

§ 141.86

monitoring periods or when all customer-side lead or galvanized requiring replacement service line owners refuse to participate in the lead service line replacement program. For purposes of this paragraph (h)(3), a refusal includes a signed statement by the customer refusing lead service line replacement, or documentation by the water system of a verbal refusal or of no response after two good faith attempts to reach the customer.

(i) *Public education to local and State health agencies—(1) Find-and-fix results.* All community water systems must provide information to local and State health agencies about find-and-fix activities conducted in accordance with §141.82(j) including the location of the tap sample site that exceeded 15 µg/L, the result of the initial tap sample, the result of the follow up tap sample, the result of water quality parameter monitoring, and any distribution system management actions or corrosion control treatment adjustments made.

(2) *Timing and content.* Community water systems must annually send copies of the public education materials provided under paragraph (a) of this section, and of paragraph (h)(1) of this section for actions conducted in the previous calendar year no later than July 1 of the following year.

(3) *Delivery.* Community water systems shall send public education materials and find-and-fix information to local and State health agencies by mail or by another method approved by the State.

(j) *Public education requirements for small water system compliance flexibility POU devices—(1) Content.* All small community water systems and non-transient non-community water systems that elect to implement POU devices under §141.93 must provide public education materials to inform users how to properly use POU devices to maximize the units' effectiveness in reducing lead levels in drinking water.

(2) *Timing.* Water systems shall provide the public education materials at the time of POU device delivery.

(3) *Delivery.* Water systems shall provide the public education materials in person, by mail, or by another method approved by the State, to persons at lo-

40 CFR Ch. I (7–1–23 Edition)

cations where the system has delivered POU devices.

[72 FR 57815, Oct. 10, 2007, as amended at 86 FR 4294, Jan. 15, 2021]

§ 141.86 Monitoring requirements for lead and copper in tap water.

(a) *Sample site location.* (1) By the applicable date for commencement of monitoring under paragraph (d)(1) of this section, each water system shall identify a pool of targeted sampling sites based on the service line inventory conducted in accordance with §141.84(a), that meet the requirements of this section, and which is sufficiently large enough to ensure that the water system can collect the number of lead and copper tap samples required in paragraph (c) of this section. Sampling sites may not include sites with installed point-of-entry (POE) treatment devices and taps used at sampling sites may not have point-of-use (POU) devices designed to remove inorganic contaminants, except for water systems monitoring under §141.93(a)(3)(iv) and water systems using these devices for the primary drinking water tap to meet other primary and secondary drinking water standards and all service connections have POEs or POU devices to provide localized treatment for compliance with the other drinking water standards. Lead and copper sampling results for systems monitoring under §141.93(a)(3)(iv) may not be used for the purposes of meeting the criteria for reduced monitoring specified in paragraph (d)(4) of this section.

(2) A water system must use the information on lead, copper, and galvanized iron or steel that is required to be identified under § 141.42(d) when conducting a materials evaluation and the information on lead service lines that is required to be collected under §141.84(a) to identify potential lead service line sampling sites.

(3) The sampling sites for a community water system's sampling pool must consist of single-family structures that are served by a lead service line ("Tier 1 sampling sites"). When multiple-family residences comprise at least 20 percent of the structures served by the water system, the system may include these types of structures in its Tier 1 sampling pool, if served by

Environmental Protection Agency

§ 141.86

a lead service line. Sites with lead status unknown service lines must not be used as Tier 1 sampling sites.

(4) A community water system with insufficient Tier 1 sampling sites must complete its sampling pool with "Tier 2 sampling sites," consisting of buildings, including multiple-family residences that are served by a lead service line. Sites with lead status unknown service lines must not be used as Tier 2 sampling sites.

(5) A community water system with insufficient Tier 1 and Tier 2 sampling sites must complete its sampling pool with "Tier 3 sampling sites," consisting of single-family structures that contain galvanized lines identified as being downstream of a lead service line (LSL) currently or in the past, or known to be downstream of a lead gooseneck, pigtail or connector. Sites with lead status unknown service lines must not be used as Tier 3 sampling sites.

(6) A community water system with insufficient Tier 1, Tier 2, and Tier 3 sampling sites must complete its sampling pool with "Tier 4 sampling sites," consisting of single-family structures that contain copper pipes with lead solder installed before the effective date of the State's applicable lead ban. Sites with lead status unknown service lines must not be used as Tier 4 sampling sites.

(7) A community water system with insufficient Tier 1, Tier 2, Tier 3, and Tier 4 sampling sites must complete its sampling pool with "Tier 5 sampling sites," consisting of single-family structures or buildings, including multiple family residences that are representative of sites throughout the distribution system. For the purpose of this paragraph (a)(7), a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system. Water systems may use non-residential buildings that are representative of sites throughout the distribution system if and only if there are an insufficient number of single-family or multiple family residential Tier 5 sites available.

(8) The sampling sites selected for a non-transient non-community water system must consist of sites that are

served by a lead service line ("Tier 1 sampling sites"). Sites with lead status unknown service lines must not be used as Tier 1 sampling sites.

(9) A non-transient non-community water system with insufficient Tier 1 sites complete its sampling pool with "Tier 3 sampling sites," consisting of sampling sites that contain galvanized lines identified as being downstream of an LSL currently or in the past, or known to be downstream of a lead gooseneck, pigtail, or connector. Sites with lead status unknown service lines must not be used as Tier 3 sampling sites.

(10) A non-transient non-community water system with insufficient Tier 1 and Tier 3 sampling sites must complete its sampling pool with "Tier 5 sampling sites," consisting of sampling sites that are representative of sites throughout the distribution system. For the purpose of this paragraph (a)(10), a representative site is a site in which the plumbing materials used at that site would be commonly found at other sites served by the water system.

(11) A water system whose distribution system contains lead service lines must collect all samples for monitoring under this section from sites served by a lead service line. A water system that cannot identify a sufficient number of sampling sites served by lead service lines must still collect samples from every site served by a lead service line, and collect the remaining samples in accordance with tiering requirements under paragraphs (a)(5) through (7) or paragraphs (a)(9) through (10) of this section.

(b) *Sample collection methods.* (1) All tap samples for lead and copper collected in accordance with this subpart, with the exception of fifth liter samples collected under paragraph (b)(3) of this section, and samples collected under paragraphs (b)(5) and (h) of this section, must be first draw samples. The first draw sample shall be analyzed for lead and copper in tap sampling periods where both contaminants are required to be monitored. In tap sampling periods where only lead is required to be monitored, the first draw sample may be analyzed for lead only.

(2) Each first draw tap sample for lead and copper must be one liter in

volume and have stood motionless in the plumbing system of each sampling site for at least six hours. Bottles used to collect first draw samples must be wide-mouth one-liter sample bottles. First draw samples from residential housing must be collected from the cold-water kitchen or bathroom sink tap. First draw samples from a nonresidential building must be one liter in volume and collected at a tap from which water is typically drawn for consumption. State-approved non-first-draw samples collected in lieu of first draw samples pursuant to paragraph (b)(5) of this section must be one liter in volume and shall be collected at an interior tap from which water is typically drawn for First draw samples may be collected by the system or the system may allow residents to collect first draw samples after instructing the residents of the sampling procedures specified in this paragraph (b)(2). Sampling instructions provided to residents must not include instructions for aerator removal and cleaning or flushing of taps prior to the start of the minimum six-hour stagnation period. To avoid problems of residents handling nitric acid, acidification of first draw samples may be done up to 14 days after the sample is collected. After acidification to resolubilize the metals, the sample must stand in the original container for the time specified in the approved EPA method before the sample can be analyzed. If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results.

(3)(i) All tap samples for copper collected in at sites with a lead service line shall be the first draw sample collected using the procedure listed in this paragraph (b)(3). Tap samples for copper are required to be collected and analyzed only in monitoring periods for which copper monitoring is required.

(ii) Systems must collect tap water in five consecutively numbered one-liter sample bottles after the water has stood motionless in the plumbing of each sampling site for at least six hours without flushing the tap prior to sample collection. Systems must analyze first draw samples for copper, when applicable, and fifth liter samples

for lead. Bottles used to collect these samples must be wide-mouth one-liter sample bottles. Systems must collect first draw samples in the first sample bottle with each subsequently numbered bottle being filled until the final bottle is filled with the water running constantly during sample collection. Fifth liter sample is the final sample collected in this sequence. System must collect first draw and fifth liter samples from residential housing from the cold-water kitchen or bathroom sink tap First draw and fifth liter samples from a nonresidential building must be one liter in volume and collected at an interior cold water tap from which water is typically drawn for consumption. First draw and fifth liter samples may be collected by the system or the system may allow residents to collect first draw samples and fifth liter samples after instructing the residents on the sampling procedures specified in this paragraph (b)(3)(ii). Sampling instructions provided to customers must not direct the customer to remove the aerator or clean or flush the taps prior to the start of the minimum six-hour stagnation period. To avoid problems of residents handling nitric acid, the system may acidify first draw samples up to 14 days after the sample is collected. After acidification to resolubilize the metals, the sample must stand in the original container for the time specified in the approved EPA method before the sample can be analyzed. If a system allows residents to perform sampling, the system may not challenge, based on alleged errors in sample collection, the accuracy of sampling results.

(4) A water system must collect each first draw tap sample from the same sampling site from which it collected the previous sample. A water system must collect each fifth liter sample from the same sampling site from which it collected the previous sample. If, for reasons beyond the control of the water system, the water system cannot gain entry to a sampling site in order to collect a follow-up tap sample, the system may collect the follow-up tap sample from another sampling site in its sampling pool as long as the new site meets the same targeting criteria,

Environmental Protection Agency

§ 141.86

and is within reasonable proximity of the original site.

(5) A non-transient, non-community water system, or a community water system that meets the criteria of §141.85(b)(7), that does not have enough taps that can supply first draw samples or fifth liter samples meeting the six-hour minimum stagnation time, as defined in §141.2, may apply to the State in writing to substitute non-first draw, first-draw, or fifth liter samples that do not meet the six-hour minimum stagnation time. Such systems must collect as many first draw or fifth liter samples from interior taps typically used for consumption, as possible and must identify sampling times and locations that would likely result in the longest standing time for the remaining sites. The State has the discretion to waive the requirement for prior State approval of sites not meeting the six-hour stagnation time either through State regulation or written notification to the system.

(c) *Number of samples.* Water systems shall collect at least one sample during each monitoring period specified in paragraph (d) of this section from the number of sites listed in the first column (“standard monitoring”) of the table in this paragraph. A system conducting reduced monitoring under paragraph (d)(4) of this section shall collect at least one sample from the number of sites specified in the second column (“reduced monitoring”) of the table in this paragraph during each monitoring period specified in paragraph (d)(4) of this section. Such reduced monitoring sites shall be representative of the sites required for standard monitoring. A public water system that has fewer than five drinking water taps, that can be used for human consumption meeting the sample site criteria of paragraph (a) of this section to reach the required number of sample sites listed in paragraph (c) of this section, must collect at least one sample from each tap and then must collect additional samples from those taps on different days during the monitoring period to meet the required number of sites. Alternatively the State may allow these public water systems to collect a number of samples less than the number of sites specified

in paragraph (c) of this section, provided that 100 percent of all taps that can be used for human consumption are sampled. The State must approve this reduction of the minimum number of samples in writing based on a request from the system or onsite verification by the State. States may specify sampling locations when a system is conducting reduced monitoring. The table is as follows:

System size (number of people served)	Number of sites (standard monitoring)	Number of sites (reduced monitoring)
>100,000	100	50
10,001 to 100,000	60	30
3,301 to 10,000	40	20
501 to 3,300	20	10
101 to 500	10	5
≤100	5	5

(d) *Timing of monitoring—(1) Standard monitoring.* Standard monitoring is a six-month tap sampling monitoring period that begins on January 1 or July 1 of the year in which the water system is monitoring at the standard number of sites in accordance to paragraph (c) of this section.

(i) All water systems with lead service lines, including those deemed optimized under §141.81(b)(3), and systems that did not conduct monitoring that meets all requirements of this section (e.g., sites selected in accordance with paragraph (a) of this section, samples collected in accordance with paragraph (b) of this section, etc.) between January 15, 2021, and October 16, 2024, must begin the first standard monitoring period on January 1 or July 1 in the year following October 16, 2024, whichever is sooner. Upon completion of this monitoring, systems must monitor in accordance with paragraph (d)(1)(ii) of this section.

(ii) Systems that conducted monitoring that meets all requirements of this section (e.g., sites selected in accordance with paragraph (a) of this section, samples collected in accordance with paragraph (b) of this section, etc.) between January 15, 2021, and October 16, 2024, and systems that have completed monitoring under paragraph (d)(1)(i) of this section, must continue monitoring as follows:

(A) Systems that do not meet the criteria under paragraph (d)(4) of the section must conduct standard monitoring.

(B) Systems that meet the criteria under paragraph (d)(4) of this section must continue to monitor in accordance with the criteria in paragraph (d)(4).

(C) Any system monitoring at a reduced frequency in accordance with paragraph (d)(4) of this section that exceeds an action level must resume standard monitoring beginning January 1 of the calendar year following the tap sampling monitoring period in which the system exceeded the action level. Any such system must also monitor in accordance with §141.87(b), (c), or (d) as applicable.

(D) Any system monitoring at a reduced frequency that exceeds the lead trigger level but meets the copper action level must not monitor any less frequently than annually and must collect samples from the standard number of sites as established in paragraph (c) of this section. This monitoring must begin the calendar year following the tap sampling monitoring period in which the system exceeded the action level. Any such system must also monitor in accordance with §141.87(b), (c), or (d) as applicable.

(E) Any system that fails to operate at or above the minimum value or within the range of values for the water quality parameters specified by the State under §141.82(f) for more than nine days in any monitoring period specified in §141.87 must conduct standard tap water monitoring and must resume sampling for water quality parameters in accordance with §141.87(d). This standard monitoring must begin no later than the 6-month period beginning January 1 of the calendar year following the water quality parameter excursion.

(F) Any water system that becomes a *large water system* without corrosion control treatment or any large water system without corrosion control treatment whose lead 90th percentile exceeds the lead practical quantitation level must conduct standard monitoring for at least two consecutive 6-month tap sampling monitoring periods and then must continue monitoring

in accordance with this paragraph (d)(1)(ii)(F).

(2) *Monitoring after installation of initial or re-optimized corrosion control treatment, installation of source water treatment and addition of new source or change in treatment.* (i) Any water system that installs or re-optimizes corrosion control treatment, as a result of exceeding the lead or copper action level, must monitor for lead and copper every six months and comply with previously designated water quality parameter values, where applicable, until the State specifies new water quality parameter values for optimal corrosion control.

(ii) Any water system that re-optimizes corrosion control treatment as a result of exceeding the lead trigger level but has not exceeded the lead or copper action level must monitor annually for lead at the standard number of sites listed in paragraph (c) of this section. Samples shall be analyzed for copper on a triennial basis. Small and medium-size systems that do not exceed the lead trigger level in three annual monitoring periods may reduce lead monitoring in accordance with paragraph (d)(4) of this section.

(iii) Any water system that installs source water treatment pursuant to §141.83(a)(3) must monitor every six months until the system at or below lead and copper action levels for two consecutive six-month monitoring periods. Systems that do not exceed the lead or copper action level for two consecutive 6-month monitoring periods may reduce monitoring in accordance with paragraph (d)(4) of this section.

(iv) If a water system has notified the State in writing in accordance with §141.90(a)(3) of an upcoming addition of a new source or long term change in treatment, the water system shall monitor every six months at the standard number of sites listed under paragraph (c) of this section until the system is at or below the lead and copper action levels for two consecutive six-month monitoring periods, unless the State determines that the addition of the new source or long term change in treatment is not significant and, therefore, does not warrant more frequent monitoring. Systems that do not exceed the lead and copper action levels,

Environmental Protection Agency

§ 141.86

and/or the lead trigger level for two consecutive six-month monitoring periods may reduce monitoring in accordance with paragraph (d)(4) of this section.

(3) *Monitoring after State specifies water quality parameter values for optimal corrosion control treatment.* (i) After the State specifies the values for water quality control parameters under § 141.82(f), the system must conduct standard six-month monitoring for two consecutive six-month tap sampling monitoring periods. Systems may then reduce monitoring in accordance with paragraph (d)(4) of this section as applicable, following a State determination that reduced monitoring is approved.

(ii) Systems required to complete the re-optimization steps in § 141.81(d) due to the exceedance of the lead trigger level that do not exceed the lead and copper action levels must monitor for two consecutive 6-month tap sampling monitoring periods. Systems may then reduce monitoring in accordance with paragraph (d)(4) of this section as applicable following a State determination that reduced monitoring is approved.

(4) *Reduced monitoring based on 90th percentile levels.* Reduced monitoring refers to an annual or triennial tap sampling monitoring period. The reduced monitoring frequency is based on the 90th percentile value for the water system.

(i) A water system that meets the criteria for reduced monitoring under paragraph (d)(4) of this section must collect these samples from sampling sites identified in paragraph (a) of this section. Systems monitoring annually or less frequently must conduct the lead and copper tap sampling during the months of June, July, August, or September unless the State has approved a different sampling period in accordance with paragraph (d)(4)(i)(A) of this section.

(A) The State at its discretion may approve a different tap sampling period for conducting the lead and copper tap sampling for systems collecting samples at a reduced frequency. Such a period must be no longer than four consecutive months, within one calendar year, and must represent a time of nor-

mal operation where the highest levels of lead are most likely to occur. For a non-transient non-community water system that does not operate during the months of June through September and for which the period of normal operation where the highest levels of lead are most likely to occur is not known, the State must designate a period that represents normal operation for the system. This monitoring must begin during the period approved or designated by the State in the calendar year immediately following the end of the second 6-month monitoring period for systems initiating annual monitoring and during the 3-year period following the end of the third consecutive year of annual monitoring for systems initiating triennial monitoring.

(B) Systems monitoring annually that have been collecting samples during the months of June through September and that receive State approval to alter their tap sampling monitoring period under paragraph (d)(4)(i)(A) of this section must collect their next round of samples during a time period that ends no later than 21 months after the previous round of sampling. Systems monitoring triennially that have been collecting samples during the month of June through September and receive State approval to alter their sampling collection period as per paragraph (d)(4)(i)(A) of this section must collect their next round of samples during a time period that ends no later than 45 months after the previous tap sampling period. Subsequent monitoring must be conducted annually or triennially, as required by this section.

(C) Small systems with waivers granted pursuant to paragraph (g) of this section that have been collecting samples during the months of June through September and receive State approval to alter their tap sampling period as per paragraph (d)(4)(i)(A) of this section must collect their next round of samples before the end of the 9-year period.

(ii) Any system that meets the lead trigger level and the copper action levels during two consecutive 6-month tap sampling monitoring periods may reduce the monitoring frequency to annual monitoring and must sample at the standard number of sampling sites

for lead and the reduced number of sites for copper as specified in paragraph (c) of this section. Systems operating *OCCT* must also have maintained the range of OWQPs set by the State in accordance with §141.82(f) for the same period and receive a written determination from the State approving annual monitoring based on the State's review of monitoring, treatment, and other relevant information submitted by the system as required by §141.90. This sampling must begin no later than the calendar year immediately following the last calendar year in which the system sampled.

(iii) Any water system that exceeds the lead trigger level but not the lead and copper action levels during two consecutive 6-month tap sampling monitoring periods must monitor no less frequently than annually at the standard number of sampling sites for lead and copper specified in paragraph (c) of this section. Systems operating *OCCT* must also have maintained the range of OWQPs set by the State in accordance with §141.82(f) for the same period of 6-month monitoring and receive a written determination from the State approving annual monitoring based on the State's review of monitoring, treatment, and other relevant information submitted by the system as required by §141.90. This sampling must begin no later than the calendar year immediately following the last calendar year in which the system sampled.

(iv) Any water system that exceeds the lead trigger level but not the lead and copper action levels during three consecutive years of monitoring may reduce the tap sampling monitoring period for copper to once every three years; however, the system may not reduce the tap sampling monitoring period for lead. Systems operating *OCCT* must also maintain the range of OWQPs set by the State in accordance with §141.82(f) and receive a written determination from the State approving triennial monitoring based on the State's review of monitoring, treatment, and other relevant information submitted by the system as required by §141.90. This sampling must begin no later than the third calendar year im-

mediately following the last calendar year in which the system sampled.

(v) Any small or medium-sized system that does not exceed the lead trigger level and the copper action level during three consecutive years of monitoring (standard monitoring completed during both six-month periods of a calendar year shall be considered 1 year of monitoring) may sample at the reduced number of sites for lead and copper in accordance with paragraph (c) of this section and reduce the monitoring frequency to triennial monitoring. Systems operating *OCCT* must also have maintained the range of OWQPs set by the State in accordance with §141.82(f) for the same three-year period and receive a written determination from the State approving triennial monitoring based on the State's review of monitoring, treatment, and other relevant information submitted by the system as required by §141.90. This sampling must begin no later than three calendar years after the last calendar year in which the system sampled.

(vi) Any water system that demonstrates for two consecutive 6-month monitoring periods that its 90th percentile lead level, calculated under §141.80(c)(4), is less than or equal to 0.005 mg/L and the 90th percentile copper level, calculated under §141.80(c)(4), is less than or equal to 0.65 mg/L may sample at the reduced number of sites for lead and copper in accordance with paragraph (c) of this section and reduce the frequency of monitoring to triennial monitoring. For water systems with corrosion control treatment, the system must maintain the range of values for the water quality parameters reflecting optimal corrosion control treatment specified by the State under §141.82(f) to qualify for reduced monitoring pursuant to this paragraph (d)(4)(vi).

(e) *Additional monitoring by systems.* The results of any monitoring conducted in addition to the minimum requirements of this section (such as customer-requested sampling) shall be considered by the water system and the State in making any determinations (*i.e.*, calculating the 90th percentile lead or copper level) under this subpart. Lead service line water systems

Environmental Protection Agency

§ 141.86

that are unable to collect the minimum number of samples from Tier 1 or Tier 2 sites shall calculate the 90th percentile using data from all the lead service lines sites and the highest lead and copper values from lower tier sites to meet the specified minimum number of samples. Systems must submit data from additional tier 3, 4 or 5 sites to the State but may not use these results in the 90th percentile calculation. Water systems must include customer-requested samples from known lead service line sites in the 90th percentile calculation if the samples meet the requirements of this section.

(f) *Invalidation of lead and copper tap samples used in the calculation of the 90th percentile.* A sample invalidated under this paragraph (f) does not count toward determining lead or copper 90th percentile levels under §141.80(c)(4) or toward meeting the minimum monitoring requirements of paragraph (c) of this section.

(1) The State may invalidate a lead or copper tap water sample at least if one of the following conditions is met.

(i) The laboratory establishes that improper sample analysis caused erroneous results.

(ii) The State determines that the sample was taken from a site that did not meet the site selection criteria of this section.

(iii) The sample container was damaged in transit.

(iv) There is substantial reason to believe that the sample was subject to tampering.

(2) The system must report the results of all samples to the State and all supporting documentation for samples the system believes should be invalidated.

(3) To invalidate a sample under paragraph (f)(1) of this section, the decision and the rationale for the decision must be documented in writing. States may not invalidate a sample solely on the grounds that a follow-up sample result is higher or lower than that of the original sample.

(4) The water system must collect replacement samples for any samples invalidated under this section if, after the invalidation of one or more samples, the system has too few samples to meet the minimum requirements of

paragraph (c) of this section. Any such replacement samples must be taken as soon as possible, but no later than 20 days after the date the State invalidates the sample or by the end of the applicable monitoring period, whichever occurs later. Replacement samples taken after the end of the applicable monitoring period shall not also be used to meet the monitoring requirements of a subsequent monitoring period. The replacement samples shall be taken at the same locations as the invalidated samples or, if that is not possible, at locations other than those already used for sampling during the monitoring period.

(g) *Monitoring waivers for systems serving 3,300 or fewer persons.* Any water system serving 3,300 or fewer persons that meets the criteria of this paragraph (g) may apply to the State to reduce the frequency of monitoring for lead and copper under this section to once every nine years (*i.e.*, a “full waiver”) if it meets all of the materials criteria specified in paragraph (g)(1) of this section and all of the monitoring criteria specified in paragraph (g)(2) of this section. If State regulations permit, any water system serving 3,300 or fewer persons that meets the criteria in paragraphs (g)(1) and (2) of this section only for lead, or only for copper, may apply to the State for a waiver to reduce the frequency of tap water monitoring to once every nine years for that contaminant only (*i.e.*, a “partial waiver”).

(1) *Materials criteria.* The system must demonstrate that its distribution system and service lines and all drinking water supply plumbing, including plumbing conveying drinking water within all residences and buildings connected to the system, are free of lead-containing materials and/or copper-containing materials, as those terms are defined in this paragraph, as follows:

(i) *Lead.* To qualify for a full waiver, or a waiver of the tap water monitoring requirements for lead (*i.e.*, a “lead waiver”), the water system must provide certification and supporting documentation to the State that the system is free of all lead-containing materials, as follows:

(A) It contains no plastic pipes which contain lead plasticizers, or plastic service lines which contain lead plasticizers; and

(B) It is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass or bronze alloy fittings and fixtures, unless such fittings and fixtures meet the specifications of any standard established pursuant to 42 U.S.C. 300g-6(e) (SDWA section 1417(e)).

(ii) *Copper*. To qualify for a full waiver, or a waiver of the tap water monitoring requirements for copper (*i.e.*, a “copper waiver”), the water system must provide certification and supporting documentation to the State that the system contains no copper pipes or copper service lines.

(2) *Monitoring criteria for waiver issuance*. The system must have completed at least one 6-month round of standard tap water monitoring for lead and copper at sites approved by the State and from the number of sites required by paragraph (c) of this section and demonstrate that the 90th percentile levels for any and all rounds of monitoring conducted since the system became free of all lead-containing and/or copper-containing materials, as appropriate, meet the following criteria.

(i) *Lead levels*. To qualify for a full waiver, or a lead waiver, the system must demonstrate that the 90th percentile lead level does not exceed 0.005 mg/L.

(ii) *Copper levels*. To qualify for a full waiver, or a copper waiver, the system must demonstrate that the 90th percentile copper level does not exceed 0.65 mg/L.

(3) *State approval of waiver application*. The State shall notify the system of its waiver determination, in writing, setting forth the basis of its decision and any condition of the waiver. As a condition of the waiver, the State may require the system to perform specific activities (e.g., limited monitoring, periodic outreach to customers to remind them to avoid installation of materials that might void the waiver) to avoid the risk of lead or copper concentration of concern in tap water. The small system must continue monitoring for lead and copper at the tap as required by paragraphs (d)(1) through (d)(4) of this section, as appropriate,

until it receives written notification from the State that the waiver has been approved.

(4) *Monitoring frequency for systems with waivers*. (i) A system with a full waiver must conduct tap water monitoring for lead and copper in accordance with paragraph (d)(4)(iv) of this section at the reduced number of sampling sites identified in paragraph (c) of this section at least once every nine years and provide the materials certification specified in paragraph (g)(1) of this section for both lead and copper to the State along with the monitoring results. Samples collected every nine years shall be collected no later than every ninth calendar year.

(ii) A system with a partial waiver must conduct tap water monitoring for the waived contaminant in accordance with paragraph (d)(4)(iv) of this section at the reduced number of sampling sites specified in paragraph (c) of this section at least once every nine years and provide the materials certification specified in paragraph (g)(1) of this section pertaining to the waived contaminant along with the monitoring results. Such a system also must continue to monitor for the non-waived contaminant in accordance with requirements of paragraph (d)(1) through (d)(4) of this section, as appropriate.

(iii) Any water system with a full or partial waiver shall notify the State in writing in accordance with §141.90(a)(3) of any upcoming long-term change in treatment or addition of a new source, as described in that section. The State must review and approve the addition of a new source or long-term change in water treatment before it is implemented by the water system. The State has the authority to require the system to add or modify waiver conditions (e.g., require recertification that the system is free of lead-containing and/or copper-containing materials, require additional round(s) of monitoring), if it deems such modifications are necessary to address treatment or source water changes at the system.

(iv) If a system with a full or partial waiver becomes aware that it is no longer free of lead-containing or copper-containing materials, as appropriate, (e.g., as a result of new construction or repairs), the system shall

Environmental Protection Agency

§ 141.86

notify the State in writing no later than 60 days after becoming aware of such a change.

(5) *Continued eligibility.* If the system continues to satisfy the requirements of paragraph (g)(4) of this section, the waiver will be renewed automatically, unless any of the conditions listed in paragraph (g)(5)(i) through (g)(5)(iii) of this section occurs. A system whose waiver has been revoked may re-apply for a waiver at such time as it again meets the appropriate materials and monitoring criteria of paragraphs (g)(1) and (g)(2) of this section.

(i) A system with a full waiver or a lead waiver no longer satisfies the materials criteria of paragraph (g)(1)(i) of this section or has a 90th percentile lead level greater than 0.005 mg/L.

(ii) A system with a full waiver or a copper waiver no longer satisfies the materials criteria of paragraph (g)(1)(ii) of this section or has a 90th percentile copper level greater than 0.65 mg/L.

(iii) The State notifies the system, in writing, that the waiver has been revoked, setting forth the basis of its decision.

(6) *Requirements following waiver revocation.* A system whose full or partial waiver has been revoked by the State is subject to the corrosion control treatment and lead and copper tap water monitoring requirements, as follows:

(i) If the system exceeds the lead and/or copper action level, the system must implement corrosion control treatment in accordance with the deadlines specified in §141.81(e), and any other applicable requirements of this subpart.

(ii) If the system meets both the lead and the copper action level, the system must monitor for lead and copper at the tap no less frequently than once every three years using the reduced number of sample sites specified in paragraph (c) of this section.

(7) *Pre-existing waivers.* Small system waivers approved by the State in writing prior to April 11, 2000 shall remain in effect under the following conditions:

(i) If the system has demonstrated that it is both free of lead-containing and copper-containing materials, as required by paragraph (g)(1) of this sec-

tion and that its 90th percentile lead levels and 90th percentile copper levels meet the criteria of paragraph (g)(2) of this section, the waiver remains in effect so long as the system continues to meet the waiver eligibility criteria of paragraph (g)(5) of this section. The first round of tap water monitoring conducted pursuant to paragraph (g)(4) of this section shall be completed no later than nine years after the last time the system has monitored for lead and copper at the tap.

(ii) If the system has met the materials criteria of paragraph (g)(1) of this section but has not met the monitoring criteria of paragraph (g)(2) of this section, the system shall conduct a round of monitoring for lead and copper at the tap demonstrating that it meets the criteria of paragraph (g)(2) of this section no later than September 30, 2000. Thereafter, the waiver shall remain in effect as long as the system meets the continued eligibility criteria of paragraph (g)(5) of this section. The first round of tap water monitoring conducted pursuant to paragraph (g)(4) of this section shall be completed no later than nine years after the round of monitoring conducted pursuant to paragraph (g)(2) of this section.

(h) *Follow-up samples for "find-and-fix" under §141.82(j).* Systems shall collect a follow-up sample at any site that exceeds the action level within 30 days of receiving the sample results. These follow-up samples may use different sample volumes or different sample collection procedures to assess the source of elevated lead. Systems shall submit samples collected under this section to the State but shall not include such samples in the 90th percentile calculation.

(i) *Public availability of tap monitoring results used in the 90th percentile calculation.* All water systems must make available to the public the results of compliance tap water monitoring data, including data used in the 90th percentile calculation under §141.80(c)(4), within 60 days of the end of the applicable tap sampling period. Nothing in this section requires water systems to make publicly available the addresses of the sites where the tap samples were collected. Large systems shall make available the monitoring results in a

§ 141.87

40 CFR Ch. I (7–1–23 Edition)

digital format. Small and medium-size systems shall make available the monitoring results in either a written or digital format. Water systems shall retain tap sampling monitoring data in accordance to recordkeeping requirements under §141.91.

[56 FR 26548, June 7, 1991; 56 FR 32113, July 15, 1991; 57 FR 28788, June 29, 1992, as amended at 65 FR 2007, Jan. 12, 2000; 72 FR 57817, Oct. 10, 2007; 86 FR 4296, Jan. 15, 2021; 86 FR 31947, June 16, 2021]

§ 141.87 Monitoring requirements for water quality parameters.

All large water systems, and all small- and medium-size water systems that exceed the lead or copper action level, and all small- and medium-size water systems with corrosion control treatment that exceed the lead trigger level must monitor water quality parameters in addition to lead and copper in accordance with this section.

(a) *General requirements*—(1) *Sample collection methods.* (i) Tap samples must be representative of water quality throughout the distribution system, taking into account the number of persons served, the different sources of water, the different treatment methods employed by the system, and seasonal variability. Tap sampling under this section is not required to be conducted at taps targeted for lead and copper sampling under §141.86(a). Sites selected for tap samples under this section must be included in the site sample plan specified under §141.86(a)(1). The site sample plan must be updated prior to changes to the sampling locations. [Note: Systems may find it convenient to conduct tap sampling for water quality parameters at sites used for total coliform sampling under §141.21(a)(1) if they also meet the requirements of this section.]

(ii) Samples collected at the entry point(s) to the distribution system must be from locations representative of each source after treatment. If a system draws water from more than one source and the sources are combined before distribution, the system must sample at an entry point to the distribution system during periods of normal operating conditions (*i.e.*, when water is representative of all sources being used).

(2) *Number of samples.* (i) Systems must collect two tap samples for applicable water quality parameters during each monitoring period specified under paragraphs (b) through (e) of this section from the minimum number of sites listed in table 1 to this paragraph (a)(2)(i). Systems that add sites as a result of the “find-and-fix” requirements in §141.82(j) must collect tap samples for applicable water quality parameters during each monitoring period under paragraphs (b) through (e) of this section and must sample from that adjusted minimum number of sites. Systems are not required to add sites if they are monitoring at least twice the minimum number of sites list in table 1 to this paragraph (a)(2)(i).

TABLE 1 TO PARAGRAPH (a)(2)(i)

System size (number people served)	Minimum number of sites for water quality parameters
>100,000	25
10,001–100,000	10
3,301–10,000	3
501–3,300	2
101–500	1
≤ 100	1

(ii)(A) Except as provided in paragraph (c)(2) of this section, water systems without corrosion control treatment must collect two samples for each applicable water quality parameter at each entry point to the distribution system during each monitoring period specified in paragraph (b) of this section. During each monitoring period specified in paragraphs (c) through (e) of this section, water systems must collect one sample for each applicable water quality parameter at each entry point to the distribution system.

(B) During each monitoring period specified in paragraphs (c) through (e) of the section, water systems with corrosion control treatment must continue to collect one sample for each applicable water quality parameter at each entry point to the distribution system no less frequently than once every two weeks.

(b) *Initial sampling for water systems.* Any large water system without corrosion control treatment must monitor for water quality parameters as specified in paragraphs (b)(1) and (2) of this