements of § 141.87 into the compliance determination.

There is no increase in burden to implement this option since both the current rule and this option allow a second sample to be taken. This option would only change how the results from the second sample are used to determine compliance.

EPA solicits public comment on this new approach.

3. Notification of Residents of Buildings Served by Partially-Replaced Lead Service Lines

In the April 12, 1996, notice, EPA proposed changes to the rule's lead service line replacement requirements at § 141.84(d). While some provisions within § 141.84(d) pertaining to partial lead service line replacement were proposed to be changed, no revision was proposed to the notification requirements associated with partial lead service line replacement. As proposed, § 141.84(d) contains the following requirements:

* * * In cases where the system does not replace the entire lead service line, the system shall notify the user served by the line that the system will replace the portion of the service line [that is under the system's control] and shall offer to replace the building owner's portion of the line, but is not required to bear the cost of replacing the building owner's portion of the line. For buildings where only a portion of the lead service line is replaced, the water system shall inform the resident(s) that the system will collect a first flush tap water sample after partial replacement of the service line is completed if the resident(s) so desire. In cases where the resident(s) accept the offer, the system shall collect the sample and report the results to the resident(s) within 14 days following partial lead service line replacement.

Upon further consideration, EPA believes that this language is somewhat ambiguous as to who is to be notified in those instances where the property owner and the resident are not the same (e.g., apartment buildings). The Agency also believes the requirement to take a follow-up sample upon resident request could place an undue burden on the water system in those instances where a line serves a large multifamily residence because the system could be required to take numerous follow-up samples. EPA does not believe that a large number of samples is required to determine the immediate effect of the partial replacement. Finally, EPA is concerned that the time frame specified for the sample collection and reporting of the results may not provide an adequate level of public health protection.

In order to address these concerns, EPA is considering the following revision to § 141.84(d).

(1) Replacing the word ''user'' in the first sentence of the requirement cited above with the word ''owner'' to clarify that the offer to replace the privately-owned portion of the line should be made to the property owner.

(2) Adding a requirement that the water system provide a notice to the resident(s) of the building(s) served by the line at least 45 days before commencing with partial lead service line replacement. The purpose of such notice would be to inform the actual consumer(s) of the tap water affected by the lead service line that they may experience a temporary increase of lead levels in their drinking water due to material disturbances in the construction process and to provide them with guidance about the measures they can take to minimize their exposure to lead. The Agency feels that 45 days is a sufficient amount of time for the recipients to study the guidance provided by the water supplier, to familiarize themselves with the potential ramifications associated with the partial lead service line replacement, and to plan and implement appropriate measures to avoid exposure to lead.

(3) Replacing the requirement for a resident-requested follow-up sample within 14 days of completing the partial replacement with the following requirement:

* * * The water system shall inform the resident(s) that the system will collect one tap water sample representative of the water in the service line for analysis of lead content as prescribed under § 141.86(b)(3) within 24 hours after the completion of the partial replacement of the service line. The system shall collect the sample and report the results of the analysis to the owner and the resident(s) served by the line within three days of receiving the results.

The Agency feels that the affected parties should be provided with the test results as quickly as possible so they can implement appropriate measures commensurate with the findings as soon as they can to minimize their exposure. In addition, unnecessary expenses and further concerns will be alleviated in those instances where the analytical results indicate no increase in lead levels resulting from the partial replacement.

(4) Adding the following provision to provide for some flexibility in the method of delivery of the required notification(s):

The water system shall provide the required information to the residents of individual dwellings by mail or by other methods approved by the State. In instances where multifamily dwellings are served by the line, the water supplier shall have the option to post the information at a conspicuous location.

In order to facilitate State determination of compliance with the requirement to collect a follow-up sample after partial replacement of a lead service line, EPA believes it is appropriate that the results from the follow-up sample also be reported to the State, in addition to being maintained in the system's files as required by § 141.91. The Agency does not believe that it is essential that the results be provided to the State within three days of receiving the results, however. Instead, EPA is considering an option that would require the water system to provide the results to the State within the first ten days of the month following the month in which the system receives the results. In this way, the reporting of the results to the State can be combined with other regularly submitted data to

the State so that any increased burden associated with this additional system reporting requirement is kept to a minimum. If the Agency decides to add this reporting requirement, it will be codified as a new § 141.90(e)(4).[4]

EPA requests public comment on the above provisions pertaining to notification associated with partial lead service line replacement, including comments on potential burden implications.

4. State Reporting Requirements

EPA is considering and requests public comment on the following two revisions affecting State reporting of data to EPA.

(a) Clarify the Manner of Reporting

Paragraphs (a) and (b) of § 142.15 explicitly provide authority to the Administrator of EPA to specify the format of reporting for violation, follow-up actions, and inventory data. Section 142.15(c)(4), which defines 90th percentile and milestone reporting for the LCR, is silent concerning the format of that reporting. As a result, some States have questioned whether EPA has the authority to require that the LCR 90th percentile and milestone data be reported in a prescribed format. EPA requests public comment on whether the Agency should clarify in the introductory text of § 142.15(c)(4), that ''States shall report to EPA by * * *, in a format prescribed by the Administrator, the following information * * *.''

(b) Data to be Reported

In light of the comments received on State reporting requirements and careful internal deliberations, EPA is considering restructuring the State reporting requirements for the LCR. EPA has been guided by several principles during these deliberations and has sought to achieve a balance between the information required to oversee rule implementation and the need to reduce the reporting burden to the maximum extent possible without jeopardizing public health or protection of the environment. EPA is considering an option that would reduce the number of milestones that States would be required to report to the Agency. This option would in no way change the information the States are required to keep in State files or data systems—only the information which would be reported on a regular basis to EPA. A more complete explanation of EPA's rationale and guiding principles follows.

First, implementation of the LCR is, and will remain, a high priority for the EPA due to the significant health effects of lead, especially on children. The State reporting requirements reflect this priority in that they go beyond requirements for other drinking water regulations (that is, beyond reporting violation and follow-up actions to the Agency). In addition, as noted above, the State record keeping requirements would not be changed by this revision. EPA expects States to maintain the required information in their files. EPA intends to periodically audit these files as part of its review of State performance. EPA may ask States in the future to provide the Agency additional detailed information on implementation of the LCR, for example, a one-time report on systems for which the State has designated OWQPs or maximum permissible source water levels. EPA believes that this approach will be less burdensome overall to the States, yet will provide the Agency the information it needs to oversee implementation of this priority rule.

Second, EPA has sought to simplify the reporting requirements. The LCR is one of the most complex drinking water regulations. The rule's implementation period may be as long as 25 years from the time the Agency promulgated the rule for systems which are triggered into lead service line replacement requirements. Compliance with many key treatment technique requirements is based on the system meeting prescribed milestones, with several years potentially elapsing between milestones. Moreover, States have significant discretion in the determination of system-specific requirements such as what constitutes optimal corrosion control. Finally, a system may be in compliance with the rule's requirements, yet still have high levels of lead or copper at the tap.

As a result of these complexities, EPA imposed State reporting requirements that were intended to provide information on compliance with all of the interim milestones in order to oversee rule implementation, to respond to inquiries from the public and others, and to target compliance assistance and enforcement efforts. EPA believes these activities still must be accomplished for this priority rule, however, the Agency is seeking to simplify the State reporting requirements, while retaining sufficient information in the national data base to provide a degree of oversight and to answer some basic questions. Some have suggested that EPA eliminate all milestone reporting. EPA disagrees with the appropriateness of doing so. Due primarily to the structure and requirements of the rule, EPA believes strongly that the Agency continues to need more information about the status of LCR implementation than can be derived simply from violation and follow-up action data.

Therefore, EPA is considering an option that would eliminate the requirement for States to report completion of several of the interim milestones but would provide better information than the currently required milestone reporting for a few key activities. Under this new option, States would be required to report the following key elements.

(1) The 90th percentile lead values for all PWSs that exceed the lead action level, the 90th percentile lead values (even where the lead action level is not exceeded) for all large and medium-size systems, and the 90th percentile copper values for all PWSs that exceed the copper action level. Note that it is a data sharing ''goal'' for States to provide the 90th percentile lead values below the action level for small systems as well. EPA is not planning to require reporting of these values at this time due to the burden of reporting that data for the very large number of small systems.

(2) A ''deemed'' milestone indicating that the system has optimized corrosion control along with an indication of the basis upon which that determination was made (e.g., the system is deemed to be optimized pursuant to § 141,81 (b)(1), (b)(2), or (b)(3), the system is optimized as a result of installing corrosion control treatment, or the system is optimized on the basis of adjusting existing treatment).

(3) Systems required to replace lead service lines.

(4) A ''done'' milestone that indicates that the system has completed all applicable corrosion control, source water treatment and lead service line replacement requirements. Note that for many systems it may be possible to report this milestone at the same time as the ''deemed'' milestone.

This information, along with the quarterly violation and follow-up information, will provide EPA data on the status of rule implementation and will allow targeting of compliance and enforcement activities based on the violations which are reported. As noted above, additional information may be obtained through audits of State files or, if the need arises, through special one-time reports.

Given the deletion of many of the milestone reporting requirements, it will be critical that States report this more limited set of information completely and in a timely manner. EPA will be following up with States to ensure that this is occurring.

Table 1 compares the current State reporting requirements, the revisions

[4] On April 12, 1996, EPA proposed to delete the existing § 141.90(e)(4) since it would no longer be relevant if the rule is revised to remove the rebutable presumption that the water system controls the entire length of the service line.

proposed on April 12, 1996, and the new option EPA is considering. The table also provides a brief explanation of the Agency's rationale for the new option.

TABLE 1.—COMPARISON OF OPTIONS UNDER CONSIDERATION FOR STATE REPORTING REQUIREMENTS UNDER THE LEAD AND COPPER RULE

Requirement	Current requirement	4/12/96 proposal	New option	Rationale
Frequency of reporting for milestone & exceedance data.	Quarterly	Requested comment on reducing the frequency to semi-annual or annual but did not propose any changes.	Retain quarterly reporting.	90th percentile data used as part of determining significant non-compliers (SNC) which needs to be done quarterly to ensure timely & appropriate follow-up action.
90th percentile lead values.	Required for all lead action level (AL) exceedances; requested via guidance for all large/medium systems <= lead AL and for any small system that has exceeded the lead AL at some time in the past.	Require for all lead AL exceedances and for large/medium systems <= lead AL.	Require as proposed; make reporting of values <= lead AL for small systems a data sharing goal.	Used in calculation of SNC for some violations; needed to support environmental indicators and to demonstrate effectiveness of corrosion control treatment; data frequently requested by the public.
90th percentile copper values.	Required for all copper AL exceedances.	Retain current requirement.	Retain current requirement make reporting of values <= copper AL a data sharing goal.	Needed to support environmental indicators and to provide national view of occurrences of high copper levels at the tap.
Systems required to conduct corrosion control study [CCSR].	Required	Eliminate	Eliminate	See Note 1.
Systems that have completed corrosion control study [CCSC].	Required	Eliminate	Eliminate	See Note 2.
State designation of optimal corrosion control treatment (OCCT) to be installed [OTDE].	Required	Retain	Eliminate	See Note 1.
State designation of source water treatment (SOWT) to be installed [STDE].	Required	Retain	Eliminate	See Note 1.
Systems that have installed OCCT [OTIN].	Required	Eliminate	Redefine to indicate that system is optimized and the basis for considering it optimized. Require reporting for all systems.	Even though States are required to report a violation if the system fails to install the corrosion control treatment designated by the State, this milestone provides fundamental information on status of LCR implementation. In addition to indicating that system has installed corrosion control treatment, where required, it provides data on the basis by which other systems are considered to be optimized. This information is not readily available through other mechanisms.
Systems that have installed source water treatment [SOWT].	Required	Retain	Eliminate	See Note 2. If EPA needs to know how many systems installed source water treatment specifically to meet LCR requirements, this information could be requested through a one-time report.
Systems for which State has designated water quality (WQP) ranges [WQPS].	Required	Retain	Eliminate	See Note 1.

TABLE 1.—COMPARISON OF OPTIONS UNDER CONSIDERATION FOR STATE REPORTING REQUIREMENTS UNDER THE LEAD AND COPPER RULE—Continued

Requirement	Current requirement	4/12/96 proposal	New option	Rationale
Systems for which State has designated maximum permissible source water levels (MPLs) [MPLS].	Required	Eliminate	Eliminate	See Note 1.
Systems required to replace lead service lines [LSLR].	Required. Must also report any accelerated lead service line replacement schedule and annual compliance.	Revise to eliminate information about accelerated schedule and annual compliance.	Revise to eliminate information about accelerated schedule and annual compliance.	Basic milestone provides fundamental information about LCR implementation status. Without this milestone, there is no other way to readily determine which systems are required to do lead service line replacement. If system fails to meet an accelerated replacement schedule, the State is required to report a violation. If EPA needs to know that a system in violation of the lead service line replacement requirement is on an accelerated schedule, this information can be provided by the State on a case-specific basis. Data about annual compliance also redundant reporting since violation reporting required for systems failing to meet this milestone.
Systems that have completed all CCT, SOWT, and LSLR requirements.	None	None	Add Require reporting for all systems.	Provides fundamental information on status of LCR implementation.
WQP ranges designated by State as representing optimal corrosion control.	None	Comments requested but no requirement proposed.	Do not require	Ranges by themselves not meaningful unless also have significant other system-specific data.
MPLs designated by State as meeting source water treatment objectives.	None	Comments requested but no requirement proposed.	Do not require	Levels by themselves not meaningful unless also have significant other system-specific data.

NOTES:

1. State determination/decision. EPA need for this milestone is to ensure that States are making timely decisions; this need can be met through other mechanisms such as program evaluations and periodic data verifications, etc. As defined, there is no way to accurately interpret what the absence of a milestone means. (It could mean any one of the following: (a) the State did not make a determination/decision whether or not to require the activity; (b) the State made a determination/decision that the system is not required to perform the activity; or (c) the State made a determination/decision that the system is required to perform the activity but the State did not report this determination/decision to EPA.) Redefining the milestone and requiring it to be reported to EPA for every system that exceeds an AL adds unnecessary burden.

2. Redundant reporting since States are required to report a violation if the system fails to meet the milestone.

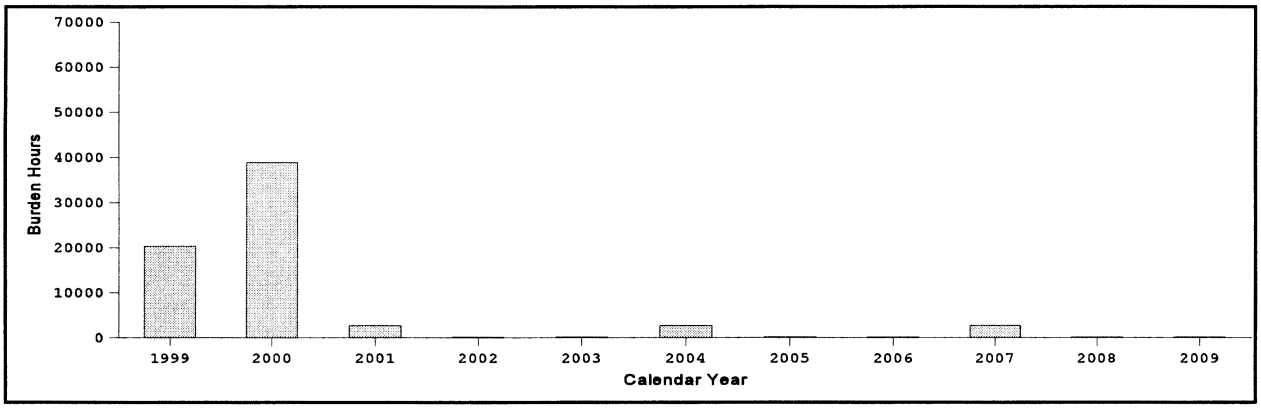
Under this new option, the reporting of the ''deemed'' and ''done'' milestones would be required for every system, including those that have achieved the milestone prior to the effective date of the revised State reporting requirements. EPA also recognizes that States may need time to adapt their internal data management systems to facilitate reporting under this new option. For these reasons, EPA plans to allow States at least 18 months from the date of promulgation of the LCR Minor Revisions Rule to submit data in accordance with the revised State reporting requirements. At the end of this transition period, however, EPA would expect all States to have submitted the ''deemed'' and ''done'' milestones for all systems which have completed the milestone(s).

Figure 1 shows the estimated change in national annual burden hours for the years 1999 through 2009[5] if this new option is implemented. The estimated additional burden in 1999 and 2000 is due primarily to the requirement to report the ''deemed'' and ''done'' milestones for all systems.[6] EPA estimates that States will need to report the ''deemed'' milestone for all systems and the ''done'' milestone for all systems except those triggered into lead service line replacement by the end of the 18-month transition period. The slight increases estimated for the years 2001, 2004, and 2007 are due to the reporting of all 90th percentile lead values for large and medium-size systems.

[5] 1998 through 2009 represents the remaining time in the original 18-year planning window for which burden/costs were estimated when the LCR was promulgated in 1991.

[6] Consistent with Agency policy, burden estimates are derived using a static inventory. Therefore, the estimates do not include any burden for new systems that might come into existence after the promulgation of the rule. The Agency also has used simplifying assumptions that all systems are in compliance with the rule's deadlines and that action level exceedances occurred during the first round of initial monitoring.

Figure 1
Estimated Annual National Change in State Burden
Associated with New State Reporting Requirements Option



NOTE: Slight increases of < 300 hour/year occur in 2000, 2002, 2003, 2005, 2006, 2008, and 2009.

EPA believes this new State reporting requirement option will significantly improve the Agency's ability to assess program progress toward the Rule's goals and, at the same time, minimize the necessity of requesting additional clarifying information from the States on a large number of systems on an ad hoc, quick turnaround, basis. EPA plans to use these data to demonstrate progress toward reducing the levels of lead and copper at the tap in several ways. In addition to computing compliance statistics, the Agency plans to utilize 90th percentile data for large and medium-size systems to characterize overall national changes in the levels of lead at the tap since these systems serve approximately 90% of the population that receives their drinking water from public water systems. Under the existing regulation, States are not required to report 90th percentile lead levels unless the system exceeds 0.015 mg/L. The Agency therefore cannot assess changes in 90th percentile levels below this level. The remaining milestones to be reported under this new option also will provide EPA a much better capability to reflect a system's actual implementation status.

Some of the milestones that EPA would eliminate from the State reporting requirements under the new option pertain to State decision-making. Under current reporting requirements, States report to EPA only when they determine that a system must complete certain actions, for example, install new treatment. The absence of a milestone does not necessarily imply that a State has failed to make a timely and appropriate determination, however, since there is no way to reflect the fact that the State determined that no treatment is needed. Rather than impose the significant burden of reporting each State decision for every system, the Agency plans to use other tools such as performance agreements, periodic program audits, and data verifications to ensure that States are meeting their primacy requirements satisfactorily. The explicit reporting of State-determination milestones to EPA would not eliminate the need for these tools, since they are needed if EPA and the public are to have confidence in the integrity of the data in the national data base. EPA believes that the benefits described above justify the added reporting burden.

EPA solicits comments on this new option, including the adequacy of the information that would be required to be reported on a routine basis. EPA requests that commenters who believe the information to be reported under this option is not adequate specify the additional information EPA should seek to obtain, how often, and in what manner (e.g., quarterly reports to the national data base, special one-time reports, etc.) EPA also solicits comments on the possibility of requiring a separate report or reports, by a date or dates certain, on certain milestones, for example, those systems for which the State has designated OWQPs or maximum permissible source water levels. EPA is especially looking for comments on the usefulness of such information as well as the burden of providing the information to EPA. Finally, for the ''Done'' milestone, EPA requests comment on whether the Agency should require reporting for all systems or only for those systems that continue to exceed an action level after optimizing corrosion control.

While the preceding discussion describes EPA's current thinking concerning State reporting requirements, the Agency will carefully review all comments on this notice as well as prior comments on the proposed rulemaking in formulating the requirements contained in the final rulemaking.

C. Simultaneous Compliance Considerations: D/DBP Stage 1 Enhanced Coagulation Requirements and the LCR

On November 3, 1997, EPA published a Notice of Data Availability pertaining to the proposed rule for NPDWRs for Disinfectants and Disinfection Byproducts (62 FR 59388). In response to that Notice, the Agency received comments that express concern regarding utilities' ability to comply with the Stage 1 D/DBP enhanced coagulation requirements and LCR requirements simultaneously. Commenters stated that enhanced coagulation will lower the pH and alkalinity of the water during treatment. They indicated concern that the lower pH and alkalinity levels may place utilities in noncompliance with the LCR by causing violations of OWQPs and/or an exceedence of the lead or copper action levels. EPA is not aware of data that suggests that low pH and alkalinity levels cannot be adjusted upward

following enhanced coagulation to meet LCR compliance requirements. However, as discussed below, the Agency solicits further comment and data on this issue.

The LCR separates public water systems into three categories: large (> 50,000), medium-size (≤ 50,000 but > 3,300) and small (< 3,300). Small and medium-size systems that do not exceed the lead and copper action levels for two consecutive six-month monitoring periods are deemed to have optimized corrosion control. These systems do not have to operate under OWQPs. Optimal water quality control parameters consist of pH, alkalinity, calcium concentration, and phosphate and silicate corrosion inhibitors. They are designated by the State. Small and medium-size systems that continue to exceed an action level after installation of corrosion control treatment must operate under State-specified OWQPs. Large systems must operate under OWQPs specified by the State unless they are deemed to have optimized corrosion control pursuant to § 141.81(b)(3).

Maintenance of each OWQP mentioned above (except for calcium concentration) is directly related to meeting specified pH and alkalinity levels at the entry point to the distribution system and in tap samples to establish LCR compliance. In treatment trains that EPA is aware of, utilities have the technological capability to raise the pH (by adding caustic—NaOH, $Ca(OH)_2$) and alkalinity (by adding Na_2CO3 or $NaHCO_3$) of the water following enhanced coagulation and before it enters the distribution system. Although certain utilities may need to add chemical feed points to provide chemical adjustment, pH and alkalinity can be maintained at the values used prior to the implementation of enhanced coagulation. Systems that operate with pH and alkalinity OWQPs should be able to meet the State-prescribed values by providing pH and alkalinity adjustment prior to entry to the distribution system. Systems that operate without pH and alkalinity OWQPs can raise the pH and alkalinity to the levels they were at before enhanced coagulation by providing chemical adjustment prior to distribution system entry.

The goal of calcium carbonate stabilization is to precipitate a layer of $CaCO_3$ scale on the pipe wall to protect it from corrosion. As the pH of a water decreases, the concentration of bicarbonate increases and the concentration of carbonate, which combines with calcium to form the desired $CaCO_3$, decreases. At the lower pH used during enhanced coagulation, it will generally be more difficult to form calcium carbonate. However, post-coagulation pH adjustment will increase the pH and hence the concentration of carbonate available to form calcium carbonate scale. Systems that must meet a specific calcium concentration to remain in compliance with OWQPs should not experience an increase in LCR violations due to the practice of enhanced coagulation provided the pH is adjusted prior to distribution system entry and the calcium level in the water prior to and after implementation of enhanced coagulation remains the same.

EPA recognizes that the inorganic composition of the water may change slightly due to enhanced coagulation. For example, small amounts of anions and compounds that can affect corrosion rates (Cl, SO_4^{-2}) may be removed or added to the water. The effect of these constituents is difficult to predict, but EPA believes they should be minimal for the great majority of systems due to the generally modest changes in the water's inorganic composition and because alkalinity and pH levels have a greater influence on corrosion rates. Increases in sulfate concentration due to increased alum addition during enhanced coagulation can actually lower the corrosion rates of lead pipe. EPA requests comment on whether changes in the inorganic matrix can be quantified to allow States to easily assess potential impacts to corrosion control.

EPA requests comment on how lowering the pH and alkalinity during enhanced coagulation may cause LCR compliance problems, given that both pH and alkalinity levels can be adjusted to meet OWQPs prior to entry to the distribution system. EPA also requests comment on whether decreasing the pH and alkalinity during enhanced coagulation, and then increasing it prior to distribution system entry, may increase exceedences of lead and copper action levels.

EPA is currently developing a simultaneous compliance guidance document working with stakeholders. The document will provide guidance to States and systems on maintaining compliance with other regulatory requirements (including the LCR) during and after the implementation of the Stage 1 D/DBP rule and the Interim Enhanced Surface Water Treatment Rule. EPA requests comment on what issues should be addressed in the guidance to mitigate concerns about simultaneous compliance with enhanced coagulation and LCR requirements. Further, the Agency requests comment on whether the proposed enhanced coagulation requirements and the existing LCR provisions that allow adjustment of corrosion control plans are flexible enough to address simultaneous compliance issues. Is additional regulatory language necessary to address this issue, or is guidance sufficient to mitigate potential compliance problems?

List of Subjects

40 CFR Part 141

Environmental protection, Chemicals, Indians-lands Intergovernmental relations, Reporting and recordkeeping requirements, Water supply.

40 CFR Part 142

Administrative practice and procedure, Chemicals, Indians-lands, Reporting and recordkeeping requirements, Water supply.

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Dana D. Minerva,

Acting Assistant Administrator.

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