

First Notice

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438
 439 **AUTHORITY:** Implementing Sections 7.2, 17, and 17.5 and authorized by Section 27 of the
 440 Environmental Protection Act [415 ILCS 5/7.2, 17, 17.5, and 27].

441
 442 **SOURCE:** Adopted in R88-26 at 14 Ill. Reg. 16517, effective September 20, 1990; amended in
 443 R90-21 at 14 Ill. Reg. 20448, effective December 11, 1990; amended in R90-13 at 15 Ill. Reg.
 444 1562, effective January 22, 1991; amended in R91-3 at 16 Ill. Reg. 19010, effective December 1,
 445 1992; amended in R92-3 at 17 Ill. Reg. 7796, effective May 18, 1993; amended in R93-1 at 17
 446 Ill. Reg. 12650, effective July 23, 1993; amended in R94-4 at 18 Ill. Reg. 12291, effective July
 447 28, 1994; amended in R94-23 at 19 Ill. Reg. 8613, effective June 20, 1995; amended in R95-17
 448 at 20 Ill. Reg. 14493, effective October 22, 1996; amended in R98-2 at 22 Ill. Reg. 5020,
 449 effective March 5, 1998; amended in R99-6 at 23 Ill. Reg. 2756, effective February 17, 1999;
 450 amended in R99-12 at 23 Ill. Reg. 10348, effective August 11, 1999; amended in R00-8 at 23 Ill.
 451 Reg. 14715, effective December 8, 1999; amended in R00-10 at 24 Ill. Reg. 14226, effective
 452 September 11, 2000; amended in R01-7 at 25 Ill. Reg. 1329, effective January 11, 2001;
 453 amended in R01-20 at 25 Ill. Reg. 13611, effective October 9, 2001; amended in R02-5 at 26 Ill.
 454 Reg. 3522, effective February 22, 2002; amended in R03-4 at 27 Ill. Reg. 1183, effective January
 455 10, 2003; amended in R03-15 at 27 Ill. Reg. 16447, effective October 10, 2003; amended in
 456 R04-3 at 28 Ill. Reg. 5269, effective March 10, 2004; amended in R04-13 at 28 Ill. Reg. 12666,
 457 effective August 26, 2004; amended in R05-6 at 29 Ill. Reg. 2287, effective January 28, 2005;
 458 amended in R06-15 at 30 Ill. Reg. 17004, effective October 13, 2006; amended in R07-2/R07-11
 459 at 31 Ill. Reg. 11757, effective July 27, 2007; amended in R08-7/R08-13 at 33 Ill. Reg. 633,
 460 effective December 30, 2008; amended in R10-1/R10-17/R11-6 at 34 Ill. Reg. 19848, effective
 461 December 7, 2010; amended in R12-4 at 36 Ill. Reg. 7110, effective April 25, 2012; amended in
 462 R13-2 at 37 Ill. Reg. 1978, effective February 4, 2013; amended in R14-8 at 38 Ill. Reg. 3608,
 463 effective January 27, 2014; amended in R14-9 at 38 Ill. Reg. 9792, effective April 21, 2014;
 464 amended in R15-6 at 39 Ill. Reg. 3713, effective February 24, 2015; amended in R15-23 at 39 Ill.
 465 Reg. 15144, effective November 9, 2015; amended in R16-4 at 39 Ill. Reg. 15352, effective
 466 November 13, 2015; amended in R17-12 at 42 Ill. Reg. 1140, effective January 4, 2018;
 467 amended in R18-9 at 42 Ill. Reg. 9316, effective May 29, 2018; amended in R18-17 at 43 Ill.
 468 Reg. 8206, effective July 26, 2019; amended in R19-16 at 44 Ill. Reg. 6996, effective April 17,
 469 2020; amended in R18-26 at 47 Ill. Reg. 7556, effective May 16, 2023; amended in R21-10/R22-
 470 2 at 47 Ill. Reg. 16486, effective November 2, 2023; amended in R23-9 at 47 Ill. Reg. 18996,
 471 effective December 7, 2023; amended in R25-1/R25-9 at 50 Ill. Reg. _____, effective
 472 _____.

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SUBPART A: GENERAL

Section 611.101 Definitions

The terms this Section defines have the given meanings in this Part:

"Act" means the Environmental Protection Act [415 ILCS 5].

"Agency" means the Illinois Environmental Protection Agency.

BOARD NOTE: The Department of Public Health (Public Health or DPH) regulates non-CWSs, including NTNCWSs and transient non-CWSs. "Agency" means Public Health if implementation by Public Health occurs with regard to non-CWS suppliers.

"Approved source of bottled water", for the purposes of Section 611.130(d)(4), means a source of water and the packaged water it provides, whether from a spring, artesian well, drilled well, municipal water supply, or any other source, that the provider inspects, samples, analyzes, and finds has a safe and sanitary quality under laws and regulations of State and local government agencies having jurisdiction, as evidenced by current certificates or notations of approval in the packaging plant from each government agency having jurisdiction over the source, the water it bottles, and distributing the water in commerce.

BOARD NOTE: This definition derives from 40 CFR 142.62(g)(2) and 21 CFR 129.3(a). The Board cannot compile an exhaustive listing of all federal, State, and local laws regulating bottled water and bottling water. However, the Board is aware of some: the Illinois Food, Drug and Cosmetic Act [410 ILCS 620], the Bottled Water Act [815 ILCS 310], the DPH Water Well Construction Code (77 Ill. Adm. Code 920), the DPH Water Well Pump Installation Code (77 Ill. Adm. Code 925), the federal bottled water quality standards (21 CFR 103.35), the federal drinking water processing and bottling standards (21 CFR 129), the federal Current Good Manufacturing Practice in Manufacturing, Packing, or Holding Human Food (21 CFR 110), the federal Fair Packaging and Labeling Act (15 U.S.C. 1451 et seq.), and the federal Fair Packaging and Labeling regulations (21 CFR 201).

"Bag filters" means pressure-driven separation devices that remove particulate matter larger than one micrometer using an engineered porous filtration media. These are typically a non-rigid fabric filtration media housed in a pressure vessel where the direction of flow is from the inside to outside the bag.

"Bank filtration" means a water treatment process using a well to recover surface water naturally infiltrating into groundwater through a river bed or banks. A

516 nearby pumping water supply or other wells typically enhances infiltration by the
517 hydraulic gradient they impose.

518
519 "Best available technology" or "BAT" means the best technology, treatment
520 techniques, or other means that USEPA determines are available for the
521 contaminant in question. Subpart F specifies BAT.

522
523 "Bin classification" or "bin" means, for Subpart Z, the appropriate of the four
524 treatment categories (Bin 1, Bin 2, Bin 3, or Bin 4) that a filtered system supplier
525 assigns itself under Section 611.1010 based on the results of source water
526 Cryptosporidium monitoring under Section 611.1001. This bin classification
527 determines the degree of additional Cryptosporidium treatment, if any, the filtered
528 system supplier must provide.

529 BOARD NOTE: This definition derives from 40 CFR 141.710 and 71 Fed. Reg.
530 654, 657 (Jan. 5, 2006).

531
532 "Board" means the Illinois Pollution Control Board.

533
534 "Cartridge filter" means a pressure-driven separation device that removes
535 particulate matter larger than 1 micrometer using an engineered porous filtration
536 media. A cartridge filter typically has rigid or semi-rigid self-supporting filter
537 elements housed in a pressure vessel in which flow is from outside to inside the
538 cartridge.

539
540 "CAS No." means "Chemical Abstracts Services Number".

541
542 "Clean compliance history" means, for Subpart AA, a record of no MCL
543 violations under Section 611.325; no monitoring violations under Subpart L or
544 Subpart AA; and no coliform treatment technique trigger exceedances or
545 treatment technique violations under Subpart AA.

546
547 "Coagulation" means a process using coagulant chemicals and mixing that
548 destabilizes and agglomerates colloidal and suspended materials into flocs.

549
550 "Combined distribution system" means the interconnected distribution system
551 comprising the distribution systems of wholesale systems and of the consecutive
552 systems that receive finished water.

553
554 "Community water system" or "CWS" means a PWS serving at least 15 service
555 connections used by year-round residents or regularly serving at least 25 year-
556 round residents.

557 BOARD NOTE: This definition differs slightly from that of Section 3.145 of the
558 Act.

559
 560 "Compliance cycle" means the nine-calendar-year cycle during which PWSs must
 561 monitor. Each compliance cycle consists of three three-year compliance periods.
 562 The first calendar cycle ran calendar years 1993 through 2001, the second ran
 563 2002 through 2010, the third ran 2011 through 2019, etc.
 564

565 "Compliance period" means a three-calendar-year period within a compliance
 566 cycle. Each compliance cycle has three three-year compliance periods. For
 567 example, the first compliance period ran calendar years 1993 through 1995, the
 568 second ran 1996 through 1998, and the third ran 1999 through 2001 within the
 569 first compliance cycle.
 570

571 "Comprehensive performance evaluation" or "CPE" is a thorough review and
 572 analysis of a treatment plant's performance-based capabilities and associated
 573 administrative, operational, and maintenance practices. The supplier conducts a
 574 CPE to identify factors that may adversely affect a plant's ability to comply. The
 575 supplier conducts a CPE to achieve compliance and emphasize approaches it can
 576 implement without significant capital improvements.
 577

578 BOARD NOTE: The final sentence of the definition of "comprehensive
 579 performance evaluation" in 40 CFR 141.2 is Section 611.160(a)(2), since it
 580 contains substantive elements.

581 "Confluent growth" means a continuous bacterial growth covering the entire
 582 filtration area or portion of a membrane filter in which bacterial colonies are not
 583 discrete.
 584

585 "Consecutive system" means a PWS receiving some or all of its finished water
 586 from one or more wholesale systems. Delivery may be through a direct
 587 connection or the distribution system of one or more consecutive systems.
 588

589 "Contaminant" means any physical, chemical, biological, or radiological
 590 substance or matter in water.
 591

592 "Conventional filtration treatment" means a series of processes, including
 593 coagulation, flocculation, sedimentation, and filtration, resulting in substantial
 594 "particulate removal".
 595

596 "CT" or "CT_{calc}" is the product of residual disinfectant concentration (RDC or C)
 597 in mg/L, determined before or at the first customer, and the corresponding
 598 disinfectant contact time (T) in minutes. If a supplier applies disinfectants at
 599 more than one point prior to the first customer, it must determine the CT of each
 600 disinfectant sequence before or at the first customer to determine the total percent
 601 inactivation or "total inactivation ratio". In determining the total inactivation

602 ratio, the supplier must determine the RDC of each disinfection sequence and
603 corresponding contact time before any subsequent disinfection application points.
604 (See the definition of "CT_{99.9}".)
605

606 "CT_{99.9}" is the CT value required for 99.9 percent (3-log) inactivation of Giardia
607 lamblia cysts. Tables 1.1 through 1.6, 2.1, and 3.1 of Appendix B list CT_{99.9}
608 values for a variety of disinfectants and conditions. (See the definition of
609 "inactivation ratio".)

610 BOARD NOTE: This definition derives from the definition of "CT" in 40 CFR
611 141.2.
612

613 "Diatomaceous earth filtration" means a process resulting in substantial
614 particulate removal:

615
616 The process deposits a precoat cake of diatomaceous earth filter media on
617 a support membrane (septum); and
618

619 The process continuously adds additional filter media, known as body
620 feed, to the feed water to maintain permeability of the filter cake while
621 filtering the water by passing through the cake on the septum.
622

623 "Direct filtration" means a series of processes, including coagulation and filtration
624 but excluding sedimentation, resulting in substantial particulate removal.
625

626 "Disinfectant" means any oxidant, including chlorine, chlorine dioxide,
627 chloramines, and ozone, that a supplier adds to water in any part of the treatment
628 or distribution process to kill or inactivate pathogenic microorganisms.
629

630 "Disinfectant contact time" or "T" means the time in minutes that water moves
631 from the point of disinfectant application or the previous point of RDC
632 measurement to a point before or at the point where the supplier measures RDC.
633

634 If the supplier measures only one RDC, T is the time in minutes that water
635 moves from the point of disinfectant application to a point before or at the
636 point where RDC is measured.
637

638 If the supplier measures more than one RDC:

639
640 For the first measurement of RDC, T is the time in minutes that
641 water moves from the first or only point of disinfectant application
642 to a point before or at the point where the supplier measures the
643 first RDC; and
644

645 For subsequent measurements of RDC, T is the time in minutes
646 that water moves from the previous RDC measurement point to the
647 RDC measurement point where the supplier calculates the
648 particular T.

649
650 In pipelines, the supplier must calculate T based on "plug flow" by
651 dividing the internal volume of the pipe by the maximum hourly flow rate
652 through that pipe.

653
654 Within mixing basins and storage reservoirs, the supplier must determine
655 T using tracer studies or an equivalent demonstration.

656
657 "Disinfection" means a process that inactivates pathogenic organisms in water by
658 chemical oxidants or equivalent agents.

659
660 "Disinfection byproduct" or "DBP" means a chemical byproduct forming when
661 disinfectants used for microbial control react with naturally occurring compounds
662 already present in source water. DBPs include bromodichloromethane,
663 bromoform, chloroform, dichloroacetic acid, bromate, chlorite,
664 dibromochloromethane, and certain haloacetic acids.

665
666 "Disinfection profile" is a summary of daily *Giardia lamblia* inactivation through
667 a treatment plant. The procedure for developing a disinfection profile is in
668 Section 611.742.

669
670 "Distribution system" includes all points downstream of an "entry point" to the
671 point of consumer ownership.

672
673 "Domestic or other non-distribution system plumbing problem" means a coliform
674 contamination problem in a PWS having more than one service connection that is
675 limited to the specific service connection from which the supplier took the
676 coliform-positive sample.

677
678 "Dose equivalent" means the product of the absorbed dose from ionizing radiation
679 and the factors accounting for differences in biological effect due to the type of
680 radiation and its distribution in the body.

681 BOARD NOTE: The International Commission on Radiation Units and
682 Measurements (ICRU) specifies "dose equivalent" as the product of the absorbed
683 dose (D), quality factor (QF), dose distribution factor (DF), and other necessary
684 factors. See "Radiation Quantities and Units," International Commission on
685 Radiological Units and Measurements (ICRU) Report 10a, Handbook 84, U.S.
686 Department of Commerce, National Bureau of Standards (1962).

687

688 "Dual sample set" means a set of two samples the supplier collects at the same
689 time and same location, analyzing one sample for TTHM and the other sample for
690 HAA5. A supplier collects dual sample sets to conduct an IDSE under Subpart W
691 and determine compliance with the TTHM and HAA5 MCLs under Subpart Y.

692
693 "E. coli" means Escherichia coli, a species of bacteria used as a specific indicator
694 of fecal contamination and potential harmful pathogens.
695 BOARD NOTE: This definition derives from 78 Fed. Reg. 10270, 10271 (Feb.
696 13, 2013).

697
698 "Enhanced coagulation" means adding sufficient coagulant to improve removing
699 disinfection byproduct (DBP) precursors by conventional filtration treatment.

700
701 "Enhanced softening" means using precipitative softening to improve removing
702 disinfection byproduct (DBP) precursors.

703
704 "Entry point" means a point just downstream of the final treatment operation but
705 upstream of the first user and any mixing with other water. If the supplier uses
706 raw water without treatment, the "entry point" is the raw water source. If a PWS
707 receives treated water from another PWS, the "entry point" is a point just
708 downstream of the other PWS but upstream of the first user and any mixing with
709 other water.

710
711 "Filter profile" is a graphical representation of individual filter performance based
712 on continuous turbidity measurements or total particle counts versus time for an
713 entire filter run from startup through backwash, including an assessment of filter
714 performance while the supplier backwashes another filter.

715
716 "Filtration" means a process passing water through porous media to remove
717 particulate matter.

718
719 "Finished water" means water that the supplier introduces into the distribution
720 system of a PWS intending the water for distribution and consumption without
721 further treatment, except treatment necessary to maintain water quality in the
722 distribution system (e.g., booster disinfection, addition of corrosion control
723 chemicals, etc.).

724
725 "Flocculation" means a process enhancing agglomeration or collection of smaller
726 floc particles into larger, more easily settleable particles through gentle hydraulic
727 or mechanical stirring.

728
729 "Flowing stream" means a course of running water flowing in a definite channel.
730

731 "40/30 certification" means the certification a supplier submits to the Agency
732 under Section 611.923 that the supplier had no TTHM or HAA5 monitoring
733 violations and no individual sample from its system exceeded 0.040 mg/L TTHM
734 or 0.030 mg/L HAA5 during eight consecutive calendar quarters.

735 BOARD NOTE: This definition derives from 40 CFR 141.603(a).

736
737 "GAC10" means granular activated carbon (GAC) filter beds with an empty-bed
738 contact time of 10 minutes based on average daily flow and a carbon reactivation
739 frequency of every 180 days, except that the reactivation frequency for GAC10 a
740 supplier uses as a best available technology to comply with the MCLs under
741 Section 611.312(b)(2) is 120 days.

742
743 "GAC20" means granular activated carbon filter beds with an empty-bed contact
744 time of 20 minutes based on average daily flow and a carbon reactivation
745 frequency of every 240 days.

746
747 "GC" means "gas chromatography" or "gas-liquid phase chromatography".

748
749 "GC/MS" means gas chromatography (GC) followed by mass spectrometry (MS).

750
751 "Gross alpha particle activity" means the total radioactivity due to alpha particle
752 emission as inferred from measurements on a dry sample.

753
754 "Gross beta particle activity" means the total radioactivity due to beta particle
755 emission as inferred from measurements on a dry sample.

756
757 "Groundwater system" or "GWS" means a PWS using only groundwater sources,
758 including a consecutive system receiving finished groundwater.

759 BOARD NOTE: This definition derives from 40 CFR 141.400(b).

760
761 "Groundwater under the direct influence of surface water" means any water
762 beneath the ground surface with significant occurrence of insects or other
763 macroorganisms, algae, or large-diameter pathogens, such as *Giardia lamblia* or
764 *Cryptosporidium*, or significant and relatively rapid shifts in water characteristics,
765 such as turbidity, temperature, conductivity, or pH, that closely correlate to
766 climatological or surface water conditions. "Groundwater under the direct
767 influence of surface water" is as determined under Section 611.212.

768
769 "Haloacetic acids (five)" or "HAA5" means the sum of the concentrations in
770 milligrams per liter (mg/L) of five haloacetic acid compounds (monochloroacetic
771 acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and
772 dibromoacetic acid), rounded to two significant figures after summing.

773

774 "Halogen" means one of the chemical elements chlorine, bromine, or iodine.

775
776 "Hazard Index (HI)" is the sum of component hazard quotients (HQs), which are
777 calculated by dividing the measured regulated PFAS component contaminant
778 concentration in water (e.g., expressed as parts per trillion (ppt) or nanograms per
779 liter (ng/l)) by the associated health-based water concentration (HBWC)
780 expressed in the same units as the measured concentration (e.g., ppt or ng/l). For
781 PFAS, a mixture Hazard Index greater than 1 (unitless) is an exceedance of the
782 MCL.

783
784 "Hazard quotient (HQ)" means the ratio of the measured concentration in drinking
785 water to the health-based water concentration (HBWC).

786
787 "Health-based water concentration (HBWC)" means level below which there are
788 no known or anticipated adverse health effects over a lifetime of exposure,
789 including sensitive populations and life stages, and allows for an adequate margin
790 of safety.

791
792 "HFPO-DA or GenX chemicals" means Chemical Abstract Service registration
793 number 122499-17-6, chemical formula C₆F₁₁O₃-, International Union of Pure
794 and Applied Chemistry preferred name 2,3,3,3-tetrafluoro-2-
795 (heptafluoropropoxy)propanoate, along with its conjugate acid and any salts,
796 derivatives, isomers, or combinations thereof.

797
798 "HPC" means "heterotrophic plate count", as measured under Section
799 611.531(a)(2)(C).

800
801 "Hydrogeologic sensitivity assessment", for Subpart S, means a determination of
802 whether a GWS supplier obtains water from a hydrogeologically sensitive setting.
803 BOARD NOTE: This definition derives from 40 CFR 141.400(c)(5).

804
805 "Inactivation ratio" or "Ai" means the ratio:

806
807
$$A_i = CT_{\text{cal}}/CT_{99.9}$$

808
809 The sum of the inactivation ratios, or "total inactivation ratio" (B), is
810 calculated by adding together the inactivation ratio for each disinfection
811 sequence:

812
813
$$B = \Sigma(A_i)$$

814
815 A total inactivation ratio equal to or greater than 1.0 assumedly provides a
816 3-log inactivation of *Giardia lamblia* cysts.

817
818 BOARD NOTE: This definition derives from the definition of "CT" in 40 CFR
819 141.2.

820
821 "Initial compliance period" means the three-year compliance period that began
822 January 1, 1993, except for the MCLs for dichloromethane, 1,2,4-
823 trichlorobenzene, 1,1,2-trichloroethane, benzo(a)pyrene, dalapon, di(2-
824 ethylhexyl)adipate, di(2-ethylhexyl)phthalate, dinoseb, diquat, endothall, endrin,
825 glyphosate, hexachlorobenzene, hexachlorocyclopentadiene, oxamyl, picloram,
826 simazine, 2,3,7,8-TCDD, antimony, beryllium, cyanide, nickel, and thallium, as
827 they apply to a supplier whose system has fewer than 150 service connections, for
828 which "initial compliance period" means the three-year compliance period that
829 began January 1, 1996.

830
831 "Initial distribution system evaluation" or "IDSE" means the evaluation,
832 performed by the supplier under Section 611.921(c), to determine the locations in
833 a distribution system that are representative of high TTHM and HAA5
834 concentrations throughout the distribution system. An IDSE is used in
835 conjunction with, but is distinct from, the compliance monitoring undertaken to
836 identify and select monitoring locations used to determine compliance with
837 Subpart I.

838 BOARD NOTE: This definition derives from 40 CFR 141.601(c).

839
840 "Inorganic contaminants" or "IOCs" refers to that group of contaminants
841 designated as such in USEPA regulatory discussions and guidance documents.
842 IOCs include antimony, arsenic, asbestos, barium, beryllium, cadmium,
843 chromium, cyanide, mercury, nickel, nitrate, nitrite, selenium, and thallium.
844 BOARD NOTE: This definition derives from 40 CFR 141.23(a)(4).

845
846 "ℓ" or "L" means liter.

847
848 "Lake or reservoir" means a natural or man made basin or hollow on the Earth's
849 surface in which water collects or is stored that may or may not have a current or
850 single direction of flow.

851
852 "Legionella" means a genus of bacteria, some species of which have caused a type
853 of pneumonia called Legionnaires Disease.

854
855 "Level 1 assessment" means an evaluation to identify the possible presence of
856 sanitary defects, defects in distribution system coliform monitoring practices, and
857 (when possible) the likely reason that the system triggered the assessment. The
858 system owner or operator conducts a Level 1 assessment. Minimum elements
859 include review and identification of atypical events that could affect distributed

860 water quality or indicate that distributed water quality is impaired; changes in
 861 distribution system maintenance and operation that could affect distributed water
 862 quality (including water storage); source and treatment considerations that bear on
 863 distributed water quality, if appropriate (e.g., whether a groundwater system is
 864 disinfected); existing water quality monitoring data; and inadequacies in sample
 865 sites, sampling protocol, and sample processing. The supplier must conduct the
 866 assessment consistent with any Agency-imposed permit conditions that tailor
 867 specific assessment elements with respect to the size and type of the system and
 868 the size, type, and characteristics of the distribution system.

869
 870 "Level 2 assessment" means an evaluation to identify the possible presence of
 871 sanitary defects, defects in distribution system coliform monitoring practices, and
 872 (when possible) the likely reason that the system triggered the assessment. A
 873 Level 2 assessment provides a more detailed examination of the system (including
 874 the system's monitoring and operational practices) than does a Level 1 assessment
 875 through the use of more comprehensive investigation and review of available
 876 information, additional internal and external resources, and other relevant
 877 practices. A person approved by the Agency in a SEP conducts a Level 2
 878 assessment, and that person may include the system operator. Minimum elements
 879 include review and identification of atypical events that could affect distributed
 880 water quality or indicate that distributed water quality is impaired; changes in
 881 distribution system maintenance and operation that could affect distributed water
 882 quality (including water storage); source and treatment considerations that bear on
 883 distributed water quality, if appropriate (e.g., whether a groundwater system is
 884 disinfected); existing water quality monitoring data; and inadequacies in sample
 885 sites, sampling protocol, and sample processing. The person conducting the Level
 886 2 assessment and the supplier must conduct the assessment consistent with any
 887 Agency-imposed permit conditions that tailor specific assessment elements with
 888 respect to the size and type of the system and the size, type, and characteristics of
 889 the distribution system. The person conducting the Level 2 assessment and the
 890 supplier must comply with any expedited actions or additional actions the SEP
 891 requires in the instance of an E. coli MCL violation.

892
 893 "Locational running annual average" or "LRAA" means the average of sample
 894 analytical results for samples taken at a particular monitoring location during the
 895 previous four calendar quarters.

896
 897 "Man-made beta particle and photon emitters" means all radionuclides emitting
 898 beta particles or photons listed in NBS Handbook 69 (63), incorporated by
 899 reference in Section 611.102, except the daughter products of thorium-232,
 900 uranium-235 and uranium-238.

901 BOARD NOTE: The USEPA-recognized naturally occurring daughter products
 902 are alpha emitters ($^{211,212}\text{Bi}$, ^{231}Pa , $^{210,212,214,215,216,218}\text{Po}$, $^{223,224,226}\text{Ra}$, $^{219,220,222}\text{Rn}$,

903 ^{227,228,230}Th, ²³⁴U) and beta emitters (^{227,228}Ac, ^{210,212,214}Bi, ²³⁴Pa, ^{210,211,212,214}Pb,
904 ²²⁸Ra, ^{231,234}Th, and ^{207,208}Tl. See 56 Fed. Reg. 33050, 33063-65 (July 18, 1991).

905
906 "Maximum contaminant level" or "MCL" means the maximum permissible
907 concentration of a contaminant in water a supplier delivers to any user of its PWS.
908 (See Section 611.121.)

909
910 "Maximum contaminant level goal" or "MCLG" means the maximum
911 concentration of a contaminant in drinking water that USEPA determined will
912 cause no known or anticipated adverse effect on the health of persons, allowing an
913 adequate margin of safety. MCLGs are nonenforceable health goals.
914 BOARD NOTE: The federal MCLGs are outside the scope of the Board's
915 identical-in-substance mandate under Section 17.5 of the Act.

916
917 "Maximum residual disinfectant level" or "MRDL" means the maximum
918 permissible concentration of a disinfectant added for water treatment that USEPA
919 determined a supplier may add and may not exceed at the consumer's tap without
920 an unacceptable risk of adverse health effects. MRDLs are enforceable in the
921 same manner as are MCLs. (See Section 611.313 and Section 611.383.)

922
923 "Maximum residual disinfectant level goal" or "MRDLG" means the maximum
924 concentration of a disinfectant that USEPA determined a supplier may add for
925 water treatment that would not cause any known or anticipated adverse effect on
926 the health of persons, allowing an adequate margin of safety. MRDLGs are
927 nonenforceable health goals and do not reflect the benefit of the addition of the
928 chemical for control of waterborne microbial contaminants.

929
930 "Maximum total trihalomethane potential" or "MTP" means the maximum
931 concentration of total trihalomethanes (TTHMs) produced in a given water
932 containing a disinfectant residual after seven days at a temperature of 25° C or
933 above.

934
935 "Membrane filtration" means a pressure- or vacuum-driven separation process in
936 which particulate matter larger than one micrometer is rejected by an engineered
937 barrier, primarily through a size exclusion mechanism, having a measurable
938 removal efficiency of a target organism that is verifiable using a direct integrity
939 test. This definition includes the common membrane technologies of
940 microfiltration, ultrafiltration, nanofiltration, and reverse osmosis.

941
942 "Method detection limit" or "MDL" means the minimum concentration of a
943 substance that analysis can measure and report with 99 percent confidence that the
944 analyte concentration is greater than zero, from analysis of a sample in a given
945 matrix containing the analyte.

946
947 "MFL" means millions of fibers per liter larger than 10 micrometers.
948 BOARD NOTE: This definition derives from 40 CFR 141.23(a)(4)(i).
949
950 "mg" means milligrams (1/1000 of a gram).
951
952 "µg" means micrograms (1/1,000,000 of a gram).
953
954 "mg/ℓ" or "mg/L" means milligrams per liter.
955
956 "µg/ℓ" or "µg/L" means micrograms per liter.
957
958 "Mixed system" means a PWS using both groundwater and surface water sources.
959 BOARD NOTE: Derived from 40 CFR 141.400(b).
960
961 "MUG" means 4-methyl-umbelliferyl-beta-d-glucuronide(IUPAC name:
962 (2S,3S,4S,5R,6S)-3,4,5-trihydroxy-6-((4-methyl-2-oxo-2Hchromen-7-
963 yl)oxy)tetrahydro-2H-pyran-2-carboxylic acid; CAS no. 881005-91-0).
964
965 "Near the first service connection" means at one of the 20 percent of all service
966 connections in the entire system that are nearest the PWS treatment facility, as
967 measured by water transport time within the distribution system.
968
969 "nm" means nanometer (1/1,000,000,000 of a meter).
970
971 "Non-community water system" or "NCWS" or "non-CWS" means a PWS that is
972 not a CWS. A non-CWS is either a "transient non-community water system
973 (TWS)" or NTNCWS.
974
975 "Non-transient, non-community water system" or "NTNCWS" means a PWS that
976 is not a CWS and that regularly serves at least 25 of the same persons over six
977 months per year.
978
979 "NPDWR" means "national primary drinking water regulation".
980
981 "NTU" means "nephelometric turbidity units".
982
983 "P-A Coliform Test" means "Presence-Absence Coliform Test".
984
985 "Paired sample" means two samples of water for total organic carbon (TOC). One
986 sample is of raw water the supplier takes prior to any treatment. The supplier
987 takes the other sample after the point of combined filter effluent representative of
988 the treated water. The supplier takes these samples at the same time. (See

989 Section 611.382.)

990

991 "Performance evaluation sample" or "PE sample" means a reference sample the
 992 Agency provides a laboratory for demonstrating that the laboratory can
 993 successfully analyze the sample within limits of performance the Agency
 994 specifies. For bacteriological laboratories, Public Health provides the sample.
 995 For radiological laboratories, the Illinois Emergency Management Agency
 996 provides the sample. The laboratory does not know the true value of the
 997 concentration of the reference material at the time of analysis.

998

999 "Person" means an individual, corporation, company, association, partnership,
 1000 state, unit of local government, or federal agency.

1001

1002 "PFBS" means Chemical Abstract Service registration number 45187-15-3,
 1003 chemical formula C4F9SO3-, perfluorobutane sulfonate, along with its conjugate
 1004 acid and any salts, derivatives, isomers, or combinations thereof.

1005

1006 "PFHxS" means Chemical Abstract Service registration number 108427-53-8,
 1007 chemical formula C6F13SO3-, perfluorohexane sulfonate, along with its conjugate
 1008 acid and any salts, derivatives, isomers, or combinations thereof.

1009

1010 "PFNA" means Chemical Abstract Service registration number 72007-68-2,
 1011 chemical formula C9F17O2-, perfluorononanoate, along with its conjugate acid
 1012 and any salts, derivatives, isomers, or combinations thereof.

1013

1014 "PFOA" means Chemical Abstract Service registration number 45285-51-6,
 1015 chemical formula C8F15O2-, perfluorooctanoate, along with its conjugate acid and
 1016 any salts, derivatives, isomers, or combinations thereof.

1017

1018 "PFOS" means Chemical Abstract Service registration number 45298-90-6,
 1019 chemical formula C8F17SO3-, perfluorooctanesulfonate, along with its conjugate
 1020 acid and any salts, derivatives, isomers, or combinations thereof.

1021

1022 "Phase I" refers to that group of chemical contaminants and the accompanying
 1023 regulations promulgated by USEPA on July 8, 1987, at 52 Fed. Reg. 25712.

1024

1025 "Phase II" refers to that group of chemical contaminants and the accompanying
 1026 regulations promulgated by USEPA on January 30, 1991, at 56 Fed. Reg. 3578.

1027

1028 "Phase IIB" refers to that group of chemical contaminants and the accompanying
 1029 regulations promulgated by USEPA on July 1, 1991, at 56 Fed. Reg. 30266.

1030

1031 "Phase V" refers to that group of chemical contaminants promulgated by USEPA

1032 on July 17, 1992, at 57 Fed. Reg. 31776.

1033

1034 "Picrocurie" or "pCi" means the quantity of radioactive material producing 2.22
1035 nuclear transformations per minute.

1036

1037 "Plant intake" means the works or structures at the head of a conduit diverting
1038 water from a source (e.g., a river or lake) into the treatment plant.

1039

1040 "Point of disinfectant application" is the point where a supplier applies the
1041 disinfectant and downstream of where the water is not subject to recontamination
1042 by surface water runoff.

1043

1044 "Point-of-entry treatment device" or "POE device" is a treatment device a
1045 consumer applies to the drinking water entering a house or building to reduce
1046 contaminants in the drinking water distributed throughout the house or building.

1047

1048 "Point-of-use treatment device", "point-of-use device", or "POU" is a water
1049 treatment device a consumer applies to a single tap to reduce contaminants in
1050 drinking water at that tap. Under Subpart G, a manufacturer, importer, or
1051 accredited third-party certifying body must certify a POU device as complying
1052 with NSF/ANSI 53 or 58 as in effect on the date of manufacture or import to
1053 satisfy the rule.

1054 BOARD NOTE: NSF/ANSI 53 is the health-based standard for lead and several
1055 other contaminants for water filter devices, including tap filter-type treatment
1056 devices. Identifying a device as certified under NSF/ANSI 53 at the time of
1057 purchase is possible. NSF maintains an on-line list of certified devices at
1058 info.nsf.org/Certified/dwtu/listings_leadreduction.asp. See the definition of
1059 "accredited third-party certifying body" in 35 Ill. Adm. Code 611.126(b) relating
1060 to NSF/ANSI 372.

1061

1062 "Presedimentation" means a preliminary treatment process a supplier uses to
1063 remove gravel, sand, and other particulate material from the source water through
1064 settling before the water enters the primary clarification and filtration processes in
1065 a treatment plant.

1066

1067 "Public Health" or "DPH" means the Illinois Department of Public Health.

1068 BOARD NOTE: See the definition of "Agency" in this Section.

1069

1070 "Public water system" or "PWS" means a system providing water to the public for
1071 human consumption through pipes or other constructed conveyances if the system
1072 has at least 15 service connections or regularly serves an average of at least 25
1073 individuals daily at least 60 days out of the year. A PWS is either a CWS or non-
1074 CWS. A PWS does not include any special irrigation district. "PWS" includes

1075 certain facilities:

1076

1077 Any collection, treatment, storage, and distribution facilities under control
1078 of the PWS operator that the operator uses in connection with the system;
1079 and

1080

1081 Any collection or pretreatment storage facilities not under control of the
1082 PWS operator that the operator uses primarily in connection with the
1083 system.

1084 BOARD NOTE: SDWA and USEPA rules use "public water system". The Act
1085 uses "public water supply". The Board intends that "public water supply" means
1086 the same as "public water system" and both terms refer both to the facilities
1087 providing water and the persons owning and operating those facilities.

1088

1089 "Radioactive contaminants" means those contaminants for which Section 611.330
1090 imposes an MCL. "Radioactive contaminants" include radium-226 and -228,
1091 tritium, strontium-89, strontium-90, iodine-131, cesium-134, uranium, gross alpha
1092 emitters, gross beta emitters, photon emitters, and other nuclides emitting
1093 energetic nuclear particles or photons.

1094 BOARD NOTE: This definition derives from Table C in 40 CFR 141.25(c),
1095 141.66, appendix A to subpart O, and appendices A and B to subpart Q of 40 CFR
1096 141.

1097

1098 "Reliably and consistently below the MCL" for a contaminant means an Agency
1099 determination based on analytical results following the initial detection of a
1100 contaminant to determine the qualitative condition of water from an individual
1101 sampling point or source. The Agency must base this determination on the
1102 consistency of analytical results, the degree below the MCL, the susceptibility of
1103 source water to variation, and other vulnerability factors pertinent to the detected
1104 contaminant that may influence the quality of water.

1105 BOARD NOTE: This definition derives from 40 CFR 141.23(b)(9), (c)(8),
1106 (d)(2), and (e)(3) and 141.24(f)(11)(ii), and 141.24(f)(11)(iii), (f)(12), (h)(6)(ii),
1107 and (h)(8).

1108

1109 "Rem" means the unit of dose equivalent from ionizing radiation to the total body
1110 or any internal organ or organ system. A "millirem (mrem)" is 1/1000 of a rem.

1111

1112 "Repeat compliance period" means a compliance period that begins after the
1113 initial compliance period.

1114

1115 "Representative" means that a sample reflects the quality of water a supplier
1116 delivers to consumers under conditions when the supplier uses all raw water
1117 sources it requires to supply water under normal use conditions and all treatment

1118 properly operates.

1119

1120 "Residual disinfectant concentration", "RDC", or the variable "C" in CT
1121 calculations means the concentration of disinfectant measured in mg/L in a
1122 representative sample of water. For purposes of the requirement of Section
1123 611.241(d) of maintaining a detectable RDC in the distribution system, "RDC"
1124 means a residual of free or combined chlorine.

1125

1126 "Safe Drinking Water Act" or "SDWA" means the Public Health Service Act, as
1127 amended by the Safe Drinking Water Act, Pub. L. 93-523, 42 U.S.C. 300f et seq.

1128

1129 "Sanitary defect" means a defect that could provide a pathway of entry for
1130 microbial contamination of a supplier's distribution system or that indicates a
1131 failure or imminent failure in an existing barrier to microbial contamination.

1132

1133 "Sanitary survey" means an onsite review of the delineated WHPAs (identifying
1134 sources of contamination within the WHPAs and evaluations or the hydrogeologic
1135 sensitivity of the delineated WHPAs the Agency conducted under source water
1136 assessments or utilizing other relevant information if available), facilities,
1137 equipment, operation, maintenance, and monitoring compliance of a PWS
1138 supplier to evaluate the adequacy of the system, its sources, and operations for the
1139 production and distribution of safe drinking water.

1140 BOARD NOTE: This definition derives from 40 CFR 141.2 and 40 CFR
1141 142.16(o)(2).

1142

1143 "Seasonal system" means a non-CWS not operating as a PWS on a year-round
1144 basis and starting up and shutting down at the beginning and end of each
1145 operating season.

1146

1147 "Sedimentation" means a process for removing solids before filtration by gravity
1148 or separation.

1149

1150 "SEP" means special exception permit the Agency issued under 35 Ill. Adm. Code
1151 602.600.

1152

1153 "Service connection", as used in the definition of PWS, does not include a
1154 connection to a system delivering water by a constructed conveyance other than a
1155 pipe if any of certain conditions exist:

1156

1157 Consumers use the water exclusively for purposes other than residential
1158 use (consisting of drinking, bathing, and cooking, or other similar uses);

1159

1160 The Agency issues a SEP determining that the supplier provides

1161 alternative water for residential use or similar uses for drinking and
1162 cooking to achieve the equivalent level of public health protection to that
1163 the applicable national primary drinking water regulations provide; or
1164

1165 The Agency issues a SEP determining that the water provided for
1166 residential use or similar uses for drinking, cooking, and bathing is
1167 centrally treated or treated at the point of entry by the provider, a pass-
1168 through entity, or the user to achieve the equivalent level of public health
1169 protection to that the applicable national primary drinking water
1170 regulations provide.

1171 BOARD NOTE: See SDWA sections 1401(4)(B)(i)(II) and (4)(B)(i)(III) (42
1172 U.S.C. 300f(4)(B)(i)(II) and (4)(B)(i)(III)).
1173

1174 "Significant deficiency" means a deficiency the Agency identifies in a
1175 groundwater system under Section 611.803. A significant deficiency might
1176 include a defect in system design, operation, or maintenance or a failure or
1177 malfunction of the sources, treatment, storage, or distribution system that the
1178 Agency determines causes or could cause introduction of contamination into the
1179 water the supplier delivers to consumers.

1180 BOARD NOTE: This definition derives from 40 CFR 142.16(o)(2)(iv). The
1181 Agency must submit to USEPA a definition and description of at least one
1182 significant deficiency in each of the eight sanitary survey elements listed in
1183 Section 611.801(c) as part of the federal primacy requirements. The Board added
1184 the general description of what a significant deficiency might include in non-
1185 limiting terms, not intending to limit Agency discretion submitting what USEPA
1186 requires. What the Agency submits to USEPA cannot provide a definition within
1187 the Board regulations without Board rulemaking action.
1188

1189 "Slow sand filtration" means a process involving passing raw water through a bed
1190 of sand at low velocity (generally less than 0.4 meters per hour (m/h)) resulting in
1191 physical and biological mechanisms substantially removing particulate material.
1192

1193 "SOC" or "Synthetic organic chemical contaminant" refers to that group of
1194 contaminants designated as "SOCs" in Section 611.311(c).
1195

1196 "Source" means a well, reservoir, or other source of raw water.
1197

1198 "Special irrigation district" means an irrigation district in existence prior to May
1199 18, 1994 that provides primarily agricultural service through a piped water system
1200 with only incidental residential use or similar use if the Agency issues a SEP
1201 making either of two determinations:
1202

1203 The Agency determines that the supplier or another person provides

1204 alternative water for residential use or similar uses for drinking or cooking
1205 to achieve the equivalent level of public health protection to that the
1206 applicable national primary drinking water regulations provide; or
1207

1208 The Agency issues a SEP determining that the water provided for
1209 residential use or similar uses for drinking, cooking, and bathing is
1210 centrally treated or treated at the point of entry by the provider, a pass-
1211 through entity, or the user to protect public health at a level equivalent to
1212 that the applicable NPDWRs provide.

1213 BOARD NOTE: This definition derives from 40 CFR 141.2 and sections
1214 1401(4)(B)(i)(II) and (4)(B)(i)(III) of SDWA (42 U.S.C. 300f(4)(B)(i)(II) and
1215 (4)(B)(i)(III)).
1216

1217 "Standard monitoring" means the monitoring the supplier performs under Section
1218 611.921(a) and (b) at various specified locations in its distribution system,
1219 including near entry points, at points representing the average residence time in its
1220 distribution system and at points in its distribution system representing high
1221 TTHM and HAA5 concentrations throughout the system.

1222 BOARD NOTE: This definition derives from 40 CFR 141.601(a) and (b).
1223

1224 "Standard sample" means the aliquot of finished drinking water the supplier or
1225 laboratory examines for the presence of coliform bacteria.
1226

1227 "State-only MCL" means one of the inorganic maximum contaminant levels
1228 (MCLs) in Section 611.300 or organic MCLs in Section 611.310.

1229 BOARD NOTE: State-only MCLs are those derived prior to the implementation
1230 of the USEPA "Phase II" regulations. The Section 611.640 definition of this
1231 term, applying only to Subpart O, does not include the Section 611.300 inorganic
1232 MCLs.
1233

1234 "Subpart B system" means a PWS using surface water or groundwater under the
1235 direct influence of surface water as a source that is subject to Subpart B and the
1236 analytical and monitoring requirements of Sections 611.531, 611.532, and
1237 611.533 and Appendices B and C.

1238 BOARD NOTE: USEPA rules define these "subpart H systems".
1239

1240 "Subpart I compliance monitoring" means monitoring required under Subpart I to
1241 demonstrate compliance with requirements for disinfectant residuals, disinfection
1242 byproducts, and disinfection byproduct precursors.

1243 BOARD NOTE: The equivalent to Subpart I is subpart L of 40 CFR 141 under
1244 USEPA's rules.
1245

1246 "Subpart Y compliance monitoring" or "Subpart Y monitoring" means monitoring
1247 Subpart Y requires to demonstrate compliance with Stage 2 requirements for
1248 disinfection byproducts.

1249 BOARD NOTE: The equivalent to Subpart Y is subpart V of 40 CFR 141 under
1250 USEPA's rules.

1251
1252 "Supplier " means any person owning or operating a PWS. This term includes the
1253 "official custodian". Under several rules, "supplier" includes a person performing
1254 a compliance-related activity on behalf of the owner or operator (e.g., a laboratory
1255 performing analyses, an engineer performing an assessment, design review,
1256 system evaluation, or other work, or a property owner or occupant sampling a
1257 tap).

1258
1259 "Surface water" means any water that is open to the atmosphere and subject to
1260 surface runoff.

1261
1262 "SUVA" means specific ultraviolet absorption at 254 nanometers (nm), an
1263 indicator of the humic content of water. "SUVA" is a sample's ultraviolet
1264 absorption at a wavelength of 254 nm (UV_{254}) (in m^{-1}) divided by its
1265 concentration of dissolved organic carbon (in mg/L).

1266
1267 "SWS" means "surface water system", a PWS using only surface water sources,
1268 including groundwater under the direct influence of surface water.

1269 BOARD NOTE: This definition derives from 40 CFR 141.23(a)(2) note,
1270 141.24(h)(2) note, 141.70(a), and 141.88(a)(1)(ii) note.

1271
1272 "System-specific study plan" means the plan a supplier submits to the Agency
1273 under Section 611.922 for studying the occurrence of TTHM and HAA5 in the
1274 supplier's distribution system based on either monitoring results or modelling of
1275 the system.

1276 BOARD NOTE: This definition derives from 40 CFR 141.602.

1277
1278 "System with a single service connection" means a system supplying drinking
1279 water to consumers via a single service line.

1280
1281 "Too numerous to count" means that the total number of bacterial colonies
1282 exceeds 200 on a 47-mm diameter membrane filter used for coliform detection.

1283
1284 "Total organic carbon" or "TOC" means total organic carbon (in mg/L) measured
1285 using heat, oxygen, ultraviolet irradiation, chemical oxidants, or combinations of
1286 these to oxidize organic carbon to carbon dioxide, rounded to two significant
1287 figures.

1288

1289 "Total trihalomethanes" or "TTHM" means the sum of the concentration of
1290 trihalomethanes (THMs) in milligrams per liter (mg/L), rounded to two
1291 significant figures.

1292 BOARD NOTE: The definition of "trihalomethanes" lists the four compounds
1293 that USEPA considers TTHMs.

1294
1295 "Transient, non-community water system" or "transient non-CWS" means a non-
1296 CWS not regularly serving at least 25 of the same persons over six months of the
1297 year.

1298 BOARD NOTE: The federal regulations apply to all "public water systems",
1299 defined as all systems having at least 15 service connections or regularly serving
1300 water to at least 25 persons. (See 42 U.S.C. 300f(4).) The Act mandates that the
1301 Board and the Agency regulate "public water supplies", defined as having at least
1302 15 service connections or regularly serving 25 persons daily at least 60 days per
1303 year. (See Section 3.365 of the Act.) The Department of Public Health regulates
1304 transient non-CWSs.

1305
1306 "Treatment" means any process changing the physical, chemical, microbiological,
1307 or radiological properties of water that is under the control of the supplier and is
1308 not a point-of-use treatment device or a point-of-entry treatment device.
1309 Treatment includes aeration, coagulation, sedimentation, filtration, activated
1310 carbon treatment, disinfection, or fluoridation.

1311
1312 "Trihalomethane" or "THM" means one of four specific derivatives of methane in
1313 which halogens substitute three of the four hydrogen atoms in the molecular
1314 structure. There are four THMs:

1315
1316 Trichloromethane (chloroform),
1317 Dibromochloromethane,
1318 Bromodichloromethane, and
1319 Tribromomethane (bromoform)

1320
1321 "Two-stage lime softening" means a process in which adding chemical precipitant
1322 and precipitating hardness occur in two distinct clarification process units in
1323 series prior to filtration.

1324
1325 "USEPA" means the U.S. Environmental Protection Agency.

1326
1327 "Uncovered finished water storage facility" is a tank, reservoir, or other facility
1328 directly open to the atmosphere a supplier uses to store water that will undergo no
1329 further treatment to reduce microbial pathogens except residual disinfection.

1330

1331 "Very small system waiver" means a conditional waiver from Subpart W
1332 available under Section 611.924 to a supplier serving fewer than 500 persons that
1333 took TTHM and HAA5 samples under Subpart I.

1334 BOARD NOTE: This definition derives from 40 CFR 141.604.

1335

1336 "Virus" means a virus of fecal origin that is infectious to humans by waterborne
1337 transmission.

1338

1339 "VOC" or "volatile organic chemical contaminant" refers to that group of
1340 contaminants designated as "VOCs" in Section 611.311(a).

1341

1342 "Waterborne disease outbreak" means a significant occurrence of acute infectious
1343 illness epidemiologically associated with the ingestion of water from a PWS that
1344 is deficient in treatment, as determined by an appropriate local or State agency.

1345

1346 "Wellhead protection area" or "WHPA" means the surface and subsurface
1347 recharge area surrounding a CWS well or well field, delineated outside of
1348 any applicable setback zones (under Section 17.1 of the Act) under
1349 Illinois' Wellhead Protection Program, through which contaminants are
1350 reasonably likely to move toward ~~the~~^{such} well or well field.

1351 BOARD NOTE: The Agency uses two guidance documents for
1352 identification of WHPAs:

1353

1354 "Guidance Document for Groundwater Protection Needs Assessments",
1355 Illinois Environmental Protection Agency, Illinois State Water Survey,
1356 and Illinois State Geologic Survey joint report, January 1995; and

1357

1358 "The Illinois Wellhead Protection Program under Section 1428 of the
1359 Federal Safe Drinking Water Act", Illinois Environmental Protection
1360 Agency, No. 22480, October 1992.

1361

1362 "Wellhead protection program" means the Illinois wellhead protection program,
1363 approved by USEPA under section 1428 of the SDWA, 42 U.S.C. 300h-7.

1364 BOARD NOTE: This definition derives from 40 CFR 141.71(b). The wellhead
1365 protection program includes the "groundwater protection needs assessment" under
1366 Section 17.1 of the Act and 35 Ill. Adm. Code 615 through 617.

1367

1368 "Wholesale system" means a PWS treating source water as necessary to produce
1369 finished water, delivering some or all of that finished water to another PWS. A
1370 wholesale system may deliver water through a direct connection or through the
1371 distribution system of one or more consecutive systems.

1372

1373 BOARD NOTE: This Section derives from 40 CFR 141.2 and other sources as noted.

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(Source: Amended at 50 Ill. Reg. _____, effective _____)

Section 611.102 Incorporations by Reference

- a) Analytical Methods. The Board incorporates by reference the following analytical methods. The rules refer to the methods by the defined short-form names given them in this Section.

"AMI Turbiwell (09)" means "Continuous Measurement of Turbidity Using a SWAN AMI Turbiwell Turbidimeter" (August 10, 2009). Available from SWAN Analytische Instrumente AG, Studbachstrasse 13, CH-8340, Hinwil, Switzerland. Referenced in Section 611.531. Available from the publisher; NEMI; and USEPA, OGWDW (under "Surface Water Treatment Rule (PDF)").

ASTM Methods. Available from ASTM International, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959 (~~610-832-9585~~ or <https://www.astm.org/products-services/standards-and-publications.html>).

"ASTM D511-93 A" means "Standard Test Methods for Calcium and Magnesium in Water", "Test Method A – Complexometric Titration", approved 1993, referenced in Section 611.611.

"ASTM D511-03 A" means "Standard Test Methods for Calcium and Magnesium in Water", "Test Method A – Complexometric Titration", approved 2003, referenced in Section 611.611.

"ASTM D511-09 A" means "Standard Test Methods for Calcium and Magnesium in Water", "Test Method A – Complexometric Titration", approved 2009, referenced in Section 611.611.

"ASTM D511-14 A" means "Standard Test Methods for Calcium and Magnesium in Water", "Test Method A – Complexometric Titration", approved 2014, referenced in Section 611.611.

"ASTM D511-93 B" means "Standard Test Methods for Calcium and Magnesium in Water", "Test Method B – Atomic Absorption Spectrophotometric", approved 1993, referenced in Section 611.611.

"ASTM D511-03 B" means "Standard Test Methods for Calcium and Magnesium in Water", "Test Method B – Atomic Absorption

1417 Spectrophotometric", approved 2003, referenced in Section
1418 611.611.
1419
1420 "ASTM D511-09 B" means "Standard Test Methods for Calcium
1421 and Magnesium in Water", "Test Method B – Atomic Absorption
1422 Spectrophotometric", approved 2009, referenced in Section
1423 611.611.
1424
1425 "ASTM D511-14 B" means "Standard Test Methods for Calcium
1426 and Magnesium in Water", "Test Method B – Atomic Absorption
1427 Spectrophotometric", approved 2014, referenced in Section
1428 611.611.
1429
1430 "ASTM D515-88 A" means "Standard Test Methods for
1431 Phosphorus in Water", "Test Method A – Colorimetric Ascorbic
1432 Acid Reduction", approved August 19, 1988, referenced in Section
1433 611.611.
1434
1435 "ASTM D859-94" means "Standard Test Method for Silica in
1436 Water", approved 1994, referenced in Section 611.611.
1437
1438 "ASTM D859-00" means "Standard Test Method for Silica in
1439 Water", approved 2000, referenced in Section 611.611.
1440
1441 "ASTM D859-05" means "Standard Test Method for Silica in
1442 Water", approved 2005, referenced in Section 611.611.
1443
1444 "ASTM D859-10" means "Standard Test Method for Silica in
1445 Water", approved 2010, referenced in Section 611.611.
1446
1447 "ASTM D859-16" means "Standard Test Method for Silica in
1448 Water", approved 2016, referenced in Section 611.611.
1449
1450 "ASTM D1067-92 B" means "Standard Test Methods for Acidity
1451 or Alkalinity in Water", "Test Method B – Electrometric or Color-
1452 Change Titration", approved May 15, 1992, referenced in Section
1453 611.611.
1454
1455 "ASTM D1067-02 B" means "Standard Test Methods for Acidity
1456 or Alkalinity in Water", "Test Method B – Electrometric or Color-
1457 Change Titration", approved in 2002, referenced in Section
1458 611.611.
1459

1460 "ASTM D1067-06 B" means "Standard Test Methods for Acidity
1461 or Alkalinity in Water", "Test Method B – Electrometric or Color-
1462 Change Titration", approved in 2006, referenced in Section
1463 611.611.

1464
1465 "ASTM D1067-11 B" means "Standard Test Methods for Acidity
1466 or Alkalinity in Water", "Test Method B – Electrometric or Color-
1467 Change Titration", approved in 2011, referenced in Section
1468 611.611.

1469
1470 "ASTM D1067-16 B" means "Standard Test Methods for Acidity
1471 or Alkalinity in Water", "Test Method B – Electrometric or Color-
1472 Change Titration", approved in 2006, referenced in Section
1473 611.611.

1474
1475 "ASTM D1125-95 (1999) A" means "Standard Test Methods for
1476 Electrical Conductivity and Resistivity of Water", "Test Method A
1477 – Field and Routine Laboratory Measurement of Static (Non-
1478 Flowing) Samples", approved 1995, reapproved 1999, referenced
1479 in Section 611.611.

1480
1481 "ASTM D1179-93 B" means "Standard Test Methods for Fluoride
1482 in Water", "Test Method B – Ion Selective Electrode", approved
1483 1993, referenced in Section 611.611.

1484
1485 "ASTM D1179-99 B" means "Standard Test Methods for Fluoride
1486 in Water", "Test Method B – Ion Selective Electrode", approved
1487 1999, referenced in Section 611.611.

1488
1489 "ASTM D1179-04 B" means "Standard Test Methods for Fluoride
1490 in Water", "Test Method B – Ion Selective Electrode", approved
1491 2004, referenced in Section 611.611.

1492
1493 "ASTM D1179-10 B" means "Standard Test Methods for Fluoride
1494 in Water", "Test Method B – Ion Selective Electrode", approved
1495 2010, referenced in Section 611.611.

1496
1497 "ASTM D1179-16 B" means "Standard Test Methods for Fluoride
1498 in Water", "Test Method B – Ion Selective Electrode", approved
1499 2010, referenced in Section 611.611.

1500

1501 "ASTM D1253-86" means "Standard Test Method for Residual
1502 Chlorine in Water", reapproved 1992, referenced in Section
1503 611.381.
1504
1505 "ASTM D1253-96" means "Standard Test Method for Residual
1506 Chlorine in Water", approved 1996, referenced in Section 611.381.
1507
1508 "ASTM D1253-03" means "Standard Test Method for Residual
1509 Chlorine in Water", approved 2003, referenced in Sections 611.381
1510 and 611.531.
1511
1512 "ASTM D1253-08" means "Standard Test Method for Residual
1513 Chlorine in Water", approved 2008, referenced in Sections 611.381
1514 and 611.531.
1515
1516 "ASTM D1253-14" means "Standard Test Method for Residual
1517 Chlorine in Water", approved 2014, referenced in Sections 611.381
1518 and 611.531.
1519
1520 "ASTM D1293-95" means "Standard Test Methods for pH of
1521 Water", approved 1995, referenced in Section 611.611.
1522
1523 "ASTM D1293-99" means "Standard Test Methods for pH of
1524 Water", approved 1999, referenced in Section 611.611.
1525
1526 "ASTM D1293-12" means "Standard Test Methods for pH of
1527 Water", approved 2012, referenced in Section 611.611.
1528
1529 "ASTM D1293-18" means "Standard Test Methods for pH of
1530 Water", approved 2018, referenced in Section 611.611.
1531
1532 "ASTM D1688-95 A" means "Standard Test Methods for Copper
1533 in Water", "Test Method A – Atomic Absorption, Direct",
1534 approved 1995, referenced in Section 611.611.
1535
1536 "ASTM D1688-02 A" means "Standard Test Methods for Copper
1537 in Water", "Test Method A – Atomic Absorption, Direct",
1538 approved 2002, referenced in Section 611.611.
1539
1540 "ASTM D1688-07 A" means "Standard Test Methods for Copper
1541 in Water", "Test Method A – Atomic Absorption, Direct",
1542 approved 2007, referenced in Section 611.611.
1543

1544 "ASTM D1688-12 A" means "Standard Test Methods for Copper
1545 in Water", "Test Method A – Atomic Absorption, Direct",
1546 approved 2012, referenced in Section 611.611.
1547

1548 "ASTM D1688-17 A" means "Standard Test Methods for Copper
1549 in Water", "Test Method A – Atomic Absorption, Direct",
1550 approved 2017, referenced in Section 611.611.
1551

1552 "ASTM D1688-95 C" means "Standard Test Methods for Copper
1553 in Water", "Test Method C – Atomic Absorption, Graphite
1554 Furnace", approved 1995, referenced in Section 611.611.
1555

1556 "ASTM D1688-02 C" means "Standard Test Methods for Copper
1557 in Water", "Test Method C – Atomic Absorption, Graphite
1558 Furnace", approved 2002, referenced in Section 611.611.
1559

1560 "ASTM D1688-07 C" means "Standard Test Methods for Copper
1561 in Water", "Test Method C – Atomic Absorption, Graphite
1562 Furnace", approved 2007, referenced in Section 611.611.
1563

1564 "ASTM D1688-12 C" means "Standard Test Methods for Copper
1565 in Water", "Test Method C – Atomic Absorption, Graphite
1566 Furnace", approved 2012, referenced in Section 611.611.
1567

1568 "ASTM D1688-17 C" means "Standard Test Methods for Copper
1569 in Water", "Test Method C – Atomic Absorption, Graphite
1570 Furnace", approved 2017, referenced in Section 611.611.
1571

1572 "ASTM D2036-98 A" means "Standard Test Methods for Cyanide
1573 in Water", "Test Method A – Total Cyanides after Distillation",
1574 approved 1998, referenced in Section 611.611.
1575

1576 "ASTM D2036-06 A" means "Standard Test Methods for Cyanide
1577 in Water", "Test Method A – Total Cyanides after Distillation",
1578 approved 2006, referenced in Section 611.611.
1579

1580 "ASTM D2036-98 B" means "Standard Test Methods for Cyanide
1581 in Water", "Test Method B – Cyanides Amenable to Chlorination
1582 by Difference", approved 1998, referenced in Section 611.611.
1583

1584 "ASTM D2036-06 B" means "Standard Test Methods for Cyanide
1585 in Water", "Test Method B – Cyanides Amenable to Chlorination
1586 by Difference", approved 2006, referenced in Section 611.611.

1587
1588 "ASTM D2459-72" means "Standard Test Method for Gamma
1589 Spectrometry in Water", approved July 28, 1972, discontinued
1590 1988, referenced in Section 611.720.
1591
1592 "ASTM D2460-97" means "Standard Test Method for
1593 Radionuclides of Radium in Water", approved 1997, referenced in
1594 Section 611.720.
1595
1596 "ASTM D2460-07" means "Standard Test Method for
1597 Radionuclides of Radium in Water", approved 2007, referenced in
1598 Section 611.720.
1599
1600 "ASTM D2907-97" means "Standard Test Methods for
1601 Microquantities of Uranium in Water by Fluorometry", approved
1602 1997, referenced in Section 611.720.
1603
1604 "ASTM D2972-97 B" means "Standard Test Methods for Arsenic
1605 in Water", "Test Method B – Atomic Absorption, Hydride
1606 Generation", approved 1997, referenced in Section 611.611.
1607
1608 "ASTM D2972-03 B" means "Standard Test Methods for Arsenic
1609 in Water", "Test Method B – Atomic Absorption, Hydride
1610 Generation", approved 2003, referenced in Section 611.611.
1611
1612 "ASTM D2972-15 B" means "Standard Test Methods for Arsenic
1613 in Water", "Test Method B – Atomic Absorption, Hydride
1614 Generation", approved 2015, referenced in Section 611.611.
1615
1616 "ASTM D2972-97 C" means "Standard Test Methods for Arsenic
1617 in Water", "Test Method C – Atomic Absorption, Graphite
1618 Furnace", approved 1997, referenced in Section 611.611.
1619
1620 "ASTM D2972-03 C" means "Standard Test Methods for Arsenic
1621 in Water", "Test Method C – Atomic Absorption, Graphite
1622 Furnace", approved 2003, referenced in Section 611.611.
1623
1624 "ASTM D2972-15 C" means "Standard Test Methods for Arsenic
1625 in Water", "Test Method C – Atomic Absorption, Graphite
1626 Furnace", approved 2015, referenced in Section 611.611.
1627
1628 "ASTM D3223-97" means "Standard Test Method for Total
1629 Mercury in Water", approved 1997, referenced in Section 611.611.

1630
1631 "ASTM D3223-02" means "Standard Test Method for Total
1632 Mercury in Water", approved 2002, referenced in Section 611.611.
1633
1634 "ASTM D3223-12" means "Standard Test Method for Total
1635 Mercury in Water", approved 2012, referenced in Section 611.611.
1636
1637 "ASTM D3223-17" means "Standard Test Method for Total
1638 Mercury in Water", approved 2017, referenced in Section 611.611.
1639
1640 "ASTM D3454-97" means "Standard Test Method for Radium-226
1641 in Water", approved 1997, referenced in Section 611.720.
1642
1643 "ASTM D3454-05" means "Standard Test Method for Radium-226
1644 in Water", approved 2005, referenced in Section 611.720.
1645
1646 "ASTM D3454-18" means "Standard Test Method for Radium-226
1647 in Water", approved ~~2018~~2005, referenced in Section 611.720.
1648
1649 "ASTM D3454-21" means "Standard Test Method for Radium-226
1650 in Water", approved 2021, referenced in Section 611.720.
1651
1652 "ASTM D3559-96 D" means "Standard Test Methods for Lead in
1653 Water", "Test Method D – Atomic Absorption, Graphite Furnace",
1654 approved August 6, 1990, referenced in Section 611.611.
1655
1656 "ASTM D3559-03 D" means "Standard Test Methods for Lead in
1657 Water", "Test Method D – Atomic Absorption, Graphite Furnace",
1658 approved 2003, referenced in Section 611.611.
1659
1660 "ASTM D3559-08 D" means "Standard Test Methods for Lead in
1661 Water", "Test Method D – Atomic Absorption, Graphite Furnace",
1662 approved 2008, referenced in Section 611.611.
1663
1664 "ASTM D3559-15 D" means "Standard Test Methods for Lead in
1665 Water", "Test Method D – Atomic Absorption, Graphite Furnace",
1666 approved 2015, referenced in Section 611.611.
1667
1668 "ASTM D3645-97 B" means "Standard Test Methods for
1669 Beryllium in Water", "Method B – Atomic Absorption, Graphite
1670 Furnace", approved 1997, referenced in Section 611.611.
1671

1672 "ASTM D3645-03 B" means "Standard Test Methods for
1673 Beryllium in Water", "Method B – Atomic Absorption, Graphite
1674 Furnace", approved 2003, referenced in Section 611.611.
1675
1676 "ASTM D3645-08 B" means "Standard Test Methods for
1677 Beryllium in Water", "Method B – Atomic Absorption, Graphite
1678 Furnace", approved 2008, referenced in Section 611.611.
1679
1680 "ASTM D3645-15 B" means "Standard Test Methods for
1681 Beryllium in Water", "Method B – Atomic Absorption, Graphite
1682 Furnace", approved 2015, referenced in Section 611.611.
1683
1684 "ASTM D3649-91" means "Standard Test Method for High-
1685 Resolution Gamma-Ray Spectrometry of Water", approved 1991,
1686 referenced in Section 611.720.
1687
1688 "ASTM D3649-98a" means "Standard Test Method for High-
1689 Resolution Gamma-Ray Spectrometry of Water", approved 1998,
1690 referenced in Section 611.720.
1691
1692 "ASTM D3649-06" means "Standard Test Method for High-
1693 Resolution Gamma-Ray Spectrometry of Water", approved 2006,
1694 referenced in Section 611.720.
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1696 "ASTM D3697-92" means "Standard Test Method for Antimony in
1697 Water", approved 1992, referenced in Section 611.611.
1698
1699 "ASTM D3697-02" means "Standard Test Method for Antimony in
1700 Water", approved 2002, referenced in Section 611.611.
1701
1702 "ASTM D3697-07" means "Standard Test Method for Antimony in
1703 Water", approved 2007, referenced in Section 611.611.
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1705 "ASTM D3697-12" means "Standard Test Method for Antimony in
1706 Water", approved 2012, referenced in Section 611.611.
1707
1708 "ASTM D3697-17" means "Standard Test Method for Antimony in
1709 Water", approved 2017, referenced in Section 611.611.
1710
1711 "ASTM D3859-98 A" means "Standard Test Methods for
1712 Selenium in Water", "Method A – Atomic Absorption, Hydride
1713 Method", approved 1998, referenced in Section 611.611.
1714

1715 "ASTM D3859-03 A" means "Standard Test Methods for
1716 Selenium in Water", "Method A – Atomic Absorption, Hydride
1717 Method", approved 2003, referenced in Section 611.611.
1718
1719 "ASTM D3859-08 A" means "Standard Test Methods for
1720 Selenium in Water", "Method A – Atomic Absorption, Hydride
1721 Method", approved 2008, referenced in Section 611.611.
1722
1723 "ASTM D3859-15 A" means "Standard Test Methods for
1724 Selenium in Water", "Method A – Atomic Absorption, Hydride
1725 Method", approved 2015, referenced in Section 611.611.
1726
1727 "ASTM D3859-98 B" means "Standard Test Methods for Selenium
1728 in Water", "Method B – Atomic Absorption, Graphite Furnace",
1729 approved 1998, referenced in Section 611.611.
1730
1731 "ASTM D3859-03 B" means "Standard Test Methods for Selenium
1732 in Water", "Method B – Atomic Absorption, Graphite Furnace",
1733 approved 2003, referenced in Section 611.611.
1734
1735 "ASTM D3859-08 B" means "Standard Test Methods for Selenium
1736 in Water", "Method B – Atomic Absorption, Graphite Furnace",
1737 approved 2008, referenced in Section 611.611.
1738
1739 "ASTM D3859-15 B" means "Standard Test Methods for Selenium
1740 in Water", "Method B – Atomic Absorption, Graphite Furnace",
1741 approved 2015, referenced in Section 611.611.
1742
1743 "ASTM D3867-90 A" means "Standard Test Methods for Nitrite-
1744 Nitrate in Water", "Test Method A – Automated Cadmium
1745 Reduction", approved 1990, referenced in Section 611.611.
1746
1747 "ASTM D3867-90 B" means "Standard Test Methods for Nitrite-
1748 Nitrate in Water", "Test Method B – Manual Cadmium
1749 Reduction", approved January 10, 1990, referenced in Section
1750 611.611.
1751
1752 "ASTM D3972-97" means "Standard Test Method for Isotopic
1753 Uranium in Water by Radiochemistry", approved 1997, referenced
1754 in Section 611.720.
1755

1756 "ASTM D3972-02" means "Standard Test Method for Isotopic
1757 Uranium in Water by Radiochemistry", approved 2002, referenced
1758 in Section 611.720.
1759
1760 "ASTM D3972-09" means "Standard Test Method for Isotopic
1761 Uranium in Water by Radiochemistry", approved 2009, referenced
1762 in Section 611.720.
1763
1764 "ASTM D4107-91" means "Standard Test Method for Tritium in
1765 Drinking Water", approved 1991, referenced in Section 611.720.
1766
1767 "ASTM D4107-98" means "Standard Test Method for Tritium in
1768 Drinking Water", approved 1998, referenced in Section 611.720.
1769
1770 "ASTM D4107-08" means "Standard Test Method for Tritium in
1771 Drinking Water", approved 2008, referenced in Section 611.720.
1772
1773 "ASTM D4107-20" means "Standard Test Method for Tritium in
1774 Drinking Water", approved 2020, referenced in Section 611.720.
1775
1776 "ASTM D4327-97" means "Standard Test Method for Anions in
1777 Water by Ion Chromatography", approved 1997, referenced in
1778 Section 611.611.
1779
1780 "ASTM D4327-03" means "Standard Test Method for Anions in
1781 Water by Ion Chromatography", approved 2003, referenced in
1782 Section 611.611.
1783
1784 "ASTM D4327-11" means "Standard Test Method for Anions in
1785 Water by Ion Chromatography", approved 2011, referenced in
1786 Section 611.611.
1787
1788 "ASTM D4327-17" means "Standard Test Method for Anions in
1789 Water by Ion Chromatography", approved 2017, referenced in
1790 Section 611.611.
1791
1792 "ASTM D4785-93" means "Standard Test Method for Low-Level
1793 Iodine-131 in Water", approved 1993, referenced in Section
1794 611.720.
1795
1796 "ASTM D4785-00a" means "Standard Test Method for Low-Level
1797 Iodine-131 in Water", approved 2000, referenced in Section
1798 611.720.

1799
1800 "ASTM D4785-08" means "Standard Test Method for Low-Level
1801 Iodine-131 in Water", approved 2008, referenced in Section
1802 611.720.
1803
1804 "ASTM D4785-20" means "Standard Test Method for Low-Level
1805 Iodine-131 in Water", approved 2020, referenced in Section
1806 611.720.
1807
1808 "ASTM D5174-97" means "Standard Test Method for Trace
1809 Uranium in Water by Pulsed-Laser Phosphorimetry", approved
1810 1997, referenced in Section 611.720.
1811
1812 "ASTM D5174-02" means "Standard Test Method for Trace
1813 Uranium in Water by Pulsed-Laser Phosphorimetry", approved
1814 2002, referenced in Section 611.720.
1815
1816 "ASTM D5174-07" means "Standard Test Method for Trace
1817 Uranium in Water by Pulsed-Laser Phosphorimetry", approved
1818 2007, referenced in Section 611.720.
1819
1820 "ASTM D5317-93" means "Standard Test Method for
1821 Determination of Chlorinated Organic Acid Compounds in Water
1822 by Gas Chromatography with an Electron Capture Detector",
1823 approved 1993, referenced in Section 611.645.
1824
1825 "ASTM D5317-98(2003)" means "Standard Test Method for
1826 Determination of Chlorinated Organic Acid Compounds in Water
1827 by Gas Chromatography with an Electron Capture Detector",
1828 approved 1998 (reapproved 2003), referenced in Section 611.645.
1829
1830 "ASTM D5317-20" means "Standard Test Method for
1831 Determination of Chlorinated Organic Acid Compounds in Water
1832 by Gas Chromatography with an Electron Capture Detector",
1833 approved 2020, referenced in Section 611.645.
1834
1835 "ASTM D5673-03" means "Standard Test Method for Elements in
1836 Water by Inductively Coupled Plasma-Mass Spectrometry",
1837 approved 2003, referenced in Section 611.720.
1838
1839 "ASTM D5673-05" means "Standard Test Method for Elements in
1840 Water by Inductively Coupled Plasma-Mass Spectrometry",
1841 approved 2005, referenced in Section 611.720.

1842
1843 "ASTM D5673-10" means "Standard Test Method for Elements in
1844 Water by Inductively Coupled Plasma-Mass Spectrometry",
1845 approved 2010, referenced in Section 611.720.
1846
1847 "ASTM D5673-16" means "Standard Test Method for Elements in
1848 Water by Inductively Coupled Plasma-Mass Spectrometry",
1849 approved 2016, referenced in Section 611.720.
1850
1851 "ASTM D6239-09" means "Standard Test Method for Uranium in
1852 Drinking Water by High-Resolution Alpha-Liquid-Scintillation
1853 Spectrometry", approved 2009, referenced in Section 611.720.
1854
1855 "ASTM D6508-00(2005)" means "Standard Test Method for
1856 Determination of Dissolved Inorganic Anions in Aqueous Matrices
1857 Using Capillary Ion Electrophoresis and Chromate Electrolyte",
1858 approved 2000 (revised 2005), referenced in Section 611.611.
1859
1860 "ASTM D6508-15" means "Standard Test Method for
1861 Determination of Dissolved Inorganic Anions in Aqueous Matrices
1862 Using Capillary Ion Electrophoresis and Chromate Electrolyte",
1863 approved 2015, referenced in Section 611.611.
1864
1865 "ASTM D6581-00" means "Standard Test Method for Bromate,
1866 Bromide, Chlorate, and Chlorite in Drinking Water by Chemically
1867 Suppressed Ion Chromatography", approved 2000, referenced in
1868 Section 611.381.
1869
1870 "ASTM D6581-08 A" means "Standard Test Method for Bromate,
1871 Bromide, Chlorate, and Chlorite in Drinking Water by Suppressed
1872 Ion Chromatography", "Test Method A – Chemically Suppressed
1873 Ion Chromatography", approved 2008, referenced in Section
1874 611.381.
1875
1876 "ASTM D6581-08 B" means "Standard Test Method for Bromate,
1877 Bromide, Chlorate, and Chlorite in Drinking Water by Suppressed
1878 Ion Chromatography", "Test Method B – Electrolytically
1879 Suppressed Ion Chromatography", approved 2008, referenced in
1880 Section 611.381.
1881
1882 "ASTM D6888-04" means "Standard Test Method for Available
1883 Cyanide with Ligand Displacement and Flow Injection Analysis

1884 (FIA) Utilizing Gas Diffusion Separation and Amperometric
1885 Detection", approved 2004, referenced in Section 611.611.
1886
1887 "ASTM D6919-03" means "Standard Test Method for
1888 Determination of Dissolved Alkali and Alkaline Earth Cations and
1889 Ammonium in Water and Wastewater by Ion Chromatography",
1890 approved 2003, referenced in Section 611.611.
1891
1892 "ASTM D6919-09" means "Standard Test Method for
1893 Determination of Dissolved Alkali and Alkaline Earth Cations and
1894 Ammonium in Water and Wastewater by Ion Chromatography",
1895 approved 2009, referenced in Section 611.611.
1896
1897 "ASTM D6919-17" means "Standard Test Method for
1898 Determination of Dissolved Alkali and Alkaline Earth Cations and
1899 Ammonium in Water and Wastewater by Ion Chromatography",
1900 approved 2017, referenced in Section 611.611.
1901
1902 "ASTM D7283-17" means "Standard Test Method for Alpha and
1903 Beta Activity in Water by Liquid Scintillation Counting", approved
1904 2017, referenced in Section 611.720.
1905
1906 "ATI Orion Technical Bulletin 601 (94)" means "Standard Method of
1907 Testing for Nitrate in Drinking Water" (July 1994), Part Number 221890-
1908 001. Available from Thermo-Fisher Scientific, 168 Third Ave, Waltham,
1909 MA 02451 (800-556-2323; www.thermofisher.com). Referenced in
1910 Section 611.611.
1911
1912 "Charm Fast Phage (12)" means "Fast Phage Test: Presence/Absence for
1913 Coliphage in Ground Water with Same Day Positive Prediction", ATP
1914 Case No. D09-0007, Version 009 (November 28, 2012). Available from
1915 Charm Sciences, Inc., 659 Andover St., Lawrence, MA 01843-1032.
1916 Referenced in Section 611.802 and USEPA, OGWDW (under "Ground
1917 Water Rule (PDF)").
1918
1919 "Chromocult® (00)" means "Chromocult® Coliform Agar
1920 Presence/Absence Membrane Filter Test Method for Detection and
1921 Identification of Coliform Bacteria and Escherichia coli in Finished
1922 Waters", Version 1.0 (November 2000). Available from EMD Millipore
1923 (division of Merck KGaA, Darmstadt, Germany), 290 Concord Road,
1924 Billerica, MA 01821 (800-645-5476 or 781-533-6000) and USEPA,
1925 OGWDW (under "Ground Water Rule (PDF)" and "Revised Total
1926 Coliforms Rules (PDF)"). Referenced in Sections 611.802 and 611.1052.

1927
1928 "E*Colite (98)" means "Alternative Test Procedure Case #D95-0007:
1929 Charm E*Colite Presence/Absence Test for Detection and Identification of
1930 Coliform Bacteria and Escherichia coli in Drinking Water" (January 9,
1931 1998). Available from Charm Sciences, Inc., 659 Andover St., Lawrence,
1932 MA 01843-1032 and USEPA, OGWDW (under "Ground Water Rule
1933 (PDF)" and "Revised Total Coliforms Rules (PDF)"). Referenced in
1934 Sections 611.802 and 611.1052.
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1937 "Radionuclides (PDF)" by individual method numbers).
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1940 and 2, 27th ed. (November 1990).
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1943 Radioassay", in section 4.5.2.3, "Radiometry", in 27th
1944 ed. Referenced in Section 611.720. USEPA, OGWDW
1945 lists EML (90) Ga-01 as "4.5.2.3".
1946
1947 "EML (90) Ra-05" means Ra-05, "Radium-226 in Tap
1948 Water, Urine, and Feces", in section 4.5.4,
1949 "Radiochemical", in 27th ed. Referenced in Section
1950 611.720.
1951
1952 "EML (90) Sr-01" means Sr-01, "Strontium-89", in section
1953 4.5.4, "Radiochemical", in 27th ed. Referenced in Section
1954 611.720.
1955
1956 "EML (90) Sr-02" means Sr-02, "Strontium-90", in section
1957 4.5.4, "Radiochemical", in 27th ed. Referenced in Section
1958 611.720.
1959
1960 "EML (90) U-02" means U-02, "Isotopic Uranium in
1961 Biological and Environmental Materials", in section 4.5.4,
1962 "Radiochemical", in 27th ed.
1963
1964 "EML (90) U-04" means U-04, "Uranium in Biological and
1965 Environmental Materials", in section 4.5.4,
1966 "Radiochemical", in 27th ed. Referenced in Section
1967 611.720.
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1969 EML (97). In "EML Procedures Manual", HASL 300, Volumes 1
 1970 and 2, 28th ed., Revision 0 (February 1997). Currently available
 1971 on-line from United States Department of Homeland Security,
 1972 Science and Technology Directorate (formerly United States
 1973 Department of Energy, Environmental Measurements Laboratory)
 1974 (<https://www.hSDL.org/c/view?docid=487142>).
 1975
 1976 "EML (97) Ga-01-R" means Ga-01-R, "Gamma
 1977 Radioassay", in section 4.5.2, "Radiometry", in 28th ed.
 1978 Referenced in Section 611.720.
 1979
 1980 "EML (97) Ra-04" means Ra-04-RC, "Radium-226 in Tap
 1981 Water, Urine, and Feces", in section 4.5.4,
 1982 "Radiochemical", in 28th ed. Referenced in Section
 1983 611.720.
 1984
 1985 "EML (97) Sr-01" means Sr-01-RC, "Strontium-89", in
 1986 section 4.5.4, "Radiochemical", in 28th ed. Referenced in
 1987 Section 611.720.
 1988
 1989 "EML (97) Sr-02" means Sr-02-RC, "Strontium-90", in
 1990 section 4.5.4, "Radiochemical", in 28th ed. Referenced in
 1991 Section 611.720.
 1992
 1993 "EML (97) U-02" means U-02-RC, "Isotopic Uranium in
 1994 Biological and Environmental Materials", in section 4.5.4,
 1995 "Radiochemical", in 28th ed.
 1996
 1997 "EML (97) U-04" means U-04-RC, "Uranium in Biological
 1998 and Environmental Materials", in section 4.5.4,
 1999 "Radiochemical", in 28th ed. Referenced in Section
 2000 611.720.
 2001
 2002 "Enterolert (96)" means "Evaluation of Enterolert for Enumeration of
 2003 Enterococci in Recreational Waters", Applied and Environmental
 2004 Microbiology, Oct. 1996, vol. 62, no. 10, p. 3881. Available from
 2005 American Society for Microbiology, 1752 N Street N.W., Washington,
 2006 DC 20036 (202-737-3600;
 2007 <https://journals.asm.org/doi/epdf/10.1128/aem.62.10.3881-3884.1996>).
 2008 Referenced in Section 611.802.
 2009
 2010 BOARD NOTE: In 40 CFR 141.402(c)(2), USEPA approved the method
 2011 the above literature review describes. The method itself is in the printed

2012 instructions to the proprietary kit available from IDEXX Laboratories,
 2013 Inc., One IDEXX Drive, Westbrook, Maine 04092 (800-548-6733);
 2014 <https://www.idexx.com/en/water/water-products-services/enterolert/>.
 2015 ASTM approved the method as "Standard Test Method for Enterococci in
 2016 Water Using Enterolert™", which is available in two versions from ASTM:
 2017 ASTM D6503-99 and ASTM D6503-99(2005). While it is more
 2018 conventional to incorporate by reference the method as presented in the kit
 2019 instructions or as approved by ASTM, the Board is constrained to
 2020 incorporate by reference the version that USEPA explicitly approves,
 2021 which is the version the technical literature describes.
 2022
 2023 "Georgia Radium (04)" means "Method for the Determination of Radium-
 2024 226 and Radium-228 in Drinking Water by Gamma-ray Spectrometry
 2025 Using HPGE or Ge(Li) Detectors", Revision 1.2 (December 2004).
 2026 Available from Georgia Tech Research Institute, Robert Rosson, 925
 2027 Dalney Road, Atlanta, GA 30332 (404-407-6339) and USEPA, OGWDW
 2028 (under "Radionuclides (PDF)"). Referenced in Section 611.720.
 2029
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 2031 1992). Available from Great Lakes Instruments, Inc., 8855 North 55th
 2032 Street, Milwaukee, WI 53223. Also available from USEPA, OGWDW
 2033 (under "Surface Water Treatment Rule (PDF)"). Referenced in Section
 2034 611.531.
 2035
 2036 "Guidance Manual for Filtration and Disinfection (91)" means "Guidance
 2037 Manual for Compliance with the Filtration and Disinfection Requirements
 2038 for Public Water Systems Using Surface Water Sources" (March 1991),
 2039 EPA 570/3-91-001, USEPA, Office of Drinking Water, Criteria and
 2040 Standards Division, Science and Technology Branch. Available from
 2041 NTRL (document number PB93-222933) and USEPA, NSCEP (search
 2042 "570391001"). Referenced in Sections 611.111 and 611.212.
 2043
 2044 Hach Methods. Available from Hach Company, P.O. Box 389, Loveland,
 2045 CO 80539-0389 (800-227-4224 or www.hach.com).
 2046
 2047 "Hach 8026 (15)" means Hach Method 8026, "Spectrophotometric
 2048 Measurement of Copper in Finished Drinking Water", Revision 1.2
 2049 (December 2015). Referenced in Section 611.611.
 2050 BOARD NOTE: Also available from USEPA, OGWDW (under
 2051 "Inorganic Contaminants and Other Inorganic Constituents
 2052 (PDF)").
 2053

2054 "Hach 8195 (18)" means Hach Method 8195, "Determination of
2055 Turbidity by Nephelometry", Revision 3.0 (March 2018).
2056 Referenced in Section 611.531.
2057
2058 "Hach 10029 (99) (m-ColiBlue24®)" means m-ColiBlue24® Test,
2059 Method No. 10029, "Total Coliforms and E. coli Membrane
2060 Filtration Method with m-ColiBlue24® Broth", Revision 2 (August
2061 17, 1999), document number DOC316.53.001213. Referenced in
2062 Sections 611.802 and 611.1052.
2063 BOARD NOTE: Also available from USEPA, OGWDW (under
2064 "Ground Water Rule (PDF)").
2065
2066 "Hach 10133 (00) (FilterTrak)" means Hach FilterTrak Method
2067 10133, "Determination of Turbidity by Laser Nephelometry",
2068 Revision 2.0 (January 7, 2000) in Appendix A of "Introduction to
2069 Laser Nephelometry: An Alternative to Conventional Particulate
2070 Analysis Methods". Referenced in Section 611.531.
2071 BOARD NOTE: Also available from USEPA, OGWDW (under
2072 "Surface Water Treatment Rule (PDF)").
2073
2074 "Hach 10206 (11) (TNTplus 835/836)" means Hach TNTplus
2075 835/836 Method 10206, "Spectrophotometric Measurement of
2076 Nitrate in Water and Wastewater", Revision 2.0 (January 2011).
2077 Referenced in Section 611.611.
2078 BOARD NOTE: Also available from USEPA, OGWDW (under
2079 "Inorganic Contaminants and Other Inorganic Constituents
2080 (PDF)").
2081
2082 "Hach 10225 (11) (SPADNS 2)" means Hach SPADNS 2 Method
2083 10225, "Fluoride, USEPA SPADNS 2 Method 10225", Revision
2084 2.0 (January 2011). Referenced in Section 611.611.
2085 BOARD NOTE: Also available from USEPA, OGWDW (under
2086 "Inorganic Contaminants and Other Inorganic Constituents
2087 (PDF)").
2088
2089 "Hach 10241 (15)" means Hach Method 10241,
2090 "Spectrophotometric Measurement of Free Chlorine (Cl₂) in
2091 Finished Drinking Water", Revision 1.2 (November 2015).
2092 Referenced in Sections 611.381 and 611.531.
2093 BOARD NOTE: Also available from USEPA, OGWDW (under
2094 "Disinfection Byproduct Rules (PDF)").
2095

2096 "Hach 10258 (16)" means Hach Method 10258, "Determination of
2097 Turbidity by 360° Nephelometry", Revision 1.0 (January 2016).
2098 Referenced in Section 611.531.
2099 BOARD NOTE: Also available from USEPA, OGWDW (under
2100 "Surface Water Treatment Rule (PDF)").
2101
2102 "Hach 10258 (18)" means Hach Method 10258, "Determination of
2103 Turbidity by 360° Nephelometry", Revision 2.0 (March 2018).
2104 Referenced in Section 611.531.
2105
2106 "Hach 10260 (13)" means Hach Method 10260, "Determination of
2107 Chlorinated Oxidants (Free and Total) in Water Using Disposable
2108 Planar Reagent-filled Cuvettes and Mesofluic Channel
2109 Colorimetry" (April 2013). Referenced in Sections 611.381 and
2110 611.531.
2111 BOARD NOTE: Also available from USEPA, OGWDW (under
2112 "Disinfection Byproduct Rules (PDF)").
2113
2114 "Hach 10261 (15)" means Hach Method 10261, "Total Organic
2115 Carbon in Finished Drinking Water by Catalyzed Ozone Hydroxyl
2116 Radical Oxidation Infrared Analysis", Revision 1.2 (December
2117 2015). Referenced in Section 611.381.
2118 BOARD NOTE: Also available from USEPA, OGWDW (under
2119 "Disinfection Byproduct Rules (PDF)").
2120
2121 "Hach 10267 (15)" means Hach Method 10267,
2122 "Spectrophotometric Measurement of Total Organic Carbon
2123 (TOC) in Finished Drinking Water", Revision 1.2 (December
2124 2015). Referenced in Section 611.381.
2125 BOARD NOTE: Also available from USEPA, OGWDW (under
2126 "Disinfection Byproduct Rules (PDF)").
2127
2128 "Hach 10272 (15)" means Hach Method 10272,
2129 "Spectrophotometric Measurement of Copper in Finished Drinking
2130 Water", Revision 1.2 (December 2015). Referenced in Section
2131 611.611.
2132 BOARD NOTE: Also available from USEPA, OGWDW (under
2133 "Inorganic Contaminants and Other Inorganic Constituents
2134 (PDF)").
2135
2136 "Hach 10312 (22)" means Hach Method 10312,
2137 "Spectrophotometric Measurement of Copper in Finished Drinking
2138 Water Aluminum -Chromeazurol S Complex (AL-CAS) Using

2139 [Planar Reagent-filled Cuvettes," Revision 1.0 \(August 2022\).](#)
2140 [Referenced in Section 611.611.](#)
2141

2142 "ITS D99-003 (03)" means "Method # (D99-003): Free Chlorine Species
2143 (HOCl- and OCl-) by Test Strip", Revision 3.0 (November 21, 2003).
2144 Available from Industrial Test Systems, Inc., 1875 Langston St., Rock
2145 Hill, SC 29730 (803-329-2999) and USEPA, OGWDW (under
2146 "Disinfection Byproduct Rules (PDF)"). Referenced in Section 611.381.
2147

2148 "Kelada 01 (01)" means "Method Kelada-01: Kelada Automated Test
2149 Methods for Total Cyanide, Acid Dissociable Cyanide, and Thiocyanate",
2150 Revision 1.2 (August 2001), USEPA Office of Water, document number
2151 EPA 821/B-01-009. Available from NTRL (document number PB2001-
2152 108275) and USEPA, OGWDW (under "Inorganic Contaminants and
2153 Other Inorganic Constituents (PDF)"). Referenced in Section 611.611.
2154

2155 Lovibond Methods. Available from Tintometer, Inc., 6456 Parkland
2156 Drive, Sarasota, FL 34243 (800-922-5242, 941-758-6410, or
2157 www.lovibond.us) and USEPA, OGWDW (under "Surface Water
2158 Treatment Rule (PDF)").
2159

2160 "Lovibond PTV 1000 (16)" means "Continuous Measurement of
2161 Drinking Water Turbidity Using a Lovibond PTV 1000 White
2162 Light LED Turbidimeter", Revision 1.0 (December 20, 2016).
2163 Referenced in Section 611.531.
2164

2165 "Lovibond PTV 2000 (16)" means "Continuous Measurement of
2166 Drinking Water Turbidity Using a Lovibond PTV 2000 660-nm
2167 LED Turbidimeter", Revision 1.0 (December 20, 2016).
2168 Referenced in Section 611.531.
2169

2170 "Lovibond TB 3500 (21)" means "Measurement of Drinking Water
2171 Turbidity of a Captured Sample Using a Lovibond White Light
2172 LED Portable Turbidimeter", Revision 1.0 (2021). Referenced in
2173 Section 611.531.
2174

2175 "Lovibond TB 5000 (21)" means "Measurement of Drinking Water
2176 Turbidity of a Captured Sample Using a Lovibond 660-nm LED
2177 Portable Turbidimeter", Revision 1.0 (2021). Referenced in
2178 Section 611.531.
2179

2180 "Lovibond PTV 6000 (16)" means "Continuous Measurement of
2181 Drinking Water Turbidity Using a Lovibond PTV 6000 Laser

2182 Turbidimeter", Revision 1.0 (December 20, 2016). Referenced in
2183 Section 611.531.

2184
2185 "Lovibond TB 6000 (21)" means "Measurement of Drinking Water
2186 Turbidity of a Captured Sample Using a Lovibond Portable Laser
2187 Turbidimeter", Revision 1.0 (2021). Referenced in Section
2188 611.531.

2189
2190 Maine Methods. Available from Maine Health and Environmental Testing
2191 Laboratory, 221 State Street, Augusta, ME 04333 (207-287-2727).

2192
2193 "ME355.01 (09)" means "Determination of Cyanide in Drinking
2194 Water by GC/MS Headspace Analysis", Revision 1 (May 26,
2195 2009). Referenced in Section 611.611. Also available from NEMI
2196 and USEPA, OGWDW (under "Inorganic Contaminants and Other
2197 Inorganic Constituents (PDF)").

2198
2199 "ME 531 (19)" means "Measurement of N-
2200 Methylcarbamoyloximes and N-Methylcarbamates in Drinking
2201 Water by LC-MS/MS", version 1.0 (September 2019). Referenced
2202 in Section 611.645.

2203
2204 ["Method 537.1", Version 2.0: Determination of Selected Per- and](#)
2205 [Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase](#)
2206 [Extraction and Liquid Chromatography/Tandem Mass Spectrometry](#)
2207 [\(LC/MS/MS\), EPA/600/R-20/006, March 2020](#)

2208
2209 Mitchell Methods. Available from Leck Mitchell, PhD, PE, 656
2210 Independence Valley Dr., Grand Junction, CO 81507 (920-244-8661); ,
2211 NEMI (except for Mitchell M5331 (16)); and USEPA, OGWDW (under
2212 "Surface Water Treatment Rule (PDF)").

2213
2214 "Mitchell M5271 (09)" means Mitchell Method M5271,
2215 "Determination of Turbidity by Laser Nephelometry", Revision 1.1
2216 (March 5, 2009). Referenced in Section 611.531.

2217
2218 "Mitchell M5331 (09)" means Mitchell Method M5331,
2219 "Determination of Turbidity by Laser Nephelometry", Revision 1.1
2220 (March 2009). Referenced in Section 611.531.

2221
2222 "Mitchell M5331 (16)" means Mitchell Method M5331,
2223 "Determination of Turbidity by Laser Nephelometry", Revision 1.2
2224 (February 2016). Referenced in Section 611.531.

2225
 2226 "Modified Colitag™ (09)" means "Modified Colitag™ Test Method for
 2227 Simultaneous Detection of E. coli and other Total Coliforms in Water",
 2228 (ATP D05-0035) (August 28, 2009). Available from CPI International,
 2229 Inc., 5580 Skylane Blvd., Santa Rosa, CA 95403 (800-878-7654;
 2230 www.cpiinternational.com); NEMI; and USEPA, OGWDW (under
 2231 "Ground Water Rule (PDF)" and "Revised Total Coliforms Rules
 2232 (PDF)"). Referenced in Sections 611.802 and 611.1052.
 2233

2234 "Modified Colitag™ (20)" means "Modified Colitag™ Test Method for
 2235 Simultaneous Detection of Total Coliforms and E. coli in Water", Version
 2236 2.0, (June 2020). Available from Neogen Corporation, 620 Leshar Place,
 2237 Lansing, MI 48912. Referenced in Sections 611.802 and 611.1052.
 2238

2239 "NBS Handbook 69 (63)" means "Maximum Permissible Body Burdens
 2240 and Maximum Permissible Concentrations of Radionuclides in Air and in
 2241 Water for Occupational Exposure" (August 1963), U.S. Department of
 2242 Commerce, National Bureau of Standards. Available from U.S. Nuclear
 2243 Regulatory Commission, One White Flint North, 115 Rockville Pike,
 2244 Rockville, MD 20852-2738;
 2245 <https://www.nrc.gov/docs/ML2020/ML20206L091.pdf> or Oak Ridge
 2246 Associated Universities (ORAU), 100 ORAU Way, Oak Ridge, TN
 2247 37830 (865-576-3146); [https://www.ornl.gov/health-physics-](https://www.ornl.gov/health-physics-museum/files/library/nbs/nbs-69.pdf)
 2248 [museum/files/library/nbs/nbs-69.pdf](https://www.ornl.gov/health-physics-museum/files/library/nbs/nbs-69.pdf). Referenced in Sections 611.101 and
 2249 611.330.

2250 BOARD NOTE: The 1963 version of National Bureau of Standards
 2251 Handbook 69 modifies the 1959 publication of the National Committee on
 2252 Radiation Protection, NCRP Report No. 22, of the same title. The version
 2253 available on the NCRP website is the 1959 document.
 2254

2255 "NECi Nitrate Reductase (06)" means "Method for Nitrate Reductase
 2256 Nitrate-Nitrogen Analysis of Drinking Water", Version 1.0, Revision 2.0
 2257 (February 1, 2016). Available from Superior Enzymes Inc., 334 Hecla
 2258 Street, Lake Linden, Michigan 49945 (906-296-1115). Also available
 2259 from USEPA, OGWDW (under "Inorganic Contaminants and Other
 2260 Inorganic Constituents (PDF)"). Referenced in Section 611.611.
 2261

2262 "New Jersey Radium (90)" means "Determination of Ra-228 in Drinking
 2263 Water" (August 1990), New Jersey Department of Environmental
 2264 Protection, Division of Environmental Quality, Bureau of Radiation and
 2265 Inorganic Analytical Services. Available from publisher, 9 Ewing Street,
 2266 Trenton, NJ 08625. Referenced in Section 611.720.
 2267

2268 "New York Radium (82)" means "Determination of 226Ra and 228Ra,
2269 Ra-02" (January 1980, revised June 1982), Radiological Sciences Institute,
2270 Center for Laboratories and Research, New York State Department of
2271 Health. Available from publisher, Empire State Plaza, Albany, NY
2272 12201. Referenced in Section 611.720.
2273
2274 "OIA-1677 (04)" means "Method OIA-1677 DW, Available Cyanide by
2275 Flow Injection, Ligand Exchange, and Amperometry" (January 2004),
2276 document number EPA 821/R-04/001. Referenced in Section 611.611.
2277 Available from; USEPA, NSCEP (search "821R04001"); and USEPA,
2278 OGWDW (under "Inorganic Contaminants and Other Inorganic
2279 Constituents (PDF)").
2280
2281 "Orion AQ4500 (09)" means "Determination of Turbidity by LED
2282 Nephelometry", Revision 5 (March 12, 2009). Available from Thermo-
2283 Fisher Scientific, 168 Third Ave, Waltham, MA 02451 (800-556-2323 or
2284 www.thermofisher.com); NEMI; and USEPA, OGWDW (under "Surface
2285 Water Treatment Rule (PDF)"). Referenced in Section 611.531.
2286
2287 Palintest Methods. Available from Palintest, Ltd., 600 Corporate Circle,
2288 Suite F, Golden, CO 80401 (720-221-6878).
2289
2290 "Palintest 1001 (99)" means "Method 1001: Lead in Drinking
2291 Water by Differential Pulse Anodic Stripping Voltammetry",
2292 August 1999, referenced in Section 611.611.
2293 BOARD NOTE: Also available from USEPA, OGWDW (under
2294 "Inorganic Contaminants and Other Inorganic Constituents
2295 (PDF)").
2296
2297 "Palintest 1001 (20)" means "Method 1001: Lead in Drinking
2298 Water by Differential Pulse Anodic Stripping Voltammetry", May
2299 2020, Revision 1.1, referenced in Section 611.611.
2300 BOARD NOTE: Also available from USEPA, OGWDW (under
2301 "Inorganic Contaminants and Other Inorganic Constituents
2302 (PDF)").
2303
2304 "Palintest ChlordioX Plus (13)" means "Chlorine Dioxide and
2305 Chlorite in Drinking Water by Amperometry using Disposable
2306 Sensors", November 2013, referenced in Sections 611.381 and
2307 611.531.
2308 BOARD NOTE: Also available from USEPA, OGWDW (under
2309 "Disinfection Byproduct Rules (PDF)").
2310

2311 "Palintest ChlordioX Plus (20)" means "Chlorine Dioxide and
2312 Chlorite in Drinking Water by Amperometry using Disposable
2313 Sensors", Version 1.1 (February 2020), referenced in Sections
2314 611.381 and 611.531.
2315
2316 "Palintest ChloroSense (09)" means "Measurement of Free and
2317 Total Chlorine in Drinking Water by Palintest ChloroSense",
2318 September 2009, referenced in Sections 611.381 and 611.531.
2319 BOARD NOTE: Also available from NEMI and USEPA,
2320 OGWDW (under "Disinfection Byproduct Rules (PDF)").
2321
2322 "Palintest ChloroSense (20)" means "Free and Total Chlorine in
2323 Drinking Water by Amperometry using disposable sensors",
2324 Revision 1.1 (February 2020), referenced in Sections 611.381 and
2325 611.531.
2326
2327 "QuikChem 10-204-00-1-X (00)" means "Digestion and distillation of
2328 total cyanide in drinking and wastewaters using MICRO DIST and
2329 determination of cyanide by flow injection analysis", Revision 2.1
2330 (November 30, 2000). Available from Lachat Instruments, 6645 W. Mill
2331 Rd., Milwaukee, WI 53218 (414-358-4200) and USEPA, OGWDW
2332 (under "Inorganic Contaminants and Other Inorganic Constituents
2333 (PDF)"). Referenced in Section 611.611.
2334
2335 "RAPID'E. coli (20)" means "Simultaneous Detection of Total Coliform
2336 Bacteria and Escherichia coli Using RAPID'E. coli 2 (REC2) in Drinking
2337 Water" (May 2020). Available from Bio-Rad Laboratories, 2000 Nobel
2338 Drive, Hercules, California 94547. Referenced in Sections 611.802 and
2339 611.1052.
2340
2341 "Readycult® (07)" means "Readycult Coliforms 100 Presence/Absence
2342 Test for Detection and Identification of Coliform Bacteria and Escherichia
2343 coli in Finished Waters", Version 1.1 (January 2007). Available from
2344 EMD Millipore (division of Merck KGaA, Darmstadt, Germany), 290
2345 Concord Road, Billerica, MA 01821 (800-645-5476 or 781-533-6000)
2346 and USEPA, OGWDW (under "Ground Water Rule (PDF)" and "Revised
2347 Total Coliforms Rules (PDF)"). Referenced in Sections 611.802 and
2348 611.1052.
2349
2350 "SimPlate (00)" means "IDEXX SimPlate™ HPC Test Method for
2351 Heterotrophs in Water" (November 29, 2000). Available from IDEXX
2352 Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092 (800-
2353 548-6733). Referenced in Section 611.531.

2354
 2355 SM Methods. Approved as the version in the indicated editions of
 2356 "Standard Methods for the Examination of Water and Wastewater".
 2357 Available from the American Public Health Association, 800 I Street NW,
 2358 Washington, DC 20005, 202-777-2742; American Water Works
 2359 Association, 6666 West Quincy Ave., Denver, CO 80235, 303-794-7711,
 2360 <https://www.awwa.org/Publications/Standard-Methods>; Water
 2361 Environment Federation, 601 Wythe Street, Alexandria, VA 22314, 800-
 2362 666-0206, www.wef.org; or Standard Methods Online, 800-633-4931,
 2363 www.standardmethods.org.
 2364

2365 BOARD NOTE: The Board did not separately list versions of methods
 2366 from Standard Methods Online also appearing in a printed edition. Using
 2367 a method in the approved version as available from Standard Methods
 2368 Online is acceptable.
 2369

2370 "SM 302 (71)" means Method 302, "Gross Alpha and Gross Beta
 2371 Radioactivity in Water (Total, Suspended, and Dissolved)", only
 2372 the version in the 13th edition. Referenced in Section 611.720.
 2373

2374 "SM 303 (71)" means Method 303, "Total Radioactive Strontium
 2375 and Strontium 90 in Water", only the version in the 13th edition.
 2376 Referenced in Section 611.720.
 2377

2378 "SM 304 (71)" means Method 304, "Radium in Water by
 2379 Precipitation", only the version in the 13th edition. Referenced in
 2380 Section 611.720.
 2381

2382 "SM 305 (71)" means Method 305, "Radium 226 by Radon in
 2383 Water (Soluble, Suspended, and Total)", only the version in the
 2384 13th edition. Referenced in Section 611.720.
 2385

2386 "SM 306 (71)" means Method 306, "Tritium in Water", in
 2387 "Standard Methods for the Examination of Water and
 2388 Wastewater", only the version in the 13th edition. Referenced in
 2389 Section 611.720.
 2390

2391 "SM 2130 B (88)" means Method 2130 B, "Turbidity",
 2392 "Nephelometric Method", only the version in the 18th edition.
 2393 Referenced in Section 611.531.
 2394

2395 "SM 2130 B (94)" means Method 2130 B, "Turbidity",
 2396 "Nephelometric Method", only the version in the 19th and 20th
 2397 editions. Referenced in Section 611.531.
 2398
 2399 "SM 2130 B (01)" means Method 2130 B, "Turbidity",
 2400 "Nephelometric Method", only the version in the 21st, 22nd, ~~and~~
 2401 23rd, and 24th editions. Referenced in Section 611.531.
 2402
 2403 "SM 2320 B (91)" means Method 2320 B, "Alkalinity", "Titration
 2404 Method", only the version in the 18th and 19th editions. Referenced
 2405 in Section 611.611.
 2406
 2407 "SM 2320 B (97)" means Method 2320 B, "Alkalinity", "Titration
 2408 Method", only the version in the 20th, 21st, 22nd, ~~and~~ 23rd, and 24th,
 2409 editions. Referenced in Section 611.611.
 2410
 2411 "SM 2510 B (91)" means Method 2510 B, "Conductivity",
 2412 "Laboratory Method", only the version in the 18th and 19th editions.
 2413 Referenced in Section 611.611.
 2414
 2415 "SM 2510 B (97)" means Method 2510 B, "Conductivity",
 2416 "Laboratory Method", only the version in the 20th, 21st, 22nd, ~~and~~
 2417 23rd, and 24th editions. Referenced in Section 611.611.
 2418
 2419 "SM 2550 (88)" means Method 2550, "Temperature, Laboratory
 2420 and Field Methods", only the version in the 18th edition.
 2421 Referenced in Section 611.611.
 2422
 2423 "SM 2550 (93)" means Method 2550, "Temperature, Laboratory
 2424 and Field Methods", only the version in the 19th and 20th editions.
 2425 Referenced in Section 611.611.
 2426
 2427 "SM 2550 (00)" means Method 2550, "Temperature, Laboratory
 2428 and Field Methods", only the version in the 21st edition.
 2429 Referenced in Section 611.611.
 2430
 2431 "SM 2550 (10)" means Method 2550, "Temperature, Laboratory
 2432 and Field Methods", only the version in the 22nd, ~~and~~ 23rd, and 24th
 2433 editions. Referenced in Section 611.611.
 2434
 2435 "SM 3111 B (89)" means Method 3111 B, "Metals by Flame
 2436 Atomic Absorption Spectrometry", "Direct Air-Acetylene Flame

2437 Method", only the version in the 18th edition. Referenced in
2438 Sections 611.611 and 611.612.
2439
2440 "SM 3111 B (93)" means Method 3111 B, "Metals by Flame
2441 Atomic Absorption Spectrometry", "Direct Air-Acetylene Flame
2442 Method", only the version in the 19th edition. Referenced in
2443 Sections 611.611 and 611.612.
2444
2445 "SM 3111 B (99)" means Method 3111 B, "Metals by Flame
2446 Atomic Absorption Spectrometry", "Direct Air-Acetylene Flame
2447 Method" only the versions in the 20th, 21st, 22nd, 23rd, and 24th
2448 editions. Referenced in Sections 611.611 and 611.612.
2449
2450 "SM 3111 D (89)" means Method 3111 D, "Metals by Flame
2451 Atomic Absorption Spectrometry", "Direct Nitrous Oxide-
2452 Acetylene Flame Method", only the version in the 19th edition.
2453 Referenced in Section 611.611.
2454
2455 "SM 3111 D (93)" means Method 3111 D, "Metals by Flame
2456 Atomic Absorption Spectrometry", "Direct Nitrous Oxide-
2457 Acetylene Flame Method", only the version in the 19th edition.
2458 Referenced in Section 611.611.
2459
2460 "SM 3111 D (99)" means Method 3111 D, "Metals by Flame
2461 Atomic Absorption Spectrometry", "Direct Nitrous Oxide-
2462 Acetylene Flame Method", only the version in the 21st, 22nd, ~~and~~
2463 23rd, and 24th editions. Referenced in Section 611.611.
2464
2465 "SM 3112 B (88)" means Method 3112 B, "Metals by Cold-Vapor
2466 Atomic Absorption Spectrometry", "Cold-Vapor Atomic
2467 Absorption Spectrometric Method", only the version in the 18th
2468 edition. Referenced in Section 611.611.
2469
2470 "SM 3112 B (93)" means Method 3112 B, "Metals by Cold-Vapor
2471 Atomic Absorption Spectrometry", "Cold-Vapor Atomic
2472 Absorption Spectrometric Method", only the version in the 19th
2473 edition. Referenced in Section 611.611.
2474
2475 "SM 3112 B (99)" means Method 3112 B, "Metals by Cold-Vapor
2476 Atomic Absorption Spectrometry", "Cold-Vapor Atomic
2477 Absorption Spectrometric Method", only the version in the 21st
2478 edition. Referenced in Section 611.611.
2479

2480 "SM 3112 B (09)" means Method 3112 B, "Metals by Cold-Vapor
2481 Atomic Absorption Spectrometry", "Cold-Vapor Atomic
2482 Absorption Spectrometric Method", only the version in the 22nd,
2483 ~~and~~ 23rd, and 24th editions. Referenced in Section 611.611.

2484
2485 "SM 3113 B (89)" means Method 3113 B, "Metals by
2486 Electrothermal Atomic Absorption Spectrometry", "Electrothermal
2487 Atomic Absorption Spectrometric Method", only the version in the
2488 18th edition. Referenced in Sections 611.611 and 611.612.

2489
2490 "SM 3113 B (93)" means Method 3113 B, "Metals by
2491 Electrothermal Atomic Absorption Spectrometry", "Electrothermal
2492 Atomic Absorption Spectrometric Method", only the version in the
2493 19th edition. (The same version appears in the 20th edition but
2494 USEPA does not approve that edition.) Referenced in Sections
2495 611.611 and 611.612.

2496
2497 "SM 3113 B (99)" means Method 3113 B, "Metals by
2498 Electrothermal Atomic Absorption Spectrometry", "Electrothermal
2499 Atomic Absorption Spectrometric Method", only the version in the
2500 21st edition. Referenced in Sections 611.611 and 611.612.

2501
2502 "SM 3113 B (04)" means Method 3113 B, "Metals by
2503 Electrothermal Atomic Absorption Spectrometry", "Electrothermal
2504 Atomic Absorption Spectrometric Method", only the version from
2505 Standard Methods Online as Method 3113 B-04. Referenced in
2506 Sections 611.611 and 611.612.

2507
2508 "SM 3113 B (10)" means Method 3113 B, "Metals by
2509 Electrothermal Atomic Absorption Spectrometry", "Electrothermal
2510 Atomic Absorption Spectrometric Method", only the version in the
2511 22nd, ~~and~~ 23rd, 24th editions. Referenced in Sections 611.611 and
2512 611.612.

2513
2514 "SM 3114 B (89)" means Method 3114 B, "Metals by Hydride
2515 Generation/Atomic Absorption Spectrometry", "Manual Hydride
2516 Generation/Atomic Absorption Spectrometric Method", only the
2517 version in the 18th edition. Referenced in Section 611.611.

2518
2519 "SM 3114 B (93)" means Method 3114 B, "Metals by Hydride
2520 Generation/Atomic Absorption Spectrometry", "Manual Hydride
2521 Generation/Atomic Absorption Spectrometric Method", only the
2522 version in the 19th edition. Referenced in Section 611.611.

2523
 2524 "SM 3114 B (97)" means Method 3114 B, "Metals by Hydride
 2525 Generation/Atomic Absorption Spectrometry", "Manual Hydride
 2526 Generation/Atomic Absorption Spectrometric Method", only the
 2527 version in the 21st edition. (The same version appears in the 20th
 2528 edition, but USEPA does not approve that edition.) Referenced in
 2529 Section 611.611.
 2530
 2531 "SM 3114 B (09)" means Method 3114 B, "Metals by Hydride
 2532 Generation/Atomic Absorption Spectrometry", "Manual Hydride
 2533 Generation/Atomic Absorption Spectrometric Method", only the
 2534 version in the 22nd, ~~and~~ 23rd, and 24th editions. Referenced in
 2535 Section 611.611.
 2536
 2537 "SM 3120 B (89)" means Method 3120 B, "Metals by Plasma
 2538 Emission Spectroscopy", "Inductively Coupled Plasma (ICP)
 2539 Method", only the version in the 18th edition. Referenced in
 2540 Sections 611.611 and 611.612.
 2541
 2542 "SM 3120 B (93)" means Method 3120 B, "Metals by Plasma
 2543 Emission Spectroscopy", "Inductively Coupled Plasma (ICP)
 2544 Method", only the version in the 19th and 20th editions. Referenced
 2545 in Sections 611.611 and 611.612.
 2546
 2547 "SM 3120 B (99)" means Method 3120 B, "Metals by Plasma
 2548 Emission Spectroscopy", "Inductively Coupled Plasma (ICP)
 2549 Method", only the version in the 21st, 22nd, ~~and~~ 23rd, and 24th
 2550 editions. Referenced in Sections 611.611 and 611.612.
 2551
 2552 "SM 3125 (97)" means Method 3125, "Metals by Inductively
 2553 Coupled Plasma/Mass Spectrometry", only the version in the 20th
 2554 and 21st editions. Referenced in Section 611.720.
 2555
 2556 "SM 3500-Ca B (97)" means Method 3500-Ca B, "Calcium",
 2557 "EDTA Titrimetric Method", only the version in the 20th, 21st, 22nd,
 2558 ~~and~~ 23rd, and 24th editions. Referenced in Section 611.611.
 2559
 2560 "SM 3500-Ca D (91)" means Method 3500-Ca D, "Calcium",
 2561 "EDTA Titrimetric Method", only the version in the 18th and 19th
 2562 editions. Referenced in Section 611.611.
 2563

2564 "SM 3500-Mg B (97)" means Method 3500-Mg B, "Magnesium",
 2565 "Calculation Method", only the version in the 20th, 21st, 22nd, ~~and~~
 2566 23rd and 24th editions. Referenced in Section 611.611.

2567
 2568 "SM 3500-Mg E (90)" means Method 3500-Mg E, "Magnesium",
 2569 "Calculation Method", only the version in the 18th edition.
 2570 Referenced in Section 611.611.

2571
 2572 "SM 3500-Mg E (91)" means Method 3500-Mg E, "Magnesium",
 2573 "Calculation Method", only the version in the 19th edition.
 2574 Referenced in Section 611.611.

2575
 2576 "SM 4110 B (90)" means Method 4110 B, "Determination of
 2577 Anions by Ion Chromatography", "Ion Chromatography with
 2578 Chemical Suppression of Eluent Conductivity", only the version in
 2579 the 18th edition. Referenced in Section 611.611.

2580
 2581 "SM 4110 B (91)" means Method 4110 B, "Determination of
 2582 Anions by Ion Chromatography", "Ion Chromatography with
 2583 Chemical Suppression of Eluent Conductivity", only the version in
 2584 the 19th edition. Referenced in Section 611.611.

2585
 2586 "SM 4110 B (97)" means Method 4110 B, "Determination of
 2587 Anions by Ion Chromatography", "Ion Chromatography with
 2588 Chemical Suppression of Eluent Conductivity", only the version in
 2589 the 20th edition. Referenced in Section 611.611.

2590
 2591 "SM 4110 B (00)" means Method 4110 B, "Determination of
 2592 Anions by Ion Chromatography", "Ion Chromatography with
 2593 Chemical Suppression of Eluent Conductivity", only the version in
 2594 the 21st, 22nd, ~~and~~ 23rd, and 24th editions. Referenced in Section
 2595 611.611.

2596
 2597 "SM 4500-Cl D (89)" means Method 4500-Cl D, "Chlorine
 2598 (Residual)", "Amperometric Titration Method", only the version in
 2599 the 18th edition. Referenced in Section 611.531.

2600
 2601 "SM 4500-Cl D (93)" means Method 4500-Cl D, "Chlorine
 2602 (Residual)", "Amperometric Titration Method", only the version in
 2603 the 19th and 20th editions. Referenced in Sections 611.381 and
 2604 611.531.
 2605

2606 "SM 4500-Cl D (00)" means Method 4500-Cl D, "Chlorine
2607 (Residual)", "Amperometric Titration Method", only the version in
2608 the 21st, 22nd, ~~and 23rd~~, and 24th editions. Referenced in Sections
2609 611.381 and 611.531.

2610
2611 "SM 4500-Cl E (89)" means Method 4500-Cl E, "Chlorine
2612 (Residual)", "Low-Level Amperometric Titration Method", only
2613 the version in the 18th edition. Referenced in Section 611.531.

2614
2615 "SM 4500-Cl E (93)" means Method 4500-Cl E, "Chlorine
2616 (Residual)", "Low-Level Amperometric Titration Method", only
2617 the version in the 19th and 20th editions. Referenced in Sections
2618 611.381 and 611.531.

2619
2620 "SM 4500-Cl E (00)" means Method 4500-Cl E, "Chlorine
2621 (Residual)", "Low-Level Amperometric Titration Method", only
2622 the version in the 21st, 22nd, ~~and 23rd~~, and 24th editions. Referenced
2623 in Sections 611.381 and 611.531.

2624
2625 "SM 4500-Cl F (89)" means Method 4500-Cl F, "Chlorine
2626 (Residual)", "DPD Ferrous Titrimetric Method", only the version
2627 in the 18th edition. Referenced in Section 611.531.

2628
2629 "SM 4500-Cl F (93)" means Method 4500-Cl F, "Chlorine
2630 (Residual)", "DPD Ferrous Titrimetric Method", only the version
2631 in the 19th and 20th editions. Referenced in Sections 611.381 and
2632 611.531.

2633
2634 "SM 4500-Cl F (00)" means Method 4500-Cl F, "Chlorine
2635 (Residual)", "DPD Ferrous Titrimetric Method", only the version
2636 in the 21st, 22nd, ~~and 23rd~~, and 24th editions. Referenced in Sections
2637 611.381 and 611.531.

2638
2639 "SM 4500-Cl G (89)" means Method 4500-Cl G, "Chlorine
2640 (Residual)", "DPD Colorimetric Method", only the version in the
2641 18th edition. Referenced in Section 611.531.

2642
2643 "SM 4500-Cl G (93)" means Method 4500-Cl G, "Chlorine
2644 (Residual)", "DPD Colorimetric Method", only the version in the
2645 19th and 20th editions. Referenced in Sections 611.381 and
2646 611.531.

2647

2648 "SM 4500-Cl G (00)" means Method 4500-Cl G, "Chlorine
2649 (Residual)", "DPD Colorimetric Method", only the version in the
2650 21st, 22nd, ~~and~~ 23rd, and 24th editions. Referenced in Sections
2651 611.381 and 611.531.
2652
2653 "SM 4500-Cl H (89)" means Method 4500-Cl H, "Chlorine
2654 (Residual)", "Syringaldazine (FACTS) Method", only the version
2655 in the 18th edition. Referenced in Section 611.531.
2656
2657 "SM 4500-Cl H (93)" means Method 4500-Cl H, "Chlorine
2658 (Residual)", "Syringaldazine (FACTS) Method", only the version
2659 in the 19th and 20th editions. Referenced in Sections 611.381 and
2660 611.531.
2661
2662 "SM 4500-Cl H (00)" means Method 4500-Cl H, "Chlorine
2663 (Residual)", "Syringaldazine (FACTS) Method", only the version
2664 in the 21st, 22nd, ~~and~~ 23rd, and 24th editions. Referenced in Sections
2665 611.381 and 611.531.
2666
2667 "SM 4500-Cl I (89)" means Method 4500-Cl I, "Chlorine
2668 (Residual)", "Iodometric Electrode Method", only the version in
2669 the 18th edition. Referenced in Section 611.531.
2670
2671 "SM 4500-Cl I (93)" means Method 4500-Cl I, "Chlorine
2672 (Residual)", "Iodometric Electrode Method", only the version in
2673 the 19th and 20th editions. Referenced in Sections 611.381 and
2674 611.531.
2675
2676 "SM 4500-Cl I (00)" means Method 4500-Cl I, "Chlorine
2677 (Residual)", "Iodometric Electrode Method", only the version in
2678 the 21st, 22nd, ~~and~~ 23rd, and 24th editions. Referenced in Sections
2679 611.381 and 611.531.
2680
2681 "SM 4500-ClO₂ C (88)" means Method 4500-ClO₂ C, "Chlorine
2682 Dioxide", "Amperometric Method I", only the version in the 18th
2683 edition. Referenced in Sections 611.381 and 611.531.
2684
2685 "SM 4500-ClO₂ C (93)" means Method 4500-ClO₂ C, "Chlorine
2686 Dioxide", "Amperometric Method I", only the version in the 19th
2687 and 20th editions. Referenced in Section 611.531.
2688

2689 "SM 4500-ClO₂ C (00)" means Method 4500-ClO₂ C, "Chlorine
 2690 Dioxide", "Amperometric Method I", only the version in the 21st,
 2691 22nd, ~~and 23rd~~, and 24th editions. Referenced in Section 611.531.
 2692

2693 "SM 4500-ClO₂ D (88)" means Method 4500-ClO₂ D, "Chlorine
 2694 Dioxide", "DPD Method", only the version in the 18th edition.
 2695 Referenced in Section 611.531.
 2696

2697 "SM 4500-ClO₂ D (93)" means Method 4500-ClO₂ D, "Chlorine
 2698 Dioxide", "DPD Method", only the version in the 19th and 20th
 2699 editions. Referenced in Sections 611.381 and 611.531.
 2700

2701 "SM 4500-ClO₂ D (00)" means Method 4500-ClO₂ D, "Chlorine
 2702 Dioxide", "DPD Method", only the version in the 21st edition.
 2703 Referenced in Section 611.381.
 2704

2705 "SM 4500-ClO₂ E (88)" means Method 4500-ClO₂ E, "Chlorine
 2706 Dioxide", "Amperometric Method II (Proposed)", only the version
 2707 in the 18th edition. Referenced in Section 611.531.
 2708

2709 "SM 4500-ClO₂ E (93)" means Method 4500-ClO₂ E, "Chlorine
 2710 Dioxide", "Amperometric Method II", only the version in the 19th
 2711 and 20th editions. Referenced in Sections 611.381 and 611.531.
 2712

2713 "SM 4500-ClO₂ E (00)" means Method 4500-ClO₂ E, "Chlorine
 2714 Dioxide", "Amperometric Method II", only the version in the 21st,
 2715 22nd, ~~and 23rd~~, and 24th editions. Referenced in Sections 611.381
 2716 and 611.531.
 2717

2718 "SM 4500-CN⁻ C (90)" means Method 4500-CN⁻ C, "Cyanide",
 2719 "Total Cyanide after Distillation", only the version in the 18th and
 2720 19th editions. Referenced in Section 611.611.
 2721

2722 ~~"SM 4500-CN⁻ C (97)" means Method 4500-CN⁻ C, "Cyanide",
 2723 "Total Cyanide after Distillation", only the version in the 20th
 2724 edition. Referenced in Section 611.611.~~
 2725

2726 "SM 4500-CN⁻ C (99)" means Method 4500-CN⁻ C, "Cyanide",
 2727 "Total Cyanide after Distillation", only the version in the 20th, 21st
 2728 and 22nd editions. Referenced in Section 611.611.
 2729

2730 "SM 4500-CN⁻ C (16)" means Method 4500-CN⁻ C, "Cyanide",
 2731 "Total Cyanide after Distillation", only the version in the 23rd and
 2732 24th editions~~edition~~. Referenced in Section 611.611.
 2733
 2734 "SM 4500-CN⁻ E (90)" means Method 4500-CN⁻ E, "Cyanide",
 2735 "Colorimetric Method", only the version in the 18th and 19th
 2736 editions. Referenced in Section 611.611.
 2737
 2738 "SM 4500-CN⁻ E (97)" means Method 4500-CN⁻ E, "Cyanide",
 2739 "Colorimetric Method", only the version in the 20th edition.
 2740 Referenced in Section 611.611.
 2741
 2742 "SM 4500-CN⁻ E (99)" means Method 4500-CN⁻ E, "Cyanide",
 2743 "Colorimetric Method", only the version in the 21st, ~~and~~ 22nd, 23rd,
 2744 and 24th editions. Referenced in Section 611.611.
 2745
 2746 "SM 4500-CN⁻ E (16)" means Method 4500-CN⁻ E, "Cyanide",
 2747 "Colorimetric Method", only the version in the 23rd edition.
 2748 Referenced in Section 611.611.
 2749
 2750 "SM 4500-CN⁻ F (90)" means Method 4500-CN⁻ F, "Cyanide",
 2751 "Cyanide-Selective Electrode Method", only the version in the 18th
 2752 and 19th editions. Referenced in Section 611.611.
 2753
 2754 "SM 4500-CN⁻ F (97)" means Method 4500-CN⁻ F, "Cyanide",
 2755 "Cyanide-Selective Electrode Method", only the version in the 20th
 2756 edition. Referenced in Section 611.611.
 2757
 2758 "SM 4500-CN⁻ F (99)" means Method 4500-CN⁻ F, "Cyanide",
 2759 "Cyanide-Selective Electrode Method", only the version in the 21st
 2760 and 22nd editions. Referenced in Section 611.611.
 2761
 2762 "SM 4500-CN⁻ F (16)" means Method 4500-CN⁻ F, "Cyanide",
 2763 "Cyanide-Ion Selective Electrode Method", only the version in the
 2764 23rd and 24th edition. Referenced in Section 611.611.
 2765
 2766 "SM 4500-CN⁻ G (90)" means Method 4500-CN⁻ G, "Cyanide",
 2767 "Cyanides Amenable to Chlorination after Distillation", only the
 2768 version in the 18th and 19th editions. Referenced in Section
 2769 611.611.
 2770

2771 "SM 4500-CN⁻ G (97)" means Method 4500-CN⁻ G, "Cyanide",
 2772 "Cyanides Amenable to Chlorination after Distillation", only the
 2773 version in the 20th edition. Referenced in Section 611.611.
 2774

2775 "SM 4500-CN⁻ G (99)" means Method 4500-CN⁻ G, "Cyanide",
 2776 "Cyanides Amenable to Chlorination after Distillation", only the
 2777 version in the 21st and 22nd editions. Referenced in Section
 2778 611.611.
 2779

2780 "SM 4500-CN⁻ G (16)" means Method 4500-CN⁻ G, "Cyanide",
 2781 "Cyanides Amenable to Chlorination after Distillation", only the
 2782 version in the 23rd and 24th edition. Referenced in Section
 2783 611.611.
 2784

2785 "SM 4500-F⁻ B (88)" means Method 4500-F⁻ B, "Fluoride",
 2786 "Preliminary Distillation Step", only the version in the 18th edition.
 2787 Referenced in Section 611.611.
 2788

2789 "SM 4500-F⁻ B (94)" means Method 4500-F⁻ B, "Fluoride",
 2790 "Preliminary Distillation Step", only the version in the 19th edition.
 2791 Referenced in Section 611.611.
 2792

2793 "SM 4500-F⁻ B (97)" means Method 4500-F⁻ B, "Fluoride",
 2794 "Preliminary Distillation Step", only the version in the 20th, 21st,
 2795 22nd, ~~and~~ 23rd, and 24th editions. Referenced in Section 611.611.
 2796

2797 "SM 4500-F⁻ C (88)" means Method 4500-F⁻ C, "Fluoride", "Ion-
 2798 Selective Electrode Method", only the version in the 18th edition.
 2799 Referenced in Section 611.611.
 2800

2801 "SM 4500-F⁻ C (94)" means Method 4500-F⁻ C, "Fluoride", "Ion-
 2802 Selective Electrode Method", only the version in the 19th edition.
 2803 Referenced in Section 611.611.
 2804

2805 "SM 4500-F⁻ C (97)" means Method 4500-F⁻ C, "Fluoride", "Ion-
 2806 Selective Electrode Method", only the version in the 20th, 21st,
 2807 22nd, ~~and~~ 23rd, and 24th editions. Referenced in Section 611.611.
 2808

2809 "SM 4500-F⁻ D (88)" means Method 4500-F⁻ D, "Fluoride",
 2810 "SPADNS Method", only the version in the 18th edition.
 2811 Referenced in Section 611.611.
 2812

2813 "SM 4500-F⁻ D (94)" means Method 4500-F⁻ D, "Fluoride",
 2814 "SPADNS Method", only the version in the 19th edition.
 2815 Referenced in Section 611.611.
 2816
 2817 "SM 4500-F⁻ D (97)" means Method 4500-F⁻ D, "Fluoride",
 2818 "SPADNS Method", only the version in the 20th, 21st, 22nd, ~~and~~
 2819 23rd, and 24th editions. Referenced in Section 611.611.
 2820
 2821 "SM 4500-F⁻ E (88)" means Method 4500-F⁻ E, "Fluoride",
 2822 "Complexone Method", only the version in the 18th edition.
 2823 Referenced in Section 611.611.
 2824
 2825 "SM 4500-F⁻ E (94)" means Method 4500-F⁻ E, "Fluoride",
 2826 "Complexone Method", only the version in the 19th edition.
 2827 Referenced in Section 611.611.
 2828
 2829 "SM 4500-F⁻ E (97)" means Method 4500-F⁻ E, "Fluoride",
 2830 "Complexone Method", only the version in the 20th, 21st, 22nd, ~~and~~
 2831 23rd, and 24th editions. Referenced in Section 611.611.
 2832
 2833 "SM 4500-H⁺ B (90)" means Method 4500-H⁺ B, "pH Value",
 2834 "Electrometric Method", only the version in the 18th and 19th
 2835 editions. Referenced in Section 611.611.
 2836
 2837 "SM 4500-H⁺ B (96)" means Method 4500-H⁺ B, "pH Value",
 2838 "Electrometric Method", only the version in the 20th edition.
 2839 Referenced in Section 611.611.
 2840
 2841 "SM 4500-H⁺ B (00)" means Method 4500-H⁺ B, "pH Value",
 2842 "Electrometric Method", only the version in the 21st, 22nd, ~~and~~ 23rd,
 2843 and 24th editions. Referenced in Section 611.611.
 2844
 2845 "SM 4500-NO₃⁻ D (88)" means Method 4500-NO₃⁻ D, "Nitrogen
 2846 (Nitrate)", "Nitrate Electrode Method", only the version in the 18th
 2847 edition. Referenced in Section 611.611.
 2848
 2849 "SM 4500-NO₃⁻ D (93)" means Method 4500-NO₃⁻ D, "Nitrogen
 2850 (Nitrate)", "Nitrate Electrode Method", only the version in the 19th
 2851 edition. Referenced in Section 611.611.
 2852
 2853 "SM 4500-NO₃⁻ D (97)" means Method 4500-NO₃⁻ D, "Nitrogen
 2854 (Nitrate)", "Nitrate Electrode Method", only the version in the 20th
 2855 edition. Referenced in Section 611.611.

2856
2857 "SM 4500-NO₃⁻ D (00)" means Method 4500-NO₃⁻ D, "Nitrogen
2858 (Nitrate)", "Nitrate Electrode Method", only the version in the 21st
2859 and 22nd editions. Referenced in Section 611.611.
2860
2861 "SM 4500-NO₃⁻ D (16)" means Method 4500-NO₃⁻ D, "Nitrogen
2862 (Nitrate)", "Nitrate Electrode Method", only the version in the 23rd
2863 and 24th editions ~~edition~~. Referenced in Section 611.611.
2864
2865 "SM 4500-NO₃⁻ E (88)" means Method 4500-NO₃⁻ E, "Nitrogen
2866 (Nitrate)", "Cadmium Reduction Method", only the version in the
2867 18th edition. Referenced in Section 611.611.
2868
2869 "SM 4500-NO₃⁻ E (93)" means Method 4500-NO₃⁻ E, "Nitrogen
2870 (Nitrate)", "Cadmium Reduction Method", only the version in the
2871 19th edition. Referenced in Section 611.611.
2872
2873 "SM 4500-NO₃⁻ E (97)" means Method 4500-NO₃⁻ E, "Nitrogen
2874 (Nitrate)", "Cadmium Reduction Method", only the version in the
2875 20th edition. Referenced in Section 611.611.
2876
2877 "SM 4500-NO₃⁻ E (00)" means Method 4500-NO₃⁻ E, "Nitrogen
2878 (Nitrate)", "Cadmium Reduction Method", only the version in the
2879 21st and 22nd editions. Referenced in Section 611.611.
2880
2881 "SM 4500-NO₃⁻ E (16)" means Method 4500-NO₃⁻ E, "Nitrogen
2882 (Nitrate)", "Cadmium Reduction Method", only the version in the
2883 23rd and 24th editions ~~edition~~. Referenced in Section 611.611.
2884
2885 "SM 4500-NO₃⁻ F (88)" means Method 4500-NO₃⁻ F, "Nitrogen
2886 (Nitrate)", "Automated Cadmium Reduction Method", only the
2887 version in the 18th edition. Referenced in Section 611.611.
2888
2889 "SM 4500-NO₃⁻ F (93)" means Method 4500-NO₃⁻ F, "Nitrogen
2890 (Nitrate)", "Automated Cadmium Reduction Method", only the
2891 version in the 19th edition. Referenced in Section 611.611.
2892
2893 "SM 4500-NO₃⁻ F (97)" means Method 4500-NO₃⁻ F, "Nitrogen
2894 (Nitrate)", "Automated Cadmium Reduction Method", only the
2895 version in the 20th edition. Referenced in Section 611.611.
2896
2897 "SM 4500-NO₃⁻ F (00)" means Method 4500-NO₃⁻ F, "Nitrogen
2898 (Nitrate)", "Automated Cadmium Reduction Method", only the

2899 version in the 21st and 22nd editions. Referenced in Section
 2900 611.611.
 2901
 2902 "SM 4500-NO₃⁻ F (16)" means Method 4500-NO₃⁻ F, "Nitrogen
 2903 (Nitrate)", "Automated Cadmium Reduction Method", only the
 2904 version in the 23rd and 24th editions~~edition~~. Referenced in Section
 2905 611.611.
 2906
 2907 "SM 4500-NO₂⁻ B (88)" means Method 4500-NO₂⁻ B, "Nitrogen
 2908 (Nitrite)", "Colorimetric Method", only the version in the 18th
 2909 edition. Referenced in Section 611.611.
 2910
 2911 "SM 4500-NO₂⁻ B (93)" means Method 4500-NO₂⁻ B, "Nitrogen
 2912 (Nitrite)", "Colorimetric Method", only the version in the 19th and
 2913 20th editions. Referenced in Section 611.611.
 2914
 2915 "SM 4500-NO₂⁻ B (00)" means Method 4500-NO₂⁻ B, "Nitrogen
 2916 (Nitrite)", "Colorimetric Method", only the version in the 21st,
 2917 22nd, ~~and~~ 23rd, and 24th editions. Referenced in Section 611.611.
 2918
 2919 "SM 4500-O₃ B (88)" means Method 4500-O₃ B, "Ozone
 2920 (Residual) (Proposed)", "Indigo Colorimetric Method", only the
 2921 version in the 18th edition. Referenced in Section 611.531.
 2922
 2923 "SM 4500-O₃ B (93)" means Method 4500-O₃ B, "Ozone
 2924 (Residual)", "Indigo Colorimetric Method", only the version in the
 2925 19th edition. Referenced in Section 611.531.
 2926
 2927 "SM 4500-O₃ B (97)" means Method 4500-O₃ B, "Ozone
 2928 (Residual)", "Indigo Colorimetric Method", only the version in the
 2929 20th, 21st, 22nd, ~~and~~ 23rd, and 24th editions. Referenced in Section
 2930 611.531.
 2931
 2932 "SM 4500-P E (88)" means Method 4500-P E, "Phosphorus",
 2933 "Ascorbic Acid Method", only the version in the 18th edition.
 2934 Referenced in Section 611.611.
 2935
 2936 "SM 4500-P E (93)" means Method 4500-P E, "Phosphorus",
 2937 "Ascorbic Acid Method", only the version in the 19th edition.
 2938 Referenced in Section 611.611.
 2939

2940 "SM 4500-P E (97)" means Method 4500-P E, "Phosphorus",
2941 "Ascorbic Acid Method", only the version in the 20th edition.
2942 Referenced in Section 611.611.
2943
2944 "SM 4500-P E (99)" means Method 4500-P E, "Phosphorus",
2945 "Ascorbic Acid Method", only the version in the 21st and 22nd
2946 editions. Referenced in Section 611.611.
2947
2948 "SM 4500-P E (05)" means Method 4500-P E, "Phosphorus",
2949 "Ascorbic Acid Method", only the version in the 23rd and 24th
2950 editions~~edition~~. Referenced in Section 611.611.
2951
2952 "SM 4500-P F (88)" means Method 4500-P F, "Phosphorus",
2953 "Automated Ascorbic Acid Reduction Method", only the version
2954 in the 18th edition. Referenced in Section 611.611.
2955
2956 "SM 4500-P F (93)" means Method 4500-P F, "Phosphorus",
2957 "Automated Ascorbic Acid Reduction Method", only the version
2958 in the 19th edition. Referenced in Section 611.611.
2959
2960 "SM 4500-P F (97)" means Method 4500-P F, "Phosphorus",
2961 "Automated Ascorbic Acid Reduction Method", only the version
2962 in the 20th edition. Referenced in Section 611.611.
2963
2964 "SM 4500-P F (99)" means Method 4500-P F, "Phosphorus",
2965 "Automated Ascorbic Acid Reduction Method", only the version
2966 in the 21st and 22nd editions. Referenced in Section 611.611.
2967
2968 "SM 4500-P F (05)" means Method 4500-P F, "Phosphorus",
2969 "Automated Ascorbic Acid Reduction Method", only the version
2970 in the 23rd and 24th editions~~edition~~. Referenced in Section
2971 611.611.
2972
2973 "SM 4500-Si D (88)" means Method 4500-Si D, "Silica",
2974 "Molybdosilicate Method", only the version in the 18th edition.
2975 Referenced in Section 611.611.
2976
2977 "SM 4500-Si D (93)" means Method 4500-Si D, "Silica",
2978 "Molybdosilicate Method", only the version in the 19th edition.
2979 Referenced in Section 611.611.
2980

2981 "SM 4500-Si E (88)" means Method 4500-Si E, "Silica",
2982 "Molybdosilicate Method", only the version in the 18th edition.
2983 Referenced in Section 611.611.
2984
2985 "SM 4500-Si E (93)" means Method 4500-Si E, "Silica",
2986 "Molybdosilicate Method", only the version in the 19th edition.
2987 Referenced in Section 611.611.
2988
2989 "SM 4500-Si F (88)" means Method 4500-Si F, "Silica",
2990 "Molybdosilicate Method", only the version in the 18th edition.
2991 Referenced in Section 611.611.
2992
2993 "SM 4500-Si F (93)" means Method 4500-Si F, "Silica",
2994 "Molybdosilicate Method", only the version in the 19th edition.
2995 Referenced in Section 611.611.
2996
2997 "SM 4500-SiO₂ C (97)" means Method 4500-SiO₂ C, "Silica",
2998 "Molybdosilicate Method", only the version in the 20th, 21st, 22nd,
2999 ~~and~~ 23rd, and 24th editions. Referenced in Section 611.611.
3000
3001 "SM 4500-SiO₂ D (97)" means Method 4500-SiO₂ D, "Silica",
3002 "Heteropoly Blue Method", only the version in the 20th, 21st, 22nd,
3003 ~~and~~ 23rd, and 24th editions. Referenced in Section 611.611.
3004
3005 "SM 4500-SiO₂ E (97)" means Method 4500-SiO₂ E, "Silica",
3006 "Automated Method for Molybdate-Reactive Silica", only the
3007 version in the 20th, 21st, 22nd, ~~and~~ 23rd, and 24th editions.
3008 Referenced in Section 611.611.
3009
3010 "SM 5310 B (92)" means Method 5310 B, "Total Organic Carbon
3011 (TOC)", "Combustion-Infrared Method", only the version in the
3012 supplement to the 19th edition. Referenced in Section 611.381.
3013
3014 "SM 5310 B (96)" means Method 5310 B, "Total Organic Carbon
3015 (TOC)", "High-Temperature Combustion Method", only the
3016 version in the 20th edition. Referenced in Section 611.381.
3017
3018 "SM 5310 B (00)" means Method 5310 B, "Total Organic Carbon
3019 (TOC)", "High-Temperature Combustion Method", only the
3020 version in the 21st and 22nd editions. Referenced in Section
3021 611.381.
3022

3023 "SM 5310 B (14)" means Method 5310 B, "Total Organic Carbon
 3024 (TOC)", "High-Temperature Combustion Method", only the
 3025 version in the 23rd edition. Referenced in Section 611.381.

3026
 3027 "SM 5310 B (22)" means Method 5310 B, "Total Organic Carbon
 3028 (TOC)", "High-Temperature Combustion Method", only the
 3029 version in the 24th edition. Referenced in Section 611.381.

3030
 3031 "SM 5310 C (92)" means Method 5310 C, "Total Organic Carbon
 3032 (TOC)", "Persulfate-Ultraviolet Oxidation Method", only the
 3033 version in the supplement to the 19th edition. Referenced in
 3034 Section 611.381.

3035
 3036 "SM 5310 C (96)" means Method 5310 C, "Total Organic Carbon
 3037 (TOC)", "Persulfate-Ultraviolet or Heated-Persulfate Oxidation
 3038 Method", only the version in the 20th edition. Referenced in
 3039 Section 611.381.

3040
 3041 "SM 5310 C (00)" means Method 5310 C, "Total Organic Carbon
 3042 (TOC)", "Persulfate-Ultraviolet or Heated-Persulfate Oxidation
 3043 Method", only the version in the 21st and 22nd editions. Referenced
 3044 in Section 611.381.

3045
 3046 "SM 5310 C (14)" means Method 5310 C, "Total Organic Carbon
 3047 (TOC)", "Persulfate-Ultraviolet or Heated-Persulfate Oxidation
 3048 Method", only the version in the 23rd and 24th editions~~edition~~.
 3049 Referenced in Section 611.381.

3050
 3051 "SM 5310 D (92)" means Method 5310 D, "Total Organic Carbon
 3052 (TOC)", "Wet-Oxidation Method", only the version in the
 3053 supplement to the 19th edition. Referenced in Section 611.381.

3054
 3055 "SM 5310 D (96)" means Method 5310 D, "Total Organic Carbon
 3056 (TOC)", "Wet-Oxidation Method", only the version in the 20th
 3057 edition. Referenced in Section 611.381.

3058
 3059 "SM 5310 D (00)" means Method 5310 D, "Total Organic Carbon
 3060 (TOC)", "Wet-Oxidation Method", only the version in the 21st and
 3061 22nd editions. Referenced in Section 611.381."

3062
 3063 "SM 5910 B (94)" means Method 5910 B, "UV-Absorbing
 3064 Organic Constituents", "Ultraviolet Absorption Method", only the

3065 version in the 19th and 20th editions. Referenced in Section
3066 611.381.
3067
3068 "SM 5910 B (00)" means Method 5910 B, "UV-Absorbing
3069 Organic Constituents", "Ultraviolet Absorption Method", only the
3070 version in the 21st edition. Referenced in Section 611.381.
3071
3072 "SM 5910 B (11)" means Method 5910 B, "UV-Absorbing
3073 Organic Constituents", "Ultraviolet Absorption Method", only the
3074 version in the 22nd edition. Referenced in Section 611.381.
3075
3076 "SM 5910 B (13)" means Method 5910 B, "UV-Absorbing
3077 Organic Constituents", "Ultraviolet Absorption Method", only the
3078 version in the 23rd and 24th editions~~edition~~. Referenced in Section
3079 611.381.
3080
3081 "SM 6251 B (94)" means Method 6251 B, "Disinfection By-
3082 Products: Haloacetic Acids and Trichlorophenol", "Micro Liquid-
3083 Liquid Extraction Gas Chromatographic Method", only the version
3084 in the 19th, 20th, and 21st editions. Referenced in Section 611.381.
3085
3086 "SM 6251 B (07)" means Method 6251 B, "Disinfection By-
3087 Products: Haloacetic Acids and Trichlorophenol", "Micro Liquid-
3088 Liquid Extraction Gas Chromatographic Method", only the version
3089 in the 22nd ~~, and~~ 23rd , and 24th editions. Referenced in Section
3090 611.381.
3091
3092 "SM 6610 (92)" means Method 6610, "Carbamate Pesticides
3093 (Proposed)", only the version in the supplement to the 18th edition
3094 and the 19th edition. Referenced in Section 611.645.
3095
3096 "SM 6610 (96)" means Method 6610, "Carbamate Pesticides",
3097 only the version in the 20th edition. Referenced in Section
3098 611.645.
3099
3100 "SM 6610 B (99)" means Method 6610, "Carbamate Pesticides",
3101 "High-Performance Liquid Chromatographic Method", only the
3102 version in the 21st edition. Referenced in Section 611.645.
3103
3104 "SM 6610 B (04)" means Method 6610, "Carbamate Pesticides",
3105 "High-Performance Liquid Chromatographic Method", only the
3106 version in 22nd ~~, and~~ 23rd , and 24th editions. Referenced in Section
3107 611.645.

3108
 3109 "SM 6640 B (01)" means Method 6640 B, "Acidic Herbicide
 3110 Compounds", "Micro Liquid-Liquid Extraction Gas
 3111 Chromatographic Method", only the version in 21st edition.
 3112 Referenced in Section 611.645.
 3113
 3114 "SM 6640 B (06)" means Method 6640 B, "Acidic Herbicide
 3115 Compounds", "Micro Liquid-Liquid Extraction Gas
 3116 Chromatographic Method", only the version in 22nd, ~~and~~ 23rd, and
 3117 24th editions. Referenced in Section 611.645.
 3118
 3119 "SM 6651 B (91)" means Method 6651 B, "Glyphosate Herbicide
 3120 (Proposed)", "Liquid Chromatographic Post-Column Fluorescence
 3121 Method", only the version in 18th edition, or "Glyphosate
 3122 Herbicide", "Liquid Chromatographic Post-Column Fluorescence
 3123 Method", in 19th edition. Referenced in Section 611.645.
 3124
 3125 "SM 6651 B (96)" means Method 6651 B, "Glyphosate Herbicide",
 3126 "Liquid Chromatographic Post-Column Fluorescence Method",
 3127 only the version in 20th edition. Referenced in Section 611.645.
 3128
 3129 "SM 6651 B (00)" means Method 6651 B, "Glyphosate Herbicide",
 3130 "Liquid Chromatographic Post-Column Fluorescence Method",
 3131 only the version in 21st edition. Referenced in Section 611.645.
 3132
 3133 "SM 6651 B (05)" means Method 6651 B, "Glyphosate Herbicide",
 3134 "Liquid Chromatographic Post-Column Fluorescence Method",
 3135 only the version in 22nd, ~~and~~ 23rd, and 24th editions. Referenced in
 3136 Section 611.645.
 3137
 3138 "SM 7110 B (85)" means Method 7110 B, "Gross Alpha and Beta
 3139 Radioactivity (Total, Suspended, and Dissolved)", "Counting
 3140 Method", only the version in 17th edition. Referenced in Section
 3141 611.720.
 3142
 3143 "SM 7110 B (91)" means Method 7110 B, "Gross Alpha and Beta
 3144 Radioactivity (Total, Suspended, and Dissolved)", "Evaporation
 3145 Method for Gross Alpha-Beta", only the version in 18th and 19th
 3146 editions. Referenced in Section 611.720.
 3147
 3148 "SM 7110 B (96)" means Method 7110 B, "Gross Alpha and Beta
 3149 Radioactivity (Total, Suspended, and Dissolved)", "Evaporation

3150 Method for Gross Alpha-Beta", only the version in 20th edition.
3151 Referenced in Section 611.720.

3152
3153 "SM 7110 B (00)" means Method 7110 B, "Gross Alpha and Beta
3154 Radioactivity (Total, Suspended, and Dissolved)", "Evaporation
3155 Method for Gross Alpha-Beta", only the version in 21st, 22nd, and
3156 23rd editions. Referenced in Section 611.720.

3157
3158 "SM 7110 B (21)" means Method 7110 B, "Gross Alpha and Beta
3159 Radioactivity (Total, Suspended, and Dissolved)", "Evaporation
3160 Method for Gross Alpha-Beta", only the version in the 24th edition.
3161 Referenced in Section 611.720.

3162
3163 "SM 7110 C (91)" means Method 7110 C, "Gross Alpha and Beta
3164 Radioactivity (Total, Suspended, and Dissolved)", "Coprecipitation
3165 Method for Gross Alpha Radioactivity in Drinking Water
3166 (Proposed)", only the version in 18th and 19th editions. Referenced
3167 in Section 611.720.

3168
3169 "SM 7110 C (96)" means Method 7110 C, "Gross Alpha and Beta
3170 Radioactivity (Total, Suspended, and Dissolved)", "Coprecipitation
3171 Method for Gross Alpha Radioactivity in Drinking Water", only
3172 the version in 20th edition. Referenced in Section 611.720.

3173
3174 "SM 7110 C (00)" means Method 7110 C, "Gross Alpha and Beta
3175 Radioactivity (Total, Suspended, and Dissolved)", "Coprecipitation
3176 Method for Gross Alpha Radioactivity in Drinking Water", only
3177 the version in 21st, 22nd, and 23rd editions. Referenced in Section
3178 611.720.

3179
3180 "SM 7110 C (21)" means Method 7110 C, "Gross Alpha and Beta
3181 Radioactivity (Total, Suspended, and Dissolved)", "Evaporation
3182 Method for Gross Alpha-Beta", only the version in the 24th edition.
3183 Referenced in Section 611.720.

3184
3185 "SM 7110 D (17)" means Method 7110 D, "Gross Alpha and Beta
3186 Radioactivity (Total, Suspended, and Dissolved)", "Liquid
3187 Scintillation Spectroscopic Method for Gross Alpha-Beta
3188 Radioactivity in Drinking Water", only the version from Standard
3189 Methods Online as Method 7110 D-17. Referenced in Section
3190 611.720.

3191

3192 ["SM 7110 D \(21\)" means Method 7110 D, "Gross Alpha and Beta](#)
3193 [Radioactivity \(Total, Suspended, and Dissolved\)", "Liquid](#)
3194 [Scintillation Spectroscopic Method for Gross Alpha-Beta](#)
3195 [Radioactivity in Drinking Water", only the version in the 24th](#)
3196 [edition. Referenced in Section 611.720.](#)

3197
3198 "SM 7120 (94)" means Method 7120, "Gamma-Emitting
3199 Radionuclides", only the version in the 19th edition. Referenced in
3200 Section 611.720.

3201
3202 "SM 7120 (97)" means Method 7120, "Gamma-Emitting
3203 Radionuclides", only the version in the 20th, 21st, 22nd, and 23rd
3204 editions. Referenced in Section 611.720.

3205
3206 ["SM 7120 \(21\)" means Method 7120, "Gamma-Emitting](#)
3207 [Radionuclides", only the version in the 24th edition. Referenced in](#)
3208 [Section 611.720.](#)

3209
3210 "SM 7500-Cs B (88)" means Method 7500-Cs B, "Radioactive
3211 Cesium", "Precipitation Method", only the version in the 17th and
3212 18th editions. Referenced in Section 611.720.

3213
3214 "SM 7500-Cs B (93)" means Method 7500-Cs B, "Radioactive
3215 Cesium", "Precipitation Method", only the version in the 19th and
3216 20th editions. Referenced in Section 611.720.

3217
3218 "SM 7500-Cs B (00)" means Method 7500-Cs B, "Radioactive
3219 Cesium", "Precipitation Method", only the version in the 21st, 22nd,
3220 ~~and~~ 23rd, [and 24th](#) editions. Referenced in Section 611.720.

3221
3222 "SM 7500-I B (88)" means Method 7500-I B, "Radioactive
3223 Iodine", "Precipitation Method", only the version in the 17th and
3224 18th editions. Referenced in Section 611.720.

3225
3226 "SM 7500-I B (93)" means Method 7500-I B, "Radioactive
3227 Iodine", "Precipitation Method", only the version in the 19th and
3228 20th editions. Referenced in Section 611.720.

3229
3230 "SM 7500-I B (00)" means Method 7500-I B, "Radioactive
3231 Iodine", "Precipitation Method", only the version in the 21st, 22nd,
3232 ~~and~~ 23rd, [and 24th](#) editions. Referenced in Section 611.720.

3233

3234 "SM 7500-I C (88)" means Method 7500-I C, "Radioactive
 3235 Iodine", "Ion-Exchange Method", only the version in the 17th and
 3236 18th editions. Referenced in Section 611.720.
 3237
 3238 "SM 7500-I C (93)" means Method 7500-I C, "Radioactive
 3239 Iodine", "Ion-Exchange Method", only the version in the 19th and
 3240 20th editions. Referenced in Section 611.720.
 3241
 3242 "SM 7500-I C (00)" means Method 7500-I C, "Radioactive
 3243 Iodine", "Ion-Exchange Method", only the version in the 21st, 22nd,
 3244 ~~and~~ 23rd, and 24th editions. Referenced in Section 611.720.
 3245
 3246 "SM 7500-I D (88)" means Method 7500-I D, "Radioactive
 3247 Iodine", "Distillation Method", only the version in the 17th and 18th
 3248 editions. Referenced in Section 611.720.
 3249
 3250 "SM 7500-I D (93)" means Method 7500-I D, "Radioactive
 3251 Iodine", "Distillation Method", only the version in the 19th and 20th
 3252 editions. Referenced in Section 611.720.
 3253
 3254 "SM 7500-I D (00)" means Method 7500-I D, "Radioactive
 3255 Iodine", "Distillation Method", only the version in the 21st, 22nd,
 3256 ~~and~~ 23rd, and 24th editions. Referenced in Section 611.720.
 3257
 3258 "SM 7500-Ra B (88)" means Method 7500-Ra B, "Radium",
 3259 "Precipitation Method", only the version in the 17th and 18th
 3260 editions. Referenced in Section 611.720.
 3261
 3262 "SM 7500-Ra B (93)" means Method 7500-Ra B, "Radium",
 3263 "Precipitation Method", only the version in the 19th and 20th
 3264 editions. Referenced in Section 611.720.
 3265
 3266 "SM 7500-Ra B (01)" means Method 7500-Ra B, "Radium",
 3267 "Precipitation Method", only the version in the 21st, 22nd, ~~and~~ 23rd,
 3268 and 24th editions. Referenced in Section 611.720.
 3269
 3270 "SM 7500-Ra C (88)" means Method 7500-Ra C, "Radium",
 3271 "Emanation Method", only the version in the 17th and 18th editions.
 3272 Referenced in Section 611.720.
 3273
 3274 "SM 7500-Ra C (93)" means Method 7500-Ra C, "Radium",
 3275 "Emanation Method", only the version in the 19th and 20th editions.
 3276 Referenced in Section 611.720.

- 3277
- 3278 "SM 7500-Ra C (01)" means Method 7500-Ra C, "Radium",
- 3279 "Emanation Method", only the version in the 21st, 22nd, ~~and~~ 23rd,
- 3280 and 24th editions. Referenced in Section 611.720.
- 3281
- 3282 "SM 7500-Ra D (88)" means Method 7500-Ra D, "Radium",
- 3283 "Sequential Precipitation Method", only the version in the 17th and
- 3284 18th editions. Referenced in Section 611.720.
- 3285
- 3286 "SM 7500-Ra D (93)" means Method 7500-Ra D, "Radium",
- 3287 "Sequential Precipitation Method", only the version in the 19th and
- 3288 20th editions. Referenced in Section 611.720.
- 3289
- 3290 "SM 7500-Ra D (01)" means Method 7500-Ra D, "Radium",
- 3291 "Sequential Precipitation Method", only the version in the 21st,
- 3292 22nd, ~~and~~ 23rd, and 24th editions. Referenced in Section 611.720.
- 3293
- 3294 "SM 7500-Ra E (01)" means Method 7500-Ra E, "Radium",
- 3295 "Gamma Spectrometry Method", only the version in the 22nd
- 3296 edition. Referenced in Section 611.720.
- 3297
- 3298 "SM 7500-Ra E (07)" means Method 7500-Ra E, "Radium",
- 3299 "Gamma Spectrometry Method", only the version in the 23rd and
- 3300 24th editions~~edition~~. Referenced in Section 611.720.
- 3301
- 3302 "SM 7500-Sr B (88)" means Method 7500-Sr B, "Total
- 3303 Radioactive Strontium and Strontium 90", "Precipitation Method",
- 3304 only the version in the 17th and 18th editions. Referenced in
- 3305 Section 611.720.
- 3306
- 3307 "SM 7500-Sr B (93)" means Method 7500-Sr B, "Total
- 3308 Radioactive Strontium and Strontium 90", "Precipitation Method",
- 3309 only the version in the 19th and 20th editions. Referenced in
- 3310 Section 611.720.
- 3311
- 3312 "SM 7500-Sr B (01)" means Method 7500-Sr B, "Total
- 3313 Radioactive Strontium and Strontium 90", "Precipitation Method",
- 3314 only the version in the 21st, 22nd, ~~and~~ 23rd, and 24th editions.
- 3315 Referenced in Section 611.720.
- 3316
- 3317 "SM 7500-³H B (88)" means Method 7500-³H B, "Tritium",
- 3318 "Liquid Scintillation Spectrometric Method", only the version in
- 3319 the 17th and 18th editions. Referenced in Section 611.720.

3320
 3321 "SM 7500-³H B (93)" means Method 7500-³H B, "Tritium",
 3322 "Liquid Scintillation Spectrometric Method", only the version in
 3323 the 19th and 20th editions. Referenced in Section 611.720.
 3324
 3325 "SM 7500-³H B (00)" means Method 7500-³H B, "Tritium",
 3326 "Liquid Scintillation Spectrometric Method", only the version in
 3327 the 21st, 22nd, and 23rd editions. Referenced in Section 611.720.
 3328
 3329 "SM 7500-³H B (22)" means Method 7500-³H B, "Tritium",
 3330 "Liquid Scintillation Spectrometric Method", only the version in
 3331 the 24th edition. Referenced in Section 611.720.
 3332
 3333 "SM 7500-U B (88)" means Method 7500-U B, "Uranium",
 3334 "Radiochemical Method (Proposed)", only the version in the 17th
 3335 edition. Referenced in Section 611.720.
 3336
 3337 "SM 7500-U B (91)" means only Method 7500-U B, "Uranium",
 3338 "Radiochemical Method (Proposed)", the version in the 18th
 3339 edition, and "Uranium", "Radiochemical Method", the version in
 3340 the 19th edition. Referenced in Section 611.720.
 3341
 3342 "SM 7500-U B (96)" means Method 7500-U B, "Uranium",
 3343 "Radiochemical Method", only the version in the 20th edition.
 3344 Referenced in Section 611.720.
 3345
 3346 "SM 7500-U B (00)" means Method 7500-U B, "Uranium",
 3347 "Radiochemical Method", only the version in the 21st, 22nd, ~~and~~
 3348 23rd, and 24th editions. Referenced in Section 611.720.
 3349
 3350 "SM 7500-U C (88)" means Method 7500-U C, "Uranium",
 3351 "Fluorometric Method (Proposed)", only the version in the 17th
 3352 edition. Referenced in Section 611.720.
 3353
 3354 "SM 7500-U C (91)" means Method 7500-U C, "Uranium",
 3355 "Isotopic Method (Proposed)", only the version in the 18th and 19th
 3356 editions. Referenced in Section 611.720.
 3357
 3358 "SM 7500-U C (96)" means Method 7500-U C, "Uranium",
 3359 "Isotopic Method", only the version in the 20th edition. Referenced
 3360 in Section 611.720.
 3361

3362 "SM 7500-U C (00)" means Method 7500-U C, "Uranium",
3363 "Isotopic Method", only the version in the 21st, 22nd, ~~and~~ 23rd, and
3364 24th editions. Referenced in Section 611.720.

3365
3366 "SM 9060 A (97)" means Method 9060 A, "Samples",
3367 "Collection", only the version in the 20th and 21st editions.
3368 Referenced in Section 611.1052.

3369
3370 "SM 9215 B (88)" means Method 9215 B, "Heterotrophic Plate
3371 Count", "Pour Plate Method", only the version in the 18th edition.
3372 Referenced in Section 611.531.

3373
3374 "SM 9215 B (94)" means Method 9215 B, "Heterotrophic Plate
3375 Count", "Pour Plate Method", only the version in the 19th and 20th
3376 editions. Referenced in Section 611.531.

3377
3378 "SM 9215 B (00)" means Method 9215 B, "Heterotrophic Plate
3379 Count", "Pour Plate Method", only the version in the 21st edition.
3380 Referenced in Section 611.531.

3381
3382 "SM 9215 B (04)" means Method 9215 B, "Heterotrophic Plate
3383 Count", "Pour Plate Method", only the version in the 22nd edition.
3384 Referenced in Section 611.531.

3385
3386 "SM 9215 B (16)" means Method 9215 B, "Heterotrophic Plate
3387 Count", "Pour Plate Method", only the version in the 23rd edition.
3388 Referenced in Section 611.531.

3389
3390 "SM 9215 B (22)" means Method 9215 B, "Heterotrophic Plate
3391 Count", "Pour Plate Method", only the version in the 24th edition.
3392 Referenced in Section 611.531.

3393
3394 "SM 9221 A (93)" means Method 9221 A, "Multiple-Tube
3395 Fermentation Technique for Members of the Coliform Group",
3396 "Introduction", only the version in the 18th edition. Referenced in
3397 Section 611.531.

3398
3399 "SM 9221 A (94)" means Method 9221 A, "Multiple-Tube
3400 Fermentation Technique for Members of the Coliform Group",
3401 "Introduction", only the version in the 19th and 20th editions.
3402 Referenced in Section 611.531.

3403

3404 "SM 9221 A (99)" means Method 9221 A, "Multiple-Tube
3405 Fermentation Technique for Members of the Coliform Group",
3406 "Introduction", only the version in the 21st edition. Referenced in
3407 Section 611.531.

3408
3409 "SM 9221 A (06)" means Method 9221 A, "Multiple-Tube
3410 Fermentation Technique for Members of the Coliform Group",
3411 "Introduction", only the version in the 22nd edition. Referenced in
3412 Section 611.531.

3413
3414 "SM 9221 A (14)" means Method 9221 A, "Multiple-Tube
3415 Fermentation Technique for Members of the Coliform Group",
3416 "Introduction", only the version in the 23rd and 24th editions ~~edition~~.
3417 Referenced in Section 611.531.

3418
3419 "SM 9221 B (93)" means Method 9221 B, "Multiple-Tube
3420 Fermentation Technique for Members of the Coliform Group",
3421 "Standard Total Coliform Fermentation Technique", only the
3422 version in the 18th edition. Referenced in Section 611.531.

3423
3424 "SM 9221 B (94)" means Method 9221 B, "Multiple-Tube
3425 Fermentation Technique for Members of the Coliform Group",
3426 "Standard Total Coliform Fermentation Technique", only the
3427 version in the 19th and 20th editions. Referenced in Sections
3428 611.531 and 611.1052.

3429
3430 "SM 9221 B (99)" means Method 9221 B, "Multiple-Tube
3431 Fermentation Technique for Members of the Coliform Group",
3432 "Standard Total Coliform Fermentation Technique", only the
3433 version in the 21st edition. Referenced in Sections 611.531 and
3434 611.1052.

3435
3436 "SM 9221 B (06)" means Method 9221 B, "Multiple-Tube
3437 Fermentation Technique for Members of the Coliform Group",
3438 "Standard Total Coliform Fermentation Technique", only the
3439 version in the 22nd edition. Referenced in Sections 611.531 and
3440 611.1052.

3441
3442 "SM 9221 B (14)" means Method 9221 B, "Multiple-Tube
3443 Fermentation Technique for Members of the Coliform Group",
3444 "Standard Total Coliform Fermentation Technique", only the
3445 version in the 23rd and 24th editions ~~edition~~. Referenced in Sections
3446 611.531 and 611.1052.

3447
3448 "SM 9221 C (93)" means Method 9221 C, "Multiple-Tube
3449 Fermentation Technique for Members of the Coliform Group",
3450 "Estimation of Bacterial Density", only the version in the 18th
3451 edition. Referenced in Section 611.531.
3452
3453 "SM 9221 C (94)" means Method 9221 C, "Multiple-Tube
3454 Fermentation Technique for Members of the Coliform Group",
3455 "Estimation of Bacterial Density", only the version in the 19th and
3456 20th editions. Referenced in Section 611.531.
3457
3458 "SM 9221 C (99)" means Method 9221 C, "Multiple-Tube
3459 Fermentation Technique for Members of the Coliform Group",
3460 "Estimation of Bacterial Density", only the version in the 21st
3461 edition. Referenced in Section 611.531.
3462
3463 "SM 9221 C (06)" means Method 9221 C, "Multiple-Tube
3464 Fermentation Technique for Members of the Coliform Group",
3465 "Estimation of Bacterial Density", only the version in the 22nd
3466 edition. Referenced in Section 611.531.
3467
3468 "SM 9221 C (14)" means Method 9221 C, "Multiple-Tube
3469 Fermentation Technique for Members of the Coliform Group",
3470 "Estimation of Bacterial Density", only the version in the 23rd [and](#)
3471 [24th editions](#)~~edition~~. Referenced in Section 611.531.
3472
3473 "SM 9221 D (94)" means Method 9221 D, "Multiple-Tube
3474 Fermentation Technique for Members of the Coliform Group",
3475 "Presence-Absence (P-A) Coliform", only the version in the 20th
3476 edition. Referenced in Section 611.1052.
3477
3478 "SM 9221 D (99)" means Method 9221 D, "Multiple-Tube
3479 Fermentation Technique for Members of the Coliform Group",
3480 "Presence-Absence (P-A) Coliform", only the version in the 21st
3481 edition. Referenced in Section 611.1052.
3482
3483 "SM 9221 D (14)" means Method 9221 D, "Multiple-Tube
3484 Fermentation Technique for Members of the Coliform Group",
3485 "Presence-Absence (P-A) Coliform", only the version in the 23rd
3486 [and 24th editions](#)~~edition~~. Referenced in Section 611.1052.
3487
3488 "SM 9221 E (93)" means Method 9221 E, "Multiple-Tube
3489 Fermentation Technique for Members of the Coliform Group",

3490 "Fecal Coliform Procedure", only the version in the 18th edition.
3491 Referenced in Section 611.531.
3492
3493 "SM 9221 E (94)" means Method 9221 E, "Multiple-Tube
3494 Fermentation Technique for Members of the Coliform Group",
3495 "Fecal Coliform Procedure", only the version in the 19th and 20th
3496 editions. Referenced in Section 611.531.
3497
3498 "SM 9221 E (99)" means Method 9221 E, "Multiple-Tube
3499 Fermentation Technique for Members of the Coliform Group",
3500 "Fecal Coliform Procedure", only the version in the 21st edition.
3501 Referenced in Section 611.531.
3502
3503 "SM 9221 E (06)" means Method 9221 E, "Multiple-Tube
3504 Fermentation Technique for Members of the Coliform Group",
3505 "Fecal Coliform Procedure", only the version in the 22nd edition.
3506 Referenced in Section 611.531.
3507
3508 "SM 9221 E (14)" means Method 9221 E, "Multiple-Tube
3509 Fermentation Technique for Members of the Coliform Group",
3510 "Thermotolerant (Fecal) Coliform Procedure", only the version in
3511 the 23rd and 24th editions ~~edition~~. Referenced in Section 611.531.
3512
3513 "SM 9221 F (94)" means Method 9221 F, "Multiple-Tube
3514 Fermentation Technique for Members of the Coliform Group",
3515 "Escherichia Coli Procedure (Proposed)", only the version in the
3516 20th edition. Referenced in Sections 611.802 and 611.1052.
3517
3518 "SM 9221 F (06)" means Method 9221 F, "Multiple-Tube
3519 Fermentation Technique for Members of the Coliform Group",
3520 "Escherichia Coli Procedure Using Fluorogenic Substrate", only
3521 the version in the 22nd edition. Referenced in Sections 611.802
3522 and 611.1052.
3523
3524 "SM 9221 F (14)" means Method 9221 F, "Multiple-Tube
3525 Fermentation Technique for Members of the Coliform Group",
3526 "Escherichia Coli Procedure Using Fluorogenic Substrate", only
3527 the version in the 23rd and 24th editions ~~edition~~. Referenced in
3528 Sections 611.802 and 611.1052.
3529
3530 "SM 9222 A (91)" means Method 9222 A, "Membrane Filter
3531 Technique for Members of the Coliform Group", "Introduction",

3532 only the version in the 18th edition. Referenced in Section
3533 611.531.

3534
3535 "SM 9222 A (94)" means Method 9222 A, "Membrane Filter
3536 Technique for Members of the Coliform Group", "Introduction",
3537 only the version in the 19th edition. Referenced in Section
3538 611.531.

3539
3540 "SM 9222 A (97)" means Method 9222 A, "Membrane Filter
3541 Technique for Members of the Coliform Group", "Introduction",
3542 only the version in the 20th and 21st editions. Referenced in
3543 Section 611.531.

3544
3545 "SM 9222 A (06)" means Method 9222 A, "Membrane Filter
3546 Technique for Members of the Coliform Group", "Introduction",
3547 only the version in the 22nd edition. Referenced in Section
3548 611.531.

3549
3550 "SM 9222 A (15)" means Method 9222 A, "Membrane Filter
3551 Technique for Members of the Coliform Group", "Introduction",
3552 only the version in the 23rd edition. Referenced in Section
3553 611.531.

3554
3555 "SM 9222 A (22)" means Method 9222 A, "Membrane Filter
3556 Technique for Members of the Coliform Group", "Introduction",
3557 only the version in the 24th edition. Referenced in Section
3558 611.531.

3559
3560 "SM 9222 B (91)" means Method 9222 B, "Membrane Filter
3561 Technique for Members of the Coliform Group", "Standard Total
3562 Coliform Membrane Filter Procedure", only the version in the 18th
3563 edition. Referenced in Section 611.531.

3564
3565 "SM 9222 B (94)" means Method 9222 B, "Membrane Filter
3566 Technique for Members of the Coliform Group", "Standard Total
3567 Coliform Membrane Filter Procedure", only the version in the 19th
3568 edition. Referenced in Section 611.531.

3569
3570 "SM 9222 B (97)" means Method 9222 B, "Membrane Filter
3571 Technique for Members of the Coliform Group", "Standard Total
3572 Coliform Membrane Filter Procedure", only the version in the 20th
3573 and 21st editions. Referenced in Sections 611.531 and 611.1052.

3574

3575 "SM 9222 B (15)" means Method 9222 B, "Membrane Filter
3576 Technique for Members of the Coliform Group", "Standard Total
3577 Coliform Membrane Filter Procedure using Endo Media", only the
3578 version in the 23rd edition. Referenced in Sections 611.531 and
3579 611.1052.

3580
3581 "SM 9222 B (22)" means Method 9222 B, "Membrane Filter
3582 Technique for Members of the Coliform Group", "Standard Total
3583 Coliform Membrane Filter Procedure using Endo Media", only the
3584 version in the 24th edition. Referenced in Section 611.531.

3585
3586 "SM 9222 C (91)" means Method 9222 C, "Membrane Filter
3587 Technique for Members of the Coliform Group", "Delayed-
3588 Incubation Total Coliform Procedure", only the version in the 18th
3589 edition. Referenced in Section 611.531.

3590
3591 "SM 9222 C (94)" means Method 9222 C, "Membrane Filter
3592 Technique for Members of the Coliform Group", "Delayed-
3593 Incubation Total Coliform Procedure", only the version in the 19th
3594 edition. Referenced in Section 611.531.

3595
3596 "SM 9222 C (97)" means Method 9222 C, "Membrane Filter
3597 Technique for Members of the Coliform Group", "Delayed-
3598 Incubation Total Coliform Procedure", only the version in the 20th
3599 and 21st editions. Referenced in Sections 611.531 and 611.1052.

3600
3601 "SM 9222 C (15)" means Method 9222 C, "Membrane Filter
3602 Technique for Members of the Coliform Group", "Delayed-
3603 Incubation Total Coliform Procedure", only the version in the 23rd
3604 edition. Referenced in Sections 611.531 and 611.1052.

3605
3606 "SM 9222 C (22)" means Method 9222 C, "Membrane Filter
3607 Technique for Members of the Coliform Group", "Delayed-
3608 Incubation Total Coliform Procedure", only the version in the 24th
3609 edition. Referenced in Section 611.531 and 611.1052.

3610
3611 "SM 9222 D (91)" means Method 9222 D, "Membrane Filter
3612 Technique for Members of the Coliform Group", "Fecal Coliform
3613 Membrane Filter Procedure", only the version in the 18th edition.
3614 Referenced in Section 611.531.

3615
3616 "SM 9222 D (94)" means Method 9222 D, "Membrane Filter
3617 Technique for Members of the Coliform Group", "Fecal Coliform

3618 Membrane Filter Procedure", only the version in the 19th edition.
3619 Referenced in Section 611.531.
3620
3621 "SM 9222 D (97)" means Method 9222 D, "Membrane Filter
3622 Technique for Members of the Coliform Group", "Fecal Coliform
3623 Membrane Filter Procedure", only the version in the 20th and 21st
3624 editions. Referenced in Sections 611.531 and 611.1004.
3625
3626 "SM 9222 D (06)" means Method 9222 D, "Membrane Filter
3627 Technique for Members of the Coliform Group", "Thermotolerant
3628 (Fecal) Coliform Membrane Filter Procedure", only the version in
3629 the 22nd edition. Referenced in Section 611.531.
3630
3631 "SM 9222 D (15)" means Method 9222 D, "Membrane Filter
3632 Technique for Members of the Coliform Group", "Thermotolerant
3633 (Fecal) Coliform Membrane Filter Procedure", only the version in
3634 the 23rd edition. Referenced in Section 611.531.
3635
3636 ["SM 9222 D \(22\)" means Method 9222 B, "Membrane Filter](#)
3637 [Technique for Members of the Coliform Group", "Thermotolerant](#)
3638 [\(Fecal\) Coliform Membrane Filter Procedure" only the version in](#)
3639 [the 24th edition. Referenced in Section 611.531.](#)
3640
3641 "SM 9222 G (97)" means Method 9222 G, "Membrane Filter
3642 Technique for Members of the Coliform Group", "MF Partition
3643 Procedure", only the version in the 20th and 21st editions.
3644 Referenced in Sections 611.802, 611.1004, and 611.1052.
3645
3646 "SM 9222 H (15)" means Method 9222 H, "Membrane Filter
3647 Technique for Members of the Coliform Group", "Partitioning E.
3648 coli from MF Total Coliform and E. coli using EC-MUG Broth",
3649 only the version in the 23rd edition. Referenced in Section
3650 611.1052.
3651
3652 ["SM 9222 H \(22\)" means Method 9222 H, "Membrane Filter](#)
3653 [Technique for Members of the Coliform Group", "Partitioning E.](#)
3654 [coli from MF Total Coliform and E. coli using EC-MUG Broth",](#)
3655 [only the version in the 24th edition. Referenced in Section](#)
3656 [611.1052.](#)
3657
3658 "SM 9222 I (15)" means Method 9222 I, "Membrane Filter
3659 Technique for Members of the Coliform Group", "Partitioning E.
3660 coli from MF Total Coliform and E. coli using NA-MUG Agar",

3661 only the version in the 23rd edition. Referenced in Sections
3662 611.802 and 611.1052.

3663
3664 "SM 9222 I (22)" means Method 9222 I, "Membrane Filter
3665 Technique for Members of the Coliform Group", "Partitioning E.
3666 coli from MF Total Coliform and E. coli using NA-MUG Agar",
3667 only the version in the 24th edition. Referenced in Section 611.802
3668 and 611.1052.

3669
3670 "SM 9222 J (15)" means Method 9222 J, "Membrane Filter
3671 Technique for Members of the Coliform Group", "Simultaneous
3672 Detection of Total Coliform and E. coli by Dual-Chromogen
3673 Membrane Filter Procedure", only the version in the 23rd edition.
3674 Referenced in Sections 611.802 and 611.1052.

3675
3676 "SM 9222 J (22)" means Method 9222 J, "Membrane Filter
3677 Technique for Members of the Coliform Group", "Simultaneous
3678 Detection of Total Coliform and E. coli by Dual-Chromogen
3679 Membrane Filter Procedure", only the version in the 24th edition.
3680 Referenced in Section 611.802 and 611.1052.

3681
3682 "SM 9223 (92)" means Method 9223, "Chromogenic Substrate
3683 Coliform Test (Proposed)" (also referred to as the variations
3684 "Colilert[®]" and "Colisure[™]" depending on the medium used), only
3685 the version in the 18th edition. Referenced in Section 611.531.

3686
3687 "SM 9223 (94)" means Method 9223, "Chromogenic Substrate
3688 Coliform" (also referred to as the variations "Colilert[®]" and
3689 "Colisure[™]" depending on the medium used), only the version in
3690 the 19th edition. Referenced in Section 611.531.

3691
3692 "SM 9223 (97)" means Method 9223, "Enzyme Substrate
3693 Coliform" (also referred to as the variations "Colilert[®]" and
3694 "Colisure[™]" depending on the medium used), only the version in
3695 the 20th and 21st editions. Referenced in Sections 611.531.

3696
3697 "SM 9223 B (92)" means Method 9223 B, "Chromogenic
3698 Substrate Coliform Test (Proposed)", "Chromogenic Substrate"
3699 (also referred to as the variations "Colilert[®]", "Colisure[™]", and
3700 "Colilert-18[®]" depending on the medium used), only the version in
3701 the 18th edition. Referenced in Section 611.1004.

3702

3703 "SM 9223 B (94)" means Method 9223 B, "Chromogenic
 3704 Substrate Coliform", "Chromogenic Substrate" (also referred to as
 3705 the variations "Colilert[®]" and "Colisure[™]" depending on the
 3706 medium used), only the version in the 19th edition. Referenced in
 3707 Section 611.1004.

3708
 3709 "SM 9223 B (97)" means Method 9223 B, "Enzyme Substrate
 3710 Coliform", "Chromogenic Substrate" (also referred to as the
 3711 variations "Colilert[®]" and "Colisure[™]" depending on the medium
 3712 used), only the version in the 20th and 21st editions. Referenced in
 3713 Sections 611.802 and 611.1004.

3714
 3715 "SM 9223 B (04)" means Method 9223 B, "Enzyme Substrate
 3716 Coliform", "Enzyme Substrate" (also referred to as the variations
 3717 "Colilert[®]" and "Colisure[™]" depending on the medium used), only
 3718 the version in the 22nd edition. Referenced in Sections 611.531,
 3719 611.802, and 611.1004.

3720
 3721 "SM 9223 B (16)" means Method 9223 B, "Enzyme Substrate
 3722 Coliform", "Enzyme Substrate" (also referred to as the variations
 3723 "Colilert[®]" and "Colisure[™]" depending on the medium used), only
 3724 the version in the 23rd and 24th editions~~edition~~. Referenced in
 3725 Sections 611.531, 611.802, and 611.1052.

3726
 3727 "SM 9230 B (93)" means Method 9230 B, "Fecal Streptococcus
 3728 and Enterococcus Groups", "Multiple-Tube Techniques", only the
 3729 version in the 20th and 21st editions. Referenced in Section
 3730 611.802.

3731
 3732 "SM 9230 B (04)" means Method 9230 B, "Fecal Streptococcus
 3733 and Enterococcus Groups", "Multiple-Tube Techniques", only the
 3734 version from Standard Methods Online as Method 9230 B-04.
 3735 Referenced in Section 611.802.

3736
 3737 "SM 9230 B (13)" means Method 9230 B, "Fecal Streptococcus
 3738 and Enterococcus Groups", "Multiple-Tube Techniques", only the
 3739 version in the 23rd edition. Referenced in Section 611.802.

3740
 3741 "SM 9230 B (22)" means Method 9230 B, "Fecal Streptococcus
 3742 and Enterococcus Groups", "Multiple-Tube Techniques", only the
 3743 version in the 24th edition. Referenced in Section 611.802.
 3744

3745 "SM 9230 C (93)" means Method 9230 C, "Fecal Streptococcus
3746 and Enterococcus Groups", "Membrane Filter Techniques", only
3747 the version in the 20th edition. Referenced in Section 611.802.
3748

3749 "SM 9230 C (13)" means Method 9230 C, "Fecal
3750 Enterococcus/Streptococcus Groups", "Membrane Filter
3751 Techniques", only the version in the 23rd edition. Referenced in
3752 Section 611.802.
3753

3754 "SM 9230 C (22)" means Method 9230 C, "Fecal Streptococcus
3755 and Enterococcus Groups", "Membrane Filter Techniques", only
3756 the version in the 24th edition. Referenced in Section 611.802.
3757

3758 "SM 9230 D (13)" means Method 9230 D, "Fecal
3759 Enterococcus/Streptococcus Groups", "Fluorogenic Substrate
3760 Enterococcus", only the version in the 23rd edition. Referenced in
3761 Section 611.802.
3762

3763 "SM 9230 D (22)" means Method 9230 D, "Fecal Streptococcus
3764 and Enterococcus Groups", "Fluorogenic Substrate Enterococcus",
3765 only the version in the 24th edition. Referenced in Section
3766 611.802.
3767

3768 BOARD NOTE: The publication dates of the several "Standard
3769 Methods for the Examination of Water and Wastewater" editions
3770 containing approved methods:
3771

3772 13th edition, 1971
3773 17th edition, 1989
3774 18th edition, 1992
3775 Supplement to 18th edition, 1994
3776 19th edition, 1995
3777 Supplement to 19th edition, 1996
3778 20th edition, 1998
3779 21st edition, 2005
3780 22nd edition, 2012
3781 23rd edition, 2017
3782 24th edition, 2023
3783

3784 "Syngenta AG-625 (01)" means "Method AG-625: Atrazine in Drinking
3785 Water by Immunoassay" (February 2001), Syngenta Crop Protection, Inc.
3786 Available from publisher, 410 Swing Road, Post Office Box 18300,
3787 Greensboro, NC 27419 (336-632-6000). Referenced in Section 611.645.

3788
3789 "Systea Easy (1-Reagent) (09)" means "Nitrate by Discrete Analysis:
3790 Systea Easy (1-Reagent) Nitrate Method (Colorimetric, Automated, 1
3791 Reagent)" (February 4, 2009). Available from Systea Scientific LLC, 900
3792 Jorie Blvd., Suite 35, Oak Brook, IL 60523 (630-645-0600); NEMI; and
3793 USEPA, OGWDW (under "Inorganic Contaminants and Other Inorganic
3794 Constituents (PDF)"). Referenced in Section 611.611.

3795
3796 Technicon Methods. Available from Bran + Luebbe, 1025 Busch
3797 Parkway, Buffalo Grove, IL 60089.

3798
3799 "Technicon #129-71W (72)" means "Fluoride in Water and
3800 Wastewater" (December 1972), Industrial Method #129-71W.
3801 Referenced in Section 611.611. See 40 CFR 141.23(k)(1),
3802 footnote 11.

3803
3804 "Technicon #380-75WE (76)" means "Fluoride in Water and
3805 Wastewater" (February 1976), #380-75WE. See 40 CFR
3806 141.23(k)(1), footnote 11, referenced in Section 611.611.

3807
3808 Tecta Methods. Available from IDEXX Laboratories, Inc., One IDEXX
3809 Drive, Westbrook, Maine 04092 (800-548-6733;
3810 [https://www.idexx.com/en/water/other-products-services/tecta-water-](https://www.idexx.com/en/water/other-products-services/tecta-water-microbiology-system/)
3811 [microbiology-system/](https://www.idexx.com/en/water/other-products-services/tecta-water-microbiology-system/) and USEPA, OGWDW (under "Ground Water Rule
3812 (PDF)" and "Revised Total Coliforms Rules (PDF)").

3813
3814 "Tecta (14)" means "TECTA™ EC/TC medium and the TECTA™
3815 Instrument: a Presence/Absence Method for Simultaneous
3816 Detection of Total Coliforms and Escherichia coli (E.coli) in
3817 Drinking Water", Version 1.0 (May 22, 2014). Referenced in
3818 Sections 611.802 and 611.1052.

3819
3820 "Tecta (17)" means "TECTA™ EC/TC medium and the TECTA™
3821 Instrument: a Presence/Absence Method for Simultaneous
3822 Detection of Total Coliforms and Escherichia coli (E.coli) in
3823 Drinking Water", Version 2.0 (March 20, 2017). Referenced in
3824 Sections 611.802 and 611.1052.

3825
3826 "Thermo-Fisher 557.1 (17)" means "Thermofisher Method 557.1:
3827 Determination of Haloacetic Acids in Drinking Water using Two-
3828 Dimensional Ion Chromatography with Suppressed Conductivity
3829 Detection", Version 1.0 (January 2017). Available from Thermo-Fisher
3830 Scientific, 490 Lakeside Dr, Sunnyvale, CA 94085 (800-556-2323;

3831 www.thermofisher.com) and USEPA, OGWDW (under "Disinfection
3832 Byproduct Rules (PDF)"). Referenced in Section 611.611.

3833
3834 "Thermo-Fisher Discrete Analyzer (16)" means "Application Note:
3835 Drinking Water Orthophosphate Method for Thermo Scientific Gallery
3836 Discrete Analyzer", Revision 5 (February 18, 2016). Available from
3837 Thermo-Fisher Scientific, Ratastie 2, 01620 Vantaa, Finland and USEPA,
3838 OGWDW (under "Inorganic Contaminants and Other Inorganic
3839 Constituents (PDF)"). Referenced in Section 611.611.

3840
3841 USEPA Methods

3842
3843 Numbered Methods

3844
3845 "USEPA H-02 (84)" means Method H-02, "Radiochemical
3846 Determination of Tritium in Water – Dioxane Method", in
3847 USEPA Radiochemistry Procedures (84). Referenced in
3848 Section 611.720.

3849 BOARD NOTE: Also available from USEPA, OGWDW
3850 (under "Radionuclides (PDF)").

3851
3852 "USEPA Ra-03 (84)" means Method Ra-03,
3853 "Radiochemical Determination of Radium-226 in Water
3854 Samples", in USEPA Radiochemistry Procedures (84).
3855 Referenced in Section 611.720.

3856 BOARD NOTE: Also available from USEPA, OGWDW
3857 (under "Radionuclides (PDF)").

3858
3859 "USEPA Ra-04 (84)" means Method Ra-04,
3860 "Radiochemical Determination of Radium-226 – De-
3861 emanation Procedure", in USEPA Radiochemistry
3862 Procedures (84). Referenced in Section 611.720.

3863 BOARD NOTE: Also available from USEPA, OGWDW
3864 (under "Radionuclides (PDF)").

3865
3866 "USEPA Ra-05 (84)" means Method Ra-05,
3867 "Radiochemical Determination of Radium-228 in Water
3868 Samples", in USEPA Radiochemistry Procedures (84).
3869 Referenced in Section 611.720.

3870 BOARD NOTE: Also available from USEPA, OGWDW
3871 (under "Radionuclides (PDF)").

3872

3873 "USEPA Sr-04 (84)" means Method Sr-04, "Radiochemical
3874 Determination of Radiostrontium in Water, Sea Water and
3875 Other Aqueous Media", in USEPA Radiochemistry
3876 Procedures (84). Referenced in Section 611.720.
3877 BOARD NOTE: Also available from USEPA, OGWDW
3878 (under "Radionuclides (PDF)").
3879

3880 "USEPA 00-01 (84)" means Method 00-01,
3881 "Radiochemical Determination of Gross Alpha and Gross
3882 Beta Activity in Water", in USEPA Radiochemistry
3883 Procedures (84). Referenced in Section 611.720.
3884 BOARD NOTE: Also available from USEPA, OGWDW
3885 (under "Radionuclides (PDF)").
3886

3887 "USEPA 00-02 (84)" means Method 00-02,
3888 "Radiochemical Determination of Gross Alpha Activity in
3889 Drinking Water by Coprecipitation", in USEPA
3890 Radiochemistry Procedures (84). Referenced in Section
3891 611.720.
3892 BOARD NOTE: Also available from USEPA, OGWDW
3893 (under "Radionuclides (PDF)").
3894

3895 "USEPA 00-07 (84)" means Method 00-07,
3896 "Radiochemical Determination of Thorium and Uranium in
3897 Water", in USEPA Radiochemistry Procedures (84).
3898 Referenced in Section 611.720.
3899 BOARD NOTE: Also available from USEPA, OGWDW
3900 (under "Radionuclides (PDF)").
3901

3902 "USEPA 100.1 (83)" means "Method 100.1: Analytical
3903 Method for Determination of Asbestos in Water"
3904 (September 1983), USEPA, Environmental Research
3905 Laboratory, document number EPA 600/4-83-043.
3906 Available from NEMI; NTRL (document number PB83-
3907 260471) and USEPA, NSCEP (search for "600483043").
3908 Referenced in Section 611.611.
3909

3910 "USEPA 100.2 (94)" means "Method 100.2:
3911 Determination of Asbestos Structures over 10-mm in
3912 Length in Drinking Water" (June 1994), USEPA,
3913 Environmental Monitoring Systems Laboratory, document
3914 number EPA 600/R-94-134. Available from NEMI; NTRL
3915 (document number PB94-201902); USEPA, NSCEP

3916 (search for "600R94134"); and USEPA, OGWDW (under
3917 "Inorganic Contaminants and Other Inorganic Constituents
3918 (PDF)"). Referenced in Section 611.611.
3919

3920 "USEPA 127 (21)" means "Method 127: Determination of
3921 Monochloramine Concentration in Drinking Water",
3922 document number EPA 815-B-21-004, (January 2021).
3923 Available from USEPA, NSCEP (search for "815B21004").
3924 Referenced in Section 611.531.

3925 BOARD NOTE: Also individually available from NEMI.
3926

3927 "USEPA 150.1 (71)" means "pH: Method 150.1
3928 (Electrometric)" (1971), in USEPA Inorganic Methods
3929 (83). Referenced in Section 611.611.

3930 BOARD NOTE: Also individually available from NEMI.
3931

3932 "USEPA 150.2 (82)" means "pH, Continuous Monitoring
3933 (Electrometric) – Method 150.2" (December 1982), in
3934 USEPA Inorganic Methods (83). Referenced in Section
3935 611.611.

3936 BOARD NOTE: Also individually available from NEMI.
3937

3938 "USEPA 150.3 (17)" means "Method 150.3:
3939 Determination of pH in Drinking Water", Version 1.0
3940 (February 2017), USEPA, Office of Ground Water and
3941 Drinking Water, document number EPA 815/B-17/001.
3942 Available from USEPA, NSCEP (search for "815B17001")
3943 and USEPA, OGWDW (under "Disinfection Byproduct
3944 Rules (PDF)" and "Inorganic Contaminants and Other
3945 Inorganic Constituents (PDF)"). Referenced in Section
3946 611.611.
3947

3948 "USEPA 180.1 (93)" means "Method 180.1:
3949 Determination of Turbidity by Nephelometry", Revision
3950 2.0 (August 1993), in USEPA Environmental Inorganic
3951 Methods (93). Referenced in Section 611.531.

3952 BOARD NOTE: Also individually available from NEMI.
3953

3954 "USEPA 200.5 (03)" means "Method 200.5:
3955 Determination of Trace Elements in Drinking Water by
3956 Axially Viewed Inductively Coupled Plasma-Atomic
3957 Emission Spectrometry", Revision 4.2 (October 2003),
3958 USEPA, National Exposure Research Laboratory,

3959 document number EPA 600/R-06/115. Available from
3960 NEMI; USEPA, NSCEP (search for "600R06115"); and
3961 USEPA, OGWDW (under "Disinfection Byproduct Rules
3962 (PDF)," "Inorganic Contaminants and Other Inorganic
3963 Constituents (PDF)," and "Secondary Contaminants
3964 (PDF)"). Referenced in Sections 611.611 and 611.612.
3965

3966 "USEPA 200.7 (94)" means "Method 200.7:
3967 Determination of Metals and Trace Elements in Water and
3968 Wastes by Inductively Coupled Plasma-Atomic Emission
3969 Spectrometry", Revision 4.4 (May 1994), in USEPA
3970 Environmental Metals Methods (94). Referenced in
3971 Sections 611.600, 611.611, and 611.612.
3972 BOARD NOTE: Also individually available from NEMI.
3973

3974 "USEPA 200.8 (94)" means "Method 200.8:
3975 Determination of Trace Elements in Water and Wastes by
3976 Inductively Coupled Plasma-Atomic Emission
3977 Spectrometry", Revision 5.3 (May 1994), in USEPA
3978 Environmental Metals Methods (94). Referenced in
3979 Sections 611.600, 611.611, 611.612, and 611.720.
3980 BOARD NOTE: Also individually available from NEMI.
3981

3982 "USEPA 200.9 (94)" means "Method 200.9:
3983 Determination of Metals and Trace Elements in Water by
3984 Ultrasonic Nebulization Inductively Coupled Plasma-
3985 Atomic Emission Spectrometry", Revision 2.2 (May 1994),
3986 in USEPA Environmental Metals Methods (94).
3987 Referenced in Sections 611.600, 611.611, and 611.612.
3988 BOARD NOTE: Also individually available from NEMI.
3989

3990 "USEPA 245.1 (91)" means "Method 245.1:
3991 Determination of Mercury in Water by Cold Vapor Atomic
3992 Absorption Spectrometry", Revision 2.3 (April 1991), in
3993 USEPA Environmental Metals Methods (94). Referenced
3994 in Section 611.611.
3995 BOARD NOTE: Also individually available from NEMI.
3996

3997 "USEPA 245.2 (74)" means "Mercury: Method 245.2
3998 (Automated Cold Vapor Technique)" (1974), in USEPA
3999 Inorganic Methods (83). Referenced in Section 611.611.
4000 BOARD NOTE: Also individually available from NEMI.
4001

4002 "USEPA 300.0 (93)" means "Method 300.0:
4003 Determination of Inorganic Anions by Ion
4004 Chromatography", Revision 2.1 (August 1993), in USEPA
4005 Environmental Inorganic Methods (93). Referenced in
4006 Sections 611.381 and 611.611.
4007 BOARD NOTE: Also individually available from NEMI.
4008

4009 "USEPA 300.1 (97)" means "Method 300.1:
4010 Determination of Inorganic Anions in Drinking Water by
4011 Ion Chromatography", Revision 1.0 (September 1997), in
4012 USEPA Organic and Inorganic Methods (00). Referenced
4013 in Sections 611.381 and 611.611.
4014 BOARD NOTE: Also individually available from NEMI.
4015

4016 "USEPA 302.0 (09)" means "Method 302.0:
4017 Determination of Bromate in Drinking Water Using Two-
4018 Dimensional Ion Chromatography with Suppressed
4019 Conductivity Detection" (September 2009), USEPA, Office
4020 of Water, document number EPA 815/B-09/014. Available
4021 from NEMI; USEPA, NSCEP (search "815B09014"); and
4022 USEPA, OGWDW (under "Disinfection Byproduct Rules
4023 (PDF)"). Referenced in Sections 611.381 and 611.382.
4024

4025 "USEPA 317.0 (01)" means "Method 317.0:
4026 Determination of Inorganic Oxyhalide Disinfection By-
4027 Products in Drinking Water Using Ion Chromatography
4028 with the Addition of a Postcolumn Reagent for Trace
4029 Bromate Analysis", Revision 2.0 (July 2001), USEPA,
4030 Office of Ground Water and Drinking Water, Technical
4031 Support Center, document number EPA 815/B-01/001.
4032 Available from NEMI; USEPA, NSCEP (search
4033 "815B01001"); and USEPA, OGWDW (under
4034 "Disinfection Byproduct Rules (PDF)"). Referenced in
4035 Sections 611.381 and 611.382.
4036

4037 "USEPA 321.8 (97)" means "Method 321.8:
4038 Determination of Bromate in Drinking Waters by Ion
4039 Chromatography Inductively Coupled Plasma/Mass
4040 Spectrometry", Revision 1.0 (December 1997), in USEPA
4041 Organic and Inorganic Methods (00). Referenced in
4042 Sections 611.381 and 611.382.
4043 BOARD NOTE: Also individually available from NEMI.
4044

4045 "USEPA 326.0 (02)" means "Method 326.0:
4046 Determination of Inorganic Oxyhalide Disinfection By-
4047 Products in Drinking Water Using Ion Chromatography
4048 Incorporating the Addition of a Suppressor Acidified
4049 Postcolumn Reagent for Trace Bromate Analysis",
4050 Revision 1.0 (June 2002), USEPA, Office of Ground Water
4051 and Drinking Water, Technical Support Center, document
4052 number EPA 815/R-03/007. Available from NEMI; NTRL
4053 (document number PB2003-107402); USEPA, NSCEP
4054 (search "815R03007"); and USEPA, OGWDW (under
4055 "Disinfection Byproduct Rules (PDF)"). Referenced in
4056 Sections 611.381 and 611.382.

4057
4058 "USEPA 327.0 (05)" means "Method 327.0:
4059 Determination of Chlorine Dioxide and Chlorite Ion in
4060 Drinking Water Using Lissamine Green B and Horseradish
4061 Peroxidase with Detection by Visible Spectrophotometry",
4062 Revision 1.1 (May 2005), USEPA, Office of Ground Water
4063 and Drinking Water, Technical Support Center, document
4064 number EPA 815/R-05/008. Available from NEMI;
4065 USEPA, NSCEP (search "815R05008"); and USEPA,
4066 OGWDW (under "Disinfection Byproduct Rules (PDF)").
4067 Referenced in Sections 611.381 and 611.531.

4068
4069 "USEPA 334.0 (09)" means "Method 334.0:
4070 Determination of Residual in Drinking Water Using an On-
4071 line Chlorine Analyzer", Version 1.0 (September 2009),
4072 USEPA, Office of Ground Water and Drinking Water,
4073 Technical Support Center, document number EPA 815/B-
4074 09/013. Available from NEMI; USEPA, NSCEP (search
4075 "815B09013"); and USEPA, OGWDW (under
4076 "Disinfection Byproduct Rules (PDF)"). Referenced in
4077 Sections 611.381 and 611.531.

4078
4079 "USEPA 335.4 (93)" means "Method 335.4:
4080 Determination of Total Cyanide by Semi-Automated
4081 Colorimetry", Revision 1.0 (August 1993), in USEPA
4082 Environmental Inorganic Methods (93). Referenced in
4083 Section 611.611.
4084 BOARD NOTE: Also individually available from NEMI.

4085
4086 "USEPA 353.2 (93)" means "Method 353.2:
4087 Determination of Inorganic Anions by Ion

4088 Chromatography", Revision 2.0 (August 1993), in USEPA
4089 Environmental Inorganic Methods (93). Referenced in
4090 Section 611.611.
4091 BOARD NOTE: Also individually available from NEMI.
4092
4093 "USEPA 365.1 (93)" means "Method 365.1:
4094 Determination of Phosphorus by Automated Colorimetry",
4095 Revision 2.0 (August 1993), in USEPA Environmental
4096 Inorganic Methods (93). Referenced in Section 611.611.
4097 BOARD NOTE: Also individually available from NEMI
4098 and USEPA, OGWDW (under "Inorganic Contaminants
4099 and Other Inorganic Constituents (PDF)").
4100
4101 "USEPA 415.3 (05)" means "Method 415.3:
4102 Determination of Total Organic Carbon and Specific UV
4103 Absorbance at 254 nm in Source Water and Drinking
4104 Water", Revision 1.1 (February 2005), USEPA, National
4105 Exposure Research Laboratory, document number EPA
4106 600/R05-055. Available from USEPA, NSCEP (search
4107 "600R05055") and USEPA, OGWDW (under "Disinfection
4108 Byproduct Rules (PDF)"). Referenced in Section 611.381.
4109
4110 "USEPA 415.3 (09)" means "Method 415.3,
4111 "Determination of Total Organic Carbon and Specific UV
4112 Absorbance at 254 nm in Source Water and Drinking
4113 Water", Revision 1.2 (September 2009), USEPA, National
4114 Exposure Research Laboratory, document number EPA
4115 600/R09-122. Referenced in Section 611.381. Available
4116 from NEMI; USEPA, NSCEP (search "600R09122"); and
4117 USEPA, OGWDW (under "Disinfection Byproduct Rules
4118 (PDF)").
4119
4120 "USEPA 502.2 (95)" means "Method 502.2: Volatile
4121 Organic Compounds in Water by Purge and Trap Capillary
4122 Column Gas Chromatography with Photoionization and
4123 Electrolytic Conductivity Detectors in Series", Revision 2.1
4124 (1995), in USEPA Organic Methods – Supplement III (95).
4125 Referenced in Sections 611.381 and 611.645.
4126 BOARD NOTE: Also individually available from NEMI.
4127
4128 "USEPA 504.1 (95)" means "Method 504.1: 1,2-
4129 Dibromomethane (EDB), 1,2-Dibromo-3-Chloropropane
4130 (DBCP), and 1,2,3-Trichloropropane (123TCP) in Water

4131 by Microextraction and Gas Chromatography", Revision
4132 1.1 (1995), in USEPA Organic Methods – Supplement III
4133 (95). Referenced in Section 611.645.

4134 BOARD NOTE: Also individually available from NEMI.

4135
4136 "USEPA 505 (95)" means "Method 505: Analysis of
4137 Organohalide Pesticides and Commercial Polychlorinated
4138 Biphenyl (PCB) Products in Water by Microextraction and
4139 Gas Chromatography", Revision 2.1 (1995), in USEPA
4140 Organic Methods – Supplement III (95). Referenced in
4141 Sections 611.645 and 611.648.

4142 BOARD NOTE: Also individually available from NEMI.

4143
4144 "USEPA 506 (95)" means "Method 506: Determination of
4145 Phthalate and Adipate Esters in Drinking Water by Liquid-
4146 Liquid Extraction or Liquid-Solid Extraction and Gas
4147 Chromatography with Photoionization Detection", Revision
4148 1.1 (1995), in USEPA Organic Methods – Supplement III
4149 (95). Referenced in Section 611.645.

4150 BOARD NOTE: Also individually available from NEMI.

4151
4152 "USEPA 507 (95)" means "Method 507: Determination of
4153 Nitrogen- and Phosphorus-Containing Pesticides in Water
4154 by Gas Chromatography with a Nitrogen-Phosphorus
4155 Detector", Revision 2.1 (1995), in USEPA Organic
4156 Methods – Supplement III (95). Referenced in Sections
4157 611.645 and 611.648.

4158 BOARD NOTE: Also individually available from NEMI.

4159
4160 "USEPA 508 (95)" means "Method 508: Determination of
4161 Chlorinated Pesticides in Water by Gas Chromatography
4162 with an Electron Capture Detector", Revision 3.1 (1995), in
4163 USEPA Organic Methods – Supplement III (95).
4164 Referenced in Sections 611.645 and 611.648.

4165 BOARD NOTE: Also individually available from NEMI.

4166
4167 "USEPA 508A (89)" means "Method 508A: Screening for
4168 Polychlorinated Biphenyls by Perchlorination and Gas
4169 Chromatography", Revision 1.0 (1989), in USEPA Organic
4170 Methods (91). Referenced in Sections 611.645 and
4171 611.646.

4172 BOARD NOTE: Also individually available from NEMI.

4173

4174 "USEPA 508.1 (95)" means "Method 508.1:
4175 Determination of Chlorinated Pesticides, Herbicides, and
4176 Organohalides by Liquid-Solid Extraction and Electron
4177 Capture Gas Chromatography", Revision 2.0 (1995), in
4178 USEPA Organic Methods – Supplement III (95).
4179 Referenced in Sections 611.645 and 611.648.
4180 BOARD NOTE: Also individually available from NEMI.
4181

4182 "USEPA 515.1 (89)" means "Method 515.1:
4183 Determination of Chlorinated Acids in Drinking Water by
4184 Gas Chromatography with an Electron Capture Detector",
4185 Revision 4.1 (1989), in USEPA Organic Methods (91).
4186 Referenced in Section 611.645.
4187

4188 "USEPA 515.2 (95)" means "Method 515.2:
4189 Determination of Chlorinated Acids in Water Using
4190 Liquid-Solid Extraction and Gas Chromatography with an
4191 Electron Capture Detector", Revision 1.1 (1995), in
4192 USEPA Organic Methods – Supplement III (95).
4193 Referenced in Section 611.645.
4194 BOARD NOTE: Also individually available from NEMI.
4195

4196 "USEPA 515.3 (96)" means "Method 515.3:
4197 Determination of Chlorinated Acids in Drinking Water by
4198 Liquid-Liquid Extraction, Derivatization and Gas
4199 Chromatography with Electron Capture Detection",
4200 Revision 1.0 (July 1996), in USEPA Organic and Inorganic
4201 Methods (00). Referenced in Section 611.645.
4202 BOARD NOTE: Also individually available from NEMI.
4203

4204 "USEPA 515.4 (00)" means "Method 515.4:
4205 "Determination of Chlorinated Acids in Drinking Water by
4206 Liquid-Liquid Microextraction, Derivatization and Fast Gas
4207 Chromatography with Electron Capture Detection"
4208 Revision 1.0 (April 2000), USEPA, Office of Ground
4209 Water and Drinking Water, Technical Support Center,
4210 document number EPA 815/B-00/001. Available from
4211 NEMI; USEPA, NSCEP (search "815B00001"); and
4212 USEPA, OGWDW (under "Organic Contaminants
4213 (PDF)"). Referenced in Section 611.645.
4214

4215 "USEPA 523 (11)" means "Method 523: Determination of
4216 Triazine Pesticides and Other Degradates in Drinking

4217 Water by Gas Chromatography/Mass Spectrometry
4218 (GC/MS)", Version 1.0 (February 2011), USEPA, Office of
4219 Ground Water and Drinking Water, Standards and Risk
4220 Management Division, Technical Support Center,
4221 document number EPA 815/R-11-002. Available from
4222 USEPA, NSCEP (search "815R11002"); and USEPA,
4223 OGWDW (under "Organic Contaminants (PDF)").
4224 referenced in Section 611.645.
4225

4226 "USEPA 524.2 (95)" means "Method 524.2: Measurement
4227 of Purgeable Organic Compounds in Water by Capillary
4228 Column Gas Chromatography/Mass Spectrometry",
4229 Revision 4.1 (1995), in USEPA Organic Methods –
4230 Supplement III (95). Referenced in Section 611.645.
4231 BOARD NOTE: Also individually available from NEMI.
4232

4233 "USEPA 524.3 (09)" means "Method 524.3: Measurement
4234 of Purgeable Organic Compounds in Water by Capillary
4235 Column Gas Chromatography/Spectrometry", Revision 1.0
4236 (June 2009), USEPA, Office of Ground Water and
4237 Drinking Water, Standards and Risk Management Division,
4238 Technical Support Center, document number EPA 815/B-
4239 09/009. Available from NEMI; USEPA, NSCEP (search
4240 for "815B09009"); and USEPA, OGWDW (under
4241 "Disinfection Byproduct Rules (PDF)" and "Organic
4242 Contaminants (PDF)"). Referenced in Sections 611.381
4243 and 611.645.
4244

4245 "USEPA 524.4 (13)" means "Method 524.4, "Measurement
4246 of Purgeable Organic Compounds in Water by Gas
4247 Chromatography/Spectrometry Using Nitrogen Purge Gas"
4248 (May 2013), USEPA, Office of Ground Water and
4249 Drinking Water, Standards and Risk Management Division,
4250 Technical Support Center, document number EPA 815/R-
4251 13/002. Available from USEPA, NSCEP (search for
4252 "815R13002"); and USEPA, OGWDW (under
4253 "Disinfection Byproduct Rules (PDF)" and "Organic
4254 Contaminants (PDF)"). Referenced in Sections 611.381
4255 and 611.645.
4256

4257 "USEPA 525.2 (95)" means "Method 525.2:
4258 Determination of Organic Compounds in Drinking by
4259 Liquid-Liquid Extraction and Capillary Column Gas

4260 Chromatography/Mass Spectrometry", Revision 2.0 (1995),
4261 in USEPA Organic Methods – Supplement III (95).
4262 Referenced in Section 611.645.

4263 BOARD NOTE: Also individually available from NEMI.

4264
4265 "USEPA 525.3 (12)" means "Method 525.3:
4266 Determination of Total Semivolatile Organic Chemicals in
4267 Drinking Water by Solid Phase Extraction and Capillary
4268 Column Gas Chromatography/Mass Spectrometry
4269 (GC/MS)", Version 1.0 (February 2012), USEPA, National
4270 Exposure Research Laboratory, document number EPA
4271 600/R-12/010. Available from USEPA, NSCEP (search
4272 "600R12010") and USEPA, OGWDW (under "Organic
4273 Contaminants (PDF)"). Referenced in Section 611.645.

4274
4275 "USEPA 531.1 (95)" means "Method 531.1: Measurement
4276 of N-Methylcarbamoyloximes and N-Methylcarbamates in
4277 Water by Direct Aqueous Injection HPLC with Post
4278 Column Derivatization", Revision 3.1 (1995), in USEPA
4279 Organic Methods – Supplement III (95). Referenced in
4280 Section 611.645.

4281 BOARD NOTE: Also individually available from NEMI.

4282
4283 "USEPA 531.2 (01)" means "Method 531.2: Measurement
4284 of N-Methylcarbamoyloximes and N-Methylcarbamates in
4285 Water by Direct Aqueous Injection HPLC with Postcolumn
4286 Derivatization", Revision 1.0 (September 2001), USEPA,
4287 Office of Ground Water and Drinking Water, Standards
4288 and Risk Management Division, Technical Support Center,
4289 document number EPA 815/B-01/002. Available from
4290 NEMI; USEPA, NSCEP (search "815B01002"); and
4291 USEPA, OGWDW (under "Organic Contaminants
4292 (PDF)"). Referenced in Section 611.645. See also and

4293
4294 ["USEPA Method 533" means "Method 533":](#)
4295 [Determination of Per- and Polyfluoroalkyl Substances in](#)
4296 [Drinking Water by Isotope Dilution Anion Exchange Solid](#)
4297 [Phase Extraction and Liquid Chromatography/Tandem](#)
4298 [Mass Spectrometry, 815-B-19-020, November 2019](#)

4299
4300 "USEPA 536 (07)" means "Method 536: Determination of
4301 Triazine Pesticides and Other Degradates in Drinking
4302 Water by Liquid Chromatography Electrospray Ionization

4303 Tandem Mass Spectrometry (LC/ESI-MS/MS)", Version
4304 1.0 (October 2007), USEPA Office of Ground Water and
4305 Drinking Water, Technical Support Center, document
4306 number EPA 815/B-07/002. Available from USEPA,
4307 NSCEP (search "815B07002") and USEPA, OGWDW
4308 (under "Organic Contaminants (PDF)"). Referenced in
4309 Section 611.645.

4310
4311 "USEPA 547 (90)" means "Method 547: Determination of
4312 Glyphosate in Drinking Water by Direct-Aqueous-Injection
4313 HPLC, Post-Column Derivatization, and Fluorescence
4314 Detection" (July 1990), in USEPA Organic Methods –
4315 Supplement I (90). Referenced in Section 611.645.

4316
4317 "USEPA 548.1 (92)" means "Method 548.1:
4318 Determination of Endothall in Drinking Water by Ion-
4319 Exchange Extraction, Acidic Methanol Methylation and
4320 Gas Chromatography/Mass Spectrometry", Revision 1.0
4321 (August 1992), in USEPA Organic Methods – Supplement
4322 II (92). Referenced in Section 611.645.
4323 BOARD NOTE: Also individually available from NEMI.

4324
4325 "USEPA 549.2 (97)" means "Method 549.2:
4326 Determination of Diquat and Paraquat in Drinking Water
4327 by Liquid-Solid Extraction and High Performance Liquid
4328 Chromatography with Ultraviolet Detection", Revision 1.0
4329 (June 1997), USEPA, Office of Research and
4330 Development, National Exposure Research Laboratory.
4331 Available from NEMI. Referenced in Section 611.645.

4332
4333 "USEPA 550 (90)" means "Method 550: Determination of
4334 Polycyclic Aromatic Hydrocarbons in Drinking Water by
4335 Liquid-Liquid Extraction and HPLC with Coupled
4336 Ultraviolet and Fluorescence Detection" (July 1990), in
4337 USEPA Organic Methods – Supplement I (90).
4338 Referenced in Section 611.645.
4339 BOARD NOTE: Also individually available from NEMI.

4340
4341 "USEPA 550.1 (90)" means "Method 550.1:
4342 Determination of Polycyclic Aromatic Hydrocarbons in
4343 Drinking Water by Liquid-Solid Extraction and HPLC with
4344 Coupled Ultraviolet and Fluorescence Detection" (July

4345 1990), in USEPA Organic Methods – Supplement I (90).
4346 Referenced in Section 611.645.
4347 BOARD NOTE: Also individually available from NEMI.
4348
4349 "USEPA 551.1 (95)" means "Method 551.1: Measurement
4350 of N-Methylcarbamoyloximes and N-Methylcarbamates in
4351 Water by Direct Aqueous Injection HPLC with Post
4352 Column Derivatization", Revision 1.0 (1995), in USEPA
4353 Organic Methods – Supplement III (95). Referenced in
4354 Section 611.645.
4355
4356 "USEPA 552.1 (92)" means "Method 552.1:
4357 Determination of Haloacetic Acids and Dalapon in
4358 Drinking Water by Ion-Exchange Liquid-Solid Extraction
4359 and Gas Chromatography with an Electron Capture
4360 Detector", Revision 1.0 (August 1992), in USEPA Organic
4361 Methods – Supplement II (92). Referenced in Sections
4362 611.381 and 611.645.
4363 BOARD NOTE: Also individually available from NEMI.
4364
4365 "USEPA 552.2 (95)" means "Method 552.2:
4366 Determination of Haloacetic Acids and Dalapon in
4367 Drinking Water by Liquid-Liquid Extraction,
4368 Derivatization and Gas Chromatography with Electron
4369 Capture Detection", Revision 1.0 (1995), in USEPA
4370 Organic Methods – Supplement III (95). Referenced in
4371 Sections 611.381 and 611.645.
4372 BOARD NOTE: Also individually available from NEMI.
4373
4374 "USEPA 552.3 (03)" means "Method 552.3:
4375 Determination of Haloacetic Acids and Dalapon in
4376 Drinking Water by Liquid-Liquid Microextraction,
4377 Derivatization, and Gas Chromatography with Electron
4378 Capture Detection", Revision 1.0 (July 2003), USEPA,
4379 Office of Ground Water and Drinking Water, Technical
4380 Support Center, document number EPA 815/B-03/002.
4381 Available from NEMI; USEPA, NSCEP (search
4382 "815B03002"); and USEPA, OGWDW (under
4383 "Disinfection Byproduct Rules (PDF)"). Referenced in
4384 Sections 611.381 and 611.645.
4385
4386 "USEPA 555 (92)" means "Method 555: Determination of
4387 Chlorinated Acids in Water by High Performance Liquid

4388 Chromatography with a Photodiode Array Ultraviolet
4389 Detector", Revision 1.0 (August 1992), in USEPA Organic
4390 Methods – Supplement II (92). Referenced in Section
4391 611.645.

4392 BOARD NOTE: Also individually available from NEMI.

4393
4394 "USEPA 557 (09)" means "Method 557: Determination of
4395 Haloacetic Acids, Bromate, and Dalapon in Drinking Water
4396 by Ion Chromatography Electrospray Ionization Tandem
4397 Mass Spectrometry (IC-ESI-MS/MS)", Version 1.0
4398 (September 2009), USEPA, Office of Ground Water and
4399 Drinking Water, Technical Support Center, document
4400 number EPA 815/B-09/012. Available from NEMI;
4401 USEPA, NSCEP (search "815B09012"); and USEPA,
4402 OGWDW (under "Disinfection Byproduct Rules (PDF)").
4403 Referenced in Sections 611.381, 611.382, and 611.645.

4404
4405 "USEPA 900.0 (80)" means "Gross Alpha and Gross Beta
4406 Radioactivity in Drinking Water – Method 900.0" (1980),
4407 in USEPA Radioactivity Methods (80). Referenced in
4408 Section 611.720.

4409 BOARD NOTE: Also individually available from NEMI
4410 and USEPA, OGWDW (under "Radionuclides (PDF)").

4411
4412 "USEPA 900.0 (18)" means Method 900.0, Revision 1.0
4413 "Gross Alpha and Gross Beta Radioactivity in Drinking
4414 Water" (February 2018), USEPA, Office of Water,
4415 document number EPA 815/B-18/002. Also available from
4416 USEPA, NSCEP (search "815B18002") and USEPA,
4417 OGWDW (under "Radionuclides (PDF)").

4418
4419 "USEPA 901.0 (80)" means "Radioactive Cesium in
4420 Drinking Water – Method 901.0" (1980), in USEPA
4421 Radioactivity Methods (80). Referenced in Section
4422 611.720.

4423 BOARD NOTE: Also individually available from NEMI
4424 and USEPA, OGWDW (under "Radionuclides (PDF)").

4425
4426 "USEPA 901.1 (80)" means "Gamma Emitting
4427 Radionuclides in Drinking Water – Method 901.1" (1980),
4428 in USEPA Radioactivity Methods (80). Referenced in
4429 Section 611.720.

4430 BOARD NOTE: Also individually available from NEMI
4431 and USEPA, OGWDW (under "Radionuclides (PDF)").

4432
4433 "USEPA 902.0 (80)" means "Radioactive Iodine in
4434 Drinking Water – Method 902.0" (1980), in USEPA
4435 Radioactivity Methods (80). Referenced in Section
4436 611.720.

4437
4438 "USEPA 903.0 (80)" means "Alpha-Emitting Radium
4439 Isotopes in Drinking Water – Method 903.0" (1980), in
4440 USEPA Radioactivity Methods (80). Referenced in
4441 Section 611.720.

4442 BOARD NOTE: Also individually available from NEMI
4443 and USEPA, OGWDW (under "Radionuclides (PDF)").

4444
4445 "USEPA 903.0 (21)" means "Method 903.0, Revision 1.0:
4446 Alpha-Emitting Radium Isotopes in Drinking Water", doc.
4447 no. EPA 815-B-21-002 (January 2021). Available from
4448 USEPA, NSCEP (nepis.epa.gov; search: "815B21002").
4449 Referenced in Section 611.720.

4450
4451 "USEPA 903.1 (80)" means "Radium-226 in Drinking
4452 Water Radon Emanation Technique – Method 903.1"
4453 (1980), in USEPA Radioactivity Methods (80). Referenced
4454 in Section 611.720.

4455 BOARD NOTE: Also individually available from NEMI
4456 and USEPA, OGWDW (under "Radionuclides (PDF)").

4457
4458 "USEPA 903.1 (21)" means "Method 903.1, Revision 1.0:
4459 Radium-226 in Drinking Water Radon Emanation
4460 Technique", doc. no. EPA 815-B-21-003 (January 2021).
4461 Available from USEPA, NSCEP (nepis.epa.gov; search:
4462 "815B21003"). Referenced in Section 611.720.

4463
4464 "USEPA 904.0 (80)" means "Radium-228 in Drinking
4465 Water – Method 904.0" (1980), in USEPA Radioactivity
4466 Methods (80). Referenced in Section 611.720.

4467 BOARD NOTE: Also individually available from NEMI
4468 and USEPA, OGWDW (under "Radionuclides (PDF)").

4469
4470 "USEPA 904.0 (22)" means "Radium-228 in Drinking
4471 Water – Method 904.0", Revision 1.0 (2022), in USEPA

4472 Radioactivity Methods (80). Referenced in Section
4473 611.720.

4474
4475 "USEPA 905.0 (80)" means "Radioactive Strontium in
4476 Drinking Water – Method 905.0" (1980), in USEPA
4477 Radioactivity Methods (80). Referenced in Section
4478 611.720.

4479 BOARD NOTE: Also individually available from NEMI
4480 and USEPA, OGWDW (under "Radionuclides (PDF)").

4481
4482 "USEPA 906.0 (80)" means "Tritium in Drinking Water –
4483 Method 906.0" (1980), in USEPA Radioactivity Methods
4484 (80). Referenced in Section 611.720.

4485 BOARD NOTE: Also individually available from NEMI
4486 and USEPA, OGWDW (under "Radionuclides (PDF)").

4487
4488 "USEPA 908.0 (80)" means "Uranium in Drinking Water –
4489 Radiochemical Method – Method 908.0" (1980), in
4490 USEPA Radioactivity Methods (80). Referenced in
4491 Section 611.720.

4492 BOARD NOTE: Also individually available from NEMI.

4493
4494 "USEPA 908.1 (80)" means "Uranium in Drinking Water –
4495 Fluorometric Method – Method 908.1" (1980), in USEPA
4496 Radioactivity Methods (80). Referenced in Section
4497 611.720.

4498 BOARD NOTE: Also individually available from NEMI
4499 and USEPA, OGWDW (under "Radionuclides (PDF)").

4500
4501 "USEPA 1600 (02)" means "Method 1600: Enterococci in
4502 Water by Membrane Filtration Using membrane-
4503 Enterococcus Indoxyl- β -D-Glucoside Agar (mEI)"
4504 (September 2002), USEPA, Office of Water, document
4505 number EPA 821/R-02/022. Available from NEMI;
4506 USEPA, NSCEP (search "821R02022"); and USEPA,
4507 OGWDW (under "Ground Water Rule (PDF)").
4508 Referenced in Section 611.802.

4509 BOARD NOTE: SM 9230 C (93) and SM 9230 (13),
4510 "Fecal Streptococcus and Enterococcus Groups, Membrane
4511 Filter Techniques", are USEPA-approved variations of this
4512 method.

4513

4514 "USEPA 1601 (01)" means "Method 1601: Male-specific
 4515 (F+) and Somatic Coliphage in Water by Two-step
 4516 Enrichment Procedure" (April 2001), USEPA, Office of
 4517 Water, document number EPA 821/R-01/030. Available
 4518 from NEMI and USEPA, NSCEP (search "821R01030");
 4519 and USEPA, OGWDW (under "Ground Water Rule
 4520 (PDF)"). Referenced in Section 611.802.

4521
 4522 "USEPA 1602 (01)" means "Method 1602: Male-specific
 4523 (F+) and Somatic Coliphage in Water by Single Agar Layer
 4524 (SAL) Procedure" (April 2001), USEPA, Office of Water,
 4525 document number EPA 821/R-01/029. Available from
 4526 NEMI and USEPA, NSCEP (search "821R01029"); and
 4527 USEPA, OGWDW (under "Ground Water Rule (PDF)").
 4528 Referenced in Section 611.802.

4529
 4530 "USEPA 1604 (02)" means "Method 1604: Total
 4531 Coliforms and Escherichia coli in Water by Membrane
 4532 Filtration Using a Simultaneous Detection Technique (MI
 4533 Medium)" (September 2002), USEPA, Office of Water,
 4534 document number EPA 821/R-02/024. Available from
 4535 NEMI and USEPA, NSCEP (search "821R02024"); and
 4536 USEPA, OGWDW (under "Ground Water Rule (PDF)",
 4537 "Revised Total Coliforms Rule (PDF)", and "Surface Water
 4538 Treatment Rule (PDF)"). Referenced in Sections 611.802
 4539 and 611.1052.

4540
 4541 "USEPA 1613 (94)" means "Method 1613: Tetra- through
 4542 Octa-Chlorinated Dioxins and Furans by Isotope Dilution
 4543 HRGC/HRMS", Revision B (October 1994), USEPA,
 4544 Office of Water, Engineering and Analysis Division,
 4545 document number EPA 821/B-94/005. Available from
 4546 NEMI; NTRL (document number PB95-104774); USEPA,
 4547 NSCEP (search "821B94005"); and USEPA, OGWDW
 4548 (under "Organic Contaminants (PDF)"). Referenced in
 4549 Section 611.645.

4550
 4551 "USEPA 1622 (01)" means "Method 1622:
 4552 Cryptosporidium in Water by Filtration/IMS/FA" (April
 4553 2001), USEPA, Office of Water, document number EPA
 4554 821/R-01/026. Available from NEMI; and USEPA,
 4555 NSCEP (search "821R01026"). Referenced in Section
 4556 611.1007.

4557
4558 "USEPA 1622 (05)" means "Method 1622:
4559 Cryptosporidium in Water by Filtration/IMS/FA"
4560 (December 2005), USEPA, Office of Ground Water and
4561 Drinking Water, document number EPA 815/R-05/001.
4562 Available from USEPA, NSCEP (search "815R05001")
4563 and USEPA, OGWDW (under "Long Term 2 Enhanced
4564 Surface Water Treatment Rule (PDF)"). Referenced in
4565 Sections 611.1004 and 611.1007.
4566
4567 "USEPA 1623 (99)" means "Method 1623:
4568 Cryptosporidium and Giardia in Water by
4569 Filtration/IMS/FA" (April 1999), USEPA, Office of
4570 Ground Water and Drinking Water, document number EPA
4571 821/R-99/006. Available from USEPA, NSCEP (search
4572 "821R99006"). Referenced in Section 611.1007.
4573
4574 "USEPA 1623 (01)" means "Method 1623:
4575 Cryptosporidium and Giardia in Water by
4576 Filtration/IMS/FA" (April 2001), USEPA, Office of
4577 Ground Water and Drinking Water, document number EPA
4578 821/R-01/025. Available from NEMI and USEPA, NSCEP
4579 (search "821R01025"). Referenced in Section 611.1007.
4580
4581 "USEPA 1623 (05)" means "Method 1623:
4582 Cryptosporidium and Giardia in Water by
4583 Filtration/IMS/FA" (December 2005), USEPA, Office of
4584 Ground Water and Drinking Water, document number EPA
4585 815/R-05/002. Available from USEPA, NSCEP (search
4586 "815R05002") and USEPA, OGWDW (under "Long Term
4587 2 Enhanced Surface Water Treatment Rule (PDF)").
4588 Referenced in Sections 611.1004 and 611.1007.
4589
4590 "USEPA 1623.1 (12)" means "Method 1623.1, "Method
4591 1623.1: Cryptosporidium and Giardia in Water by
4592 Filtration/IMS/FA" (January 2012), USEPA, Office of
4593 Ground Water and Drinking Water, document number EPA
4594 816/R-12/001. Available from USEPA, NSCEP (search
4595 "816R12001") and USEPA, OGWDW (under "Long Term
4596 2 Enhanced Surface Water Treatment Rule (PDF)").
4597 Referenced in Section 611.1004.
4598
4599 USEPA Documents Containing Multiple Numbered Methods

4600
4601 "USEPA Environmental Inorganic Methods (93)" means
4602 "Methods for the Determination of Inorganic Substances in
4603 Environmental Samples" (August 1993), USEPA,
4604 Environmental Monitoring Systems Laboratory, document
4605 number EPA 600/R-93-100 (for USEPA 180.1 (93),
4606 USEPA 300.0 (93), USEPA 335.4 (93), USEPA 353.2
4607 (93), and USEPA 365.1 (93) only). Available from NTRL
4608 (document number PB94-121811) and USEPA, NSCEP
4609 (search "600R93100").
4610

4611 "USEPA Environmental Metals Methods (94)" means
4612 "Methods for the Determination of Metals in
4613 Environmental Samples – Supplement I", May 1994,
4614 USEPA, Environmental Monitoring Systems Laboratory,
4615 document number EPA 600/R-94-111 (for USEPA 200.7
4616 (94), USEPA 200.8 (94), USEPA 200.9 (94), and USEPA
4617 245.1 (94) only). Referenced in Sections 611.600, 611.611,
4618 611.612, and 611.720. Available from NTRL (document
4619 number PB84-125472) and USEPA, NSCEP (search
4620 "600R94111").
4621

4622 "USEPA Inorganic Methods (83)" means "Methods for
4623 Chemical Analysis of Water and Wastes"(March 1983),
4624 USEPA, Office of Research and Development, document
4625 number EPA 600/4-79-020 (USEPA 150.1 (71), USEPA
4626 150.2 (82), and USEPA 245.2 (74) only). Available from
4627 NTRL (document number PB84-128677) and USEPA,
4628 NSCEP (search "600479020"). Referenced in Section
4629 611.611.
4630

4631 "USEPA Organic and Inorganic Methods (00)" means
4632 "Methods for the Determination of Organic and Inorganic
4633 Compounds in Drinking Water, Volume 1" (August 2000),
4634 USEPA, Office of Water and Office of Research and
4635 Development, document number EPA 815/R-00/014
4636 (Methods 300.1 (97), USEPA 321.8 (97), and USEPA
4637 515.3 (96) only). Available from NTRL (document
4638 number PB2000-106981) and USEPA, NSCEP (search
4639 "815R00014").
4640

4641 "USEPA Organic Methods (91)" means "Methods for the
4642 Determination of Organic Compounds in Drinking Water",

4643 (December 1988 (revised July 1991)), USEPA, Office of
 4644 Research and Development, document number EPA 600/4-
 4645 88/039 (USEPA 508A (89) and USEPA 515.1 (89) only).
 4646 Available from NTRL (document number PB91-231480)
 4647 and USEPA, NSCEP (search "600488039") and USEPA,
 4648 OGWDW.

4649
 4650 "USEPA Organic Methods – Supplement I (90)" means
 4651 "Methods for the Determination of Organic Compounds in
 4652 Drinking Water – Supplement I" (July 1990), USEPA,
 4653 Environmental Monitoring Systems Laboratory, document
 4654 number EPA 600/4-90/020 (USEPA 547 (90), USEPA 550
 4655 (90) and USEPA 550.1 (90) only). Available from NTRL
 4656 (document number PB91-146027) and USEPA, NSCEP
 4657 (search "600490020").
 4658

4659 "USEPA Organic Methods – Supplement II (92)" means
 4660 "Methods for the Determination of Organic Compounds in
 4661 Drinking Water – Supplement II" (August 1992), USEPA,
 4662 Office of Research and Development, document number
 4663 EPA 600/R-92/129 (USEPA 548.1 (92), USEPA 552.1
 4664 (92), and USEPA 555 (92) only). Available from NTRL
 4665 (document number PB92-207703) and USEPA, NSCEP
 4666 (search "600R92129").
 4667

4668 "USEPA Organic Methods – Supplement III (95)" means
 4669 "Methods for the Determination of Organic Compounds in
 4670 Drinking Water – Supplement III" (August 1995), USEPA,
 4671 Office of Research and Development, document number
 4672 EPA 600/R-95/131 (USEPA 502.2 (95), USEPA 504.1
 4673 (95), USEPA 505 (95), USEPA 506 (95), USEPA 507 (95),
 4674 USEPA 508 (95), USEPA 508.1 (95), USEPA 515.2 (95),
 4675 USEPA 524.2 (95), USEPA 525.2 (95), USEPA 531.1
 4676 (95), USEPA 551.1 (95), and USEPA 552.2 (95) only).
 4677 Available from NTRL (document number PB95-261616)
 4678 and USEPA, NSCEP (search "600R95131").
 4679

4680 "USEPA Radioactivity Methods (80)" means "Prescribed
 4681 Procedures for Measurement of Radioactivity in Drinking
 4682 Water" (August 1980), USEPA, Office of Research and
 4683 Development, Environmental Monitoring and Support
 4684 Laboratory, document number EPA 600/4-80/032 (USEPA
 4685 900.0 (80), USEPA 901.0 (80), USEPA 901.1 (80),

4686 USEPA 902.0 (80), USEPA 903.0 (80), USEPA 903.1
4687 (80), USEPA 904.0 (80), USEPA 905.0 (80), USEPA
4688 906.0 (80), USEPA 908.0 (80), and USEPA 908.1 (80)
4689 only.). Available from NTRL (document number PB80-
4690 224744); USEPA, NSCEP (search "821480032"); and
4691 USEPA, OGWDW (under "Radionuclides (PDF))".

4692
4693 "USEPA Radiochemistry Procedures (84)" means
4694 "Radiochemistry Procedures Manual" (June 1984),
4695 USEPA, Eastern Environmental Radiation Facility,
4696 document number EPA 520/5-84-006 (USEPA 00-01 (84),
4697 USEPA 00-02 (84), USEPA 00-07 (84), USEPA H-02 (84),
4698 USEPA Ra-03 (84), USEPA Ra-04 (84), USEPA Ra-05
4699 (84), USEPA Sr-04 (84) only). Available from NTRL
4700 (document number PB84215581); USEPA, NSCEP (search
4701 "520584006"); and USEPA, OGWDW.

4702
4703 Unnumbered Methods

4704
4705 "USEPA ARP (73)" means "Procedures for Radiochemical
4706 Analysis of Nuclear Reactor Aqueous Solutions" (May
4707 1973), USEPA, Office of Research and Monitoring,
4708 National Environmental Research Center, document
4709 number EPA-R4-73-014. Available from NTRL
4710 (document number PB222154) and USEPA, NSCEP
4711 (search "R473014"). Referenced in Section 611.720.

4712
4713 "USEPA IRM (76)" means "Interim Radiochemical
4714 Methodology for Drinking Water" (March 1976), USEPA,
4715 Office of Research and Development, Environmental
4716 Monitoring and Support Laboratory, document number
4717 EPA 600/4-75-008 (revised) (pages 1 through 37 only).
4718 Available from NTRL (document number PB253258);
4719 USEPA, NSCEP (search "600475008A"); and USEPA,
4720 OGWDW (under "Radionuclides (PDF)"). Referenced in
4721 Section 611.720.

4722
4723 "USEPA IRM (76), pages 1-3" means pages 1
4724 through 3, "Gross Alpha and Beta Radioactivity in
4725 Drinking Water", in USEPA IRM (76). Referenced
4726 in Section 611.720.
4727

4728 "USEPA IRM (76), pages 4-5" means pages 4
4729 through 5, "Radioactive Cesium in Drinking
4730 Water", in USEPA IRM (76). Referenced in
4731 Section 611.720.
4732
4733 "USEPA IRM (76), pages 6-8" means pages 6
4734 through 8, "Radioactive Iodine in Drinking Water:
4735 Precipitation Method", in USEPA IRM (76).
4736 Referenced in Section 611.720.
4737
4738 "USEPA IRM (76), pages 9-12" means pages 9
4739 through 12, "Radioactive Iodine in Drinking Water:
4740 Distillation Method", in USEPA IRM (76).
4741 Referenced in Section 611.720.
4742
4743 "USEPA IRM (76), pages 13-15" means pages 13
4744 through 15, "Alpha-Emitting Radium Isotopes in
4745 Drinking Water: Precipitation Method", in USEPA
4746 IRM (76). Referenced in Section 611.720.
4747
4748 "USEPA IRM (76), pages 16-23" means pages 16
4749 through 23, "Radium-226 in Drinking Water:
4750 Radon Emanation Technique", in USEPA IRM
4751 (76). Referenced in Section 611.720.
4752
4753 "USEPA IRM (76), pages 24-28" means pages 24
4754 through 28, "Radium-228 in Drinking Water:
4755 Sequential Method Radium-228/Radium-226", in
4756 USEPA IRM (76). Referenced in Section 611.720.
4757
4758 "USEPA IRM (76), pages 29-33" means pages 29
4759 through 33, "Radioactive Strontium in Drinking
4760 Water", in USEPA IRM (76). Referenced in
4761 Section 611.720.
4762
4763 "USEPA IRM (76), pages 34-37" means pages 34
4764 through 37, "Tritium in Drinking Water", in
4765 USEPA IRM (76). Referenced in Section 611.720.
4766
4767 "USEPA RCA (79)" means "Radiochemical Analytical
4768 Procedures for Analysis of Environmental Samples"
4769 (March 1979), USEPA, Environmental Monitoring and
4770 Support Laboratory, document number EMSL-LV-0539-17

4771 (pages 1 through 5, 19 through 48, 65 through 73, and 87
4772 through 95 only). Available from NTRL (document
4773 number EMSLLV053917); USEPA, NSCEP (search
4774 "EMSLLV053917") and USEPA, OGWDW (under
4775 "Radionuclides (PDF)"). Referenced in Section 611.720.
4776

4777 "USEPA RCA (79), pages 1-5" means pages 1
4778 through 5, "Determination of Gross Alpha and Beta
4779 in Water", in USEPA RCA (79). Referenced in
4780 Section 611.720.
4781

4782 "USEPA RCA (79), pages 19-32" means pages 19
4783 through 32, "Determination of Radium-226 and
4784 Radium-228 in Water, Soil, Air, and Biological
4785 Tissue", in USEPA RCA (79). Referenced in
4786 Section 611.720.
4787

4788 "USEPA RCA (79), pages 33-48" means pages 33
4789 through 48, "Isotopic Determination of Plutonium,
4790 Uranium, and Thorium in Water, Soil, Air, and
4791 Biological Tissue", in USEPA RCA (79).
4792 Referenced in Section 611.720.
4793

4794 "USEPA RCA (79), pages 65-73" means pages 65
4795 through 73, "Determination of Strontium-89 and
4796 Strontium-90 in Water, Soil, Air, and Biological
4797 Tissue", in USEPA RCA (79). Referenced in
4798 Section 611.720.
4799

4800 "USEPA RCA (79), pages 87-91" means pages 87
4801 through 91, "Determination of Tritium in Water,
4802 Soil, Air, and Biological Tissue (Direct Method)",
4803 in USEPA RCA (79). Referenced in Section
4804 611.720.
4805

4806 "USEPA RCA (79), pages 92-95" means pages 92
4807 through 95, "Isotopic Analysis by Gamma Ray
4808 Spectra Using Lithium-Drifted Germanium
4809 Detectors", in USEPA RCA (79). Referenced in
4810 Section 611.720.
4811

4812 "USEPA Technical Notes (94)" means "Technical Notes on
4813 Drinking Water Methods" (October 1994), document

4814 number EPA 600/R-94-173, USEPA, Office of Research
4815 and Development. Available from NTRL (document
4816 number PB95-104766); and USEPA, NSCEP (search
4817 "600R94173"). Referenced in Sections 611.531, 611.611,
4818 and 611.645.

4819
4820 Sources of USEPA Methods

4821
4822 NEMI. National Environmental Method Index (on-line at
4823 www.nemi.gov/home/).

4824
4825 NTRL. National Technical Reports Library, U.S.
4826 Department of Commerce, 5301 Shawnee Road,
4827 Alexandria, VA 22312 (703-605-6000 or 800-553-6847,
4828 <https://ntrl.ntis.gov/NTRL/>).

4829
4830 USEPA, NSCEP. United States Environmental Protection
4831 Agency, National Service Center for Environmental
4832 Publications, P.O. Box 42419, Cincinnati, OH 45242-
4833 0419, accessible on-line and available by download from
4834 <http://www.epa.gov/nscep/> using the search term indicated
4835 for the individual method).

4836
4837 USEPA, OGWDW. United States Environmental
4838 Protection Agency, Office of Ground Water and Drinking
4839 Water (methods cited as available are directly available
4840 through a link in the indicated list on
4841 [www.epa.gov/dwanalyticalmethods/approved-drinking-](http://www.epa.gov/dwanalyticalmethods/approved-drinking-water-analytical-methods)
4842 [water-analytical-methods](http://www.epa.gov/dwanalyticalmethods/approved-drinking-water-analytical-methods)).

4843
4844 USGS Methods. All documents available from United States Geological
4845 Survey, Federal Center, Box 25286, Denver, CO 80225-0425.

4846
4847 "USGS I-1030-85" means "Alkalinity, electrometric titration, I-
4848 1030-85", in "Techniques of Water-Resource Investigation of the
4849 United States Geological Survey", 3rd ed. (1989), Book 5, Chapter
4850 A1, "Methods for Determination of Inorganic Substances in Water
4851 and Fluvial Sediments". Available at [pubs.usgs.gov/twri/twri5-](http://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf)
4852 [a1/pdf/TWRI_5-A1.pdf](http://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf). Referenced in Section 611.611.

4853
4854 "USGS I-1601-85" means "Phosphorus, orthophosphate,
4855 colorimetric, phosphomolybdate, I-1601-85", in "Techniques of
4856 Water-Resource Investigation of the United States Geological

4857 Survey", 3rd ed. (1989), Book 5, Chapter A1, "Methods for
 4858 Determination of Inorganic Substances in Water and Fluvial
 4859 Sediments". Available at [pubs.usgs.gov/twri/twri5-](https://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf)
 4860 [a1/pdf/TWRI_5-A1.pdf](https://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf). Referenced in Section 611.611.
 4861
 4862 "USGS I-1700-85" means "Silica, colorimetric, molybdate blue, I-
 4863 1700-85", in "Techniques of Water-Resource Investigation of the
 4864 United States Geological Survey", 3rd ed. (1989), Book 5, Chapter
 4865 A1, "Methods for Determination of Inorganic Substances in Water
 4866 and Fluvial Sediments". Available at [pubs.usgs.gov/twri/twri5-](https://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf)
 4867 [a1/pdf/TWRI_5-A1.pdf](https://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf). Referenced in Section 611.611.
 4868
 4869 "USGS I-2598-85" means "Phosphorus, orthophosphate,
 4870 colorimetric, phosphomolybdate, automated-discrete, I-2598-85",
 4871 in "Techniques of Water-Resource Investigation of the United
 4872 States Geological Survey", 3rd ed. (1989), Book 5, Chapter A1,
 4873 "Methods for Determination of Inorganic Substances in Water and
 4874 Fluvial Sediments". Available at [pubs.usgs.gov/twri/twri5-](https://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf)
 4875 [a1/pdf/TWRI_5-A1.pdf](https://pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf). Referenced in Section 611.611.
 4876
 4877 "USGS I-2601-90" means "Phosphorus, orthophosphate,
 4878 colorimetry, phosphomolybdate, automated segment-flow, I-2601-
 4879 90", in "Methods for Analysis by the U.S. Geological Survey
 4880 National Water Quality Laboratory – Determination of Inorganic
 4881 and Organic Constituents in Water and Fluvial Sediments", U.S.
 4882 Geological Survey, Open File Report 93-125 (1993). Available at
 4883 pubs.usgs.gov/publication/ofr93125 and
 4884 https://www.nemi.gov/methods/method_summary/8907/.
 4885 Referenced in Section 611.611.
 4886
 4887 "USGS I-2700-85" means "Silica, colorimetric, molybdate blue,
 4888 automated-segmented flow, I-2700-85", in "Techniques of Water-
 4889 Resource Investigation of the United States Geological Survey",
 4890 3rd ed. (1989), Book 5, Chapter A1, "Methods for Determination of
 4891 Inorganic Substances in Water and Fluvial Sediments". Available
 4892 at pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf. Referenced
 4893 in Section 611.611.
 4894
 4895 "USGS I-3300-85" means "Cyanide, colorimetric, pyridine-
 4896 pyrazolone, I-3300-85", in "Techniques of Water-Resource
 4897 Investigation of the United States Geological Survey", 3rd ed.
 4898 (1989), Book 5, Chapter A1, "Methods for Determination of
 4899 Inorganic Substances in Water and Fluvial Sediments". Available

4900 at pubs.usgs.gov/twri/twri5-a1/pdf/TWRI_5-A1.pdf. Referenced
 4901 in Section 611.611.

4902
 4903 "USGS R-1110-76" means "Cesium-137 and cesium-134,
 4904 dissolved. Inorganic ion-exchange method – gamma counting, R-
 4905 1110-76", in "Techniques of Water-Resource Investigation of the
 4906 Water Resources Investigations of the United States Geological
 4907 Survey", Book 5, Chapter A-5, "Methods for Determination of
 4908 Radioactive Substances in Water and Fluvial Sediments" (1977).
 4909 Available at pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf.
 4910 Referenced in Section 611.720.

4911
 4912 "USGS R-1111-76" means "Radiocesium, dissolved, as cesium-
 4913 137. Inorganic ion-exchange method – beta counting, R-1111-76",
 4914 in "Techniques of Water-Resource Investigation of the Water
 4915 Resources Investigations of the United States Geological Survey",
 4916 Book 5, Chapter A-5, "Methods for Determination of Radioactive
 4917 Substances in Water and Fluvial Sediments" (1977). Available at
 4918 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
 4919 Section 611.720.

4920
 4921 "USGS R-1120-76" means "Gross alpha and beta radioactivity,
 4922 dissolved and suspended, R-1120-76", in "Techniques of Water-
 4923 Resource Investigation of the Water Resources Investigations of
 4924 the United States Geological Survey", Book 5, Chapter A-5,
 4925 "Methods for Determination of Radioactive Substances in Water
 4926 and Fluvial Sediments" (1977). Available at [pubs.usgs.gov](https://pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf)
 4927 [/twri/twri5a5/pdf/TWRI_5-A5.pdf](https://pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf). Referenced in Section
 4928 611.720.

4929
 4930 "USGS R-1140-76" means "Radium, dissolved, as radium-226.
 4931 Precipitation method, R-1140-76", in "Techniques of Water-
 4932 Resource Investigation of the Water Resources Investigations of
 4933 the United States Geological Survey", Book 5, Chapter A-5,
 4934 "Methods for Determination of Radioactive Substances in Water
 4935 and Fluvial Sediments" (1977). Available at
 4936 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
 4937 Section 611.720.

4938
 4939 "USGS R-1141-76" means "Radium-226, dissolved. Radon
 4940 emanation method, R-1141-76", in "Techniques of Water-
 4941 Resource Investigation of the Water Resources Investigations of
 4942 the United States Geological Survey", Book 5, Chapter A-5,

4943 "Methods for Determination of Radioactive Substances in Water
 4944 and Fluvial Sediments" (1977). Available at [pubs.usgs.gov](https://pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf)
 4945 /twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in Section
 4946 611.720.

4947
 4948 "USGS R-1142-76" means "Radium-228, dissolved.
 4949 Determination by separation and counting of actinium-228, R-
 4950 1142-76", in "Techniques of Water-Resource Investigation of the
 4951 Water Resources Investigations of the United States Geological
 4952 Survey", Book 5, Chapter A-5, "Methods for Determination of
 4953 Radioactive Substances in Water and Fluvial Sediments" (1977).
 4954 Available at pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf.
 4955 Referenced in Section 611.720.

4956
 4957 "USGS R-1160-76" means "Strontium-90, dissolved. Chemical
 4958 separation and precipitation method, R-1160-76", in "Techniques
 4959 of Water-Resource Investigation of the Water Resources
 4960 Investigations of the United States Geological Survey", Book 5,
 4961 Chapter A-5, "Methods for Determination of Radioactive
 4962 Substances in Water and Fluvial Sediments" (1977). Available at
 4963 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
 4964 Section 611.720.

4965
 4966 "USGS R-1171-76" means "Tritium. Liquid scintillation, Denver
 4967 lab method – gamma counting, R-1171-76", in "Techniques of
 4968 Water-Resource Investigation of the Water Resources
 4969 Investigations of the United States Geological Survey", Book 5,
 4970 Chapter A-5, "Methods for Determination of Radioactive
 4971 Substances in Water and Fluvial Sediments" (1977). Available at
 4972 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
 4973 Section 611.720.

4974
 4975 "USGS R-1180-76" means "Uranium, dissolved. Fluorometric
 4976 method – direct, R-1180-76", in "Techniques of Water-Resource
 4977 Investigation of the Water Resources Investigations of the United
 4978 States Geological Survey", Book 5, Chapter A-5, "Methods for
 4979 Determination of Radioactive Substances in Water and Fluvial
 4980 Sediments" (1977). Available at [pubs.usgs.gov/twri/twri5a5/](https://pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf)
 4981 [pdf/TWRI_5-A5.pdf](https://pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf). Referenced in Section 611.720.

4982
 4983 "USGS R-1181-76" means "Uranium, dissolved. Fluorometric
 4984 method – extraction procedure, R-1181-76", in "Techniques of
 4985 Water-Resource Investigation of the Water Resources

4986 Investigations of the United States Geological Survey", Book 5,
4987 Chapter A-5, "Methods for Determination of Radioactive
4988 Substances in Water and Fluvial Sediments" (1977). Available at
4989 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
4990 Section 611.720.

4991
4992 "USGS R-1182-76" means "Uranium, dissolved, isotopic ratios.
4993 Alpha spectrometry – chemical separation, R-1182-76", in
4994 "Techniques of Water-Resource Investigation of the Water
4995 Resources Investigations of the United States Geological Survey",
4996 Book 5, Chapter A-5, "Methods for Determination of Radioactive
4997 Substances in Water and Fluvial Sediments" (1977). Available at
4998 pubs.usgs.gov/twri/twri5a5/pdf/TWRI_5-A5.pdf. Referenced in
4999 Section 611.720.

5000
5001 "Waters B-1011 (87)" means "Waters Test Method for Determination of
5002 Nitrite/Nitrate in Water Using Single Column Ion Chromatography",
5003 Method B-1011 (August 1987). Available from Waters Corporation,
5004 Technical Services Division, 34 Maple St., Milford, MA 01757 (800-252-
5005 4752 or 508-478-2000, www.waters.com) and USEPA, OGWDW (under
5006 "Inorganic Contaminants and Other Inorganic Constituents (PDF)").
5007 Referenced in Section 611.611.

5008
5009 ["Yokogawa Method 820" means Yokogawa 820 "Measurement of](#)
5010 [Turbidity in Drinking Water by Right Angle Scattered Light Turbidity](#)
5011 [Analyzer", Yokogawa 820 Revision 1.0 \(November 2022\). Available](#)
5012 [from Yokogawa Electric Corporation, Nakamachi, Musashino-shi, Tokyo,](#)
5013 [Japan 180-8750.](#)

5014
5015 b) The Board incorporates the following federal regulations by reference:

5016
5017 19 CFR 101.1 (~~2024~~2022) (Definitions), referenced in Section 611.126.

5018
5019 40 CFR 3.3 (~~2024~~2021) (What Definitions Are Applicable to This Part?),
5020 referenced in Section 611.105.

5021
5022 40 CFR 3.10 (~~2024~~2021) (What Are the Requirements for Electronic
5023 Reporting to EPA?), referenced in Section 611.105.

5024
5025 40 CFR 3.2000 (~~2024~~2021) (What Are the Requirements Authorized
5026 State, Tribe, and Local Programs' Reporting Systems Must Meet?),
5027 referenced in Section 611.105.

5028

- 5029 40 CFR 136.3(a) (~~2024~~2021), referenced in Section 611.1004.
5030
5031 Appendix B to 40 CFR 136 (~~2024~~2021), referenced in Sections 611.359,
5032 611.609, and 611.646.
5033
5034 40 CFR 141.21(f)(6)(i) and (f)(6)(ii) (2021), referenced in Section
5035 611.802.
5036
5037 40 CFR 142.20(b)(1) (2021), referenced in Section 611.112.
5038
5039 Subpart G of 40 CFR 142 (2021), referenced in Section 611.113.
5040

5041 c) This Part incorporates no later amendments or editions.

5042 (Source: Amended at 50 Ill. Reg. _____, effective _____)
5043
5044

5045 **Section 611.105 Electronic Reporting**
5046

5047 Submitting any document to comply with this Part as an electronic document in lieu of a paper
5048 document must comply with this Section.
5049

5050 a) Scope and Applicability
5051

5052 1) The USEPA, the Board, or the Agency may provide for submitting
5053 electronic documents in lieu of paper documents. This Section does not
5054 require the submission of electronic documents in lieu of paper
5055 documents. This Section provides for submitting an electronic version of
5056 any document the supplier must submit to USEPA or the Agency under
5057 certain rules:
5058

5059 A) To USEPA directly under Title 40 of the Code of Federal
5060 Regulations; or
5061

5062 B) To the Board or the Agency under any provision of 35 Ill. Adm.
5063 Code 611.
5064

5065 2) A supplier may only submit an electronic document under specific
5066 circumstances:
5067

5068 A) For submitting documents to USEPA, a supplier may submit an
5069 electronic document only after USEPA publishes a Federal
5070 Register notice that USEPA will receive the specific document or
5071 type of document in an electronic format; or

- 5072
5073 B) For submitting documents to the State, a supplier may submit an
5074 electronic document only after the Board or the Agency begins
5075 using an electronic document receiving system that USEPA
5076 approves under 40 CFR 3.1000, so long as the system complies
5077 with 40 CFR 3.2000, incorporated by reference in Section
5078 611.102(c), and USEPA does not withdraw its approval in writing.
5079
- 5080 3) This Section does not apply to specific documents, whether or not the
5081 supplier submits the document to satisfy the requirements cited in
5082 subsection (a)(1):
5083
- 5084 A) Any document the supplier submits via facsimile;
5085
- 5086 B) Any document the supplier submits via magnetic or optical media,
5087 such as a diskette, compact disc, digital video disc, or tape; or
5088
- 5089 C) Any data transfer between USEPA, any state, or any local
5090 government and the Board or the Agency as part of administrative
5091 arrangements to share data.
5092
- 5093 4) Upon USEPA conferring written approval for submitting any types of
5094 documents as electronic documents in lieu of paper documents, as
5095 described in subsection (a)(2)(B), the Agency or the Board, as appropriate,
5096 must publish a Notice of Public Information in the Illinois Register that
5097 describes the documents approved for submission as electronic
5098 documents, the USEPA-approved electronic document receiving system
5099 for receiving them, the acceptable formats and procedures for their
5100 submission, and, as applicable, the date on which the Board or the Agency
5101 will begin to receive those submissions. ~~If the~~~~In the event of~~ USEPA
5102 ~~withdraws~~~~withdrawing~~ approval for receiving any type of document as an
5103 electronic document in lieu of a paper document, the Board or the Agency
5104 must similarly cause publication of a Notice of Public Information in the
5105 *Illinois Register*.
5106

5107 BOARD NOTE: Subsection (a) derives from 40 CFR 3.1, 3.2, 3.10, 3.20, and
5108 3.1000.
5109

- 5110 b) Definitions. For the purposes of this Section, terms have the meanings 40 CFR
5111 3.3, incorporated by reference in 35 Ill. Adm. Code 611.102(c), attributes them.
5112
- 5113 c) Procedures for Submitting Electronic Documents to USEPA in Lieu of Paper
5114 Documents. Except as provided in subsection (a)(3), any person Title 40 of the

5115 Code of Federal Regulations requires to create and submit or otherwise provide a
5116 document to USEPA may satisfy this requirement with an electronic document in
5117 lieu of a paper document upon meeting certain conditions:

- 5118
- 5119 1) The person satisfies the requirements of 40 CFR 3.10, incorporated by
5120 reference in Section 611.102(c); and
 - 5121
 - 5122 2) USEPA first publishes a notice in the Federal Register, as subsection
5123 (a)(2)(A) describes.
 - 5124

5125 BOARD NOTE: Subsection (c) derives from 40 CFR 3.2(a) and subpart B of 40
5126 CFR 3.

5127

5128 d) Procedures for Submitting Electronic Documents to the Board or the Agency in
5129 Lieu of Paper Documents

- 5130
- 5131 1) The Board or the Agency may establish procedural rules for electronically
5132 submitting documents. The Board or the Agency must establish any rules
5133 under the Administrative Procedure Act [5 ILCS 100/5].
 - 5134
 - 5135 2) The Board or the Agency may accept electronic documents under this
5136 Section only as subsection (a)(2)(B) provides.
 - 5137

5138 BOARD NOTE: Subsection (d) derives from 40 CFR 3.2(b) and subpart D of 40
5139 CFR 3.

5140

5141 e) Effects of Submitting an Electronic Document in Lieu of a Paper Document

- 5142
- 5143 1) A person failing to comply with this Section when electronically
5144 submitting a document is subject to the penalties prescribed for failing to
5145 comply with the requirement to file that document.
 - 5146
 - 5147 2) The electronic signature on a document a person files electronically to
5148 satisfy a reporting requirement legally binds, obligates, and makes the
5149 signer responsible to the same extent as would the filer's filing a paper
5150 document bearing the signer's handwritten signature.
 - 5151
 - 5152 3) Proof that the signer used a particular signature device to create an
5153 electronic signature establishes that the individual uniquely entitled to use
5154 the device did so intending to sign the electronic document and give it
5155 effect.
 - 5156

5157 4) Nothing in this Section limits using electronic documents or information
5158 derived from electronic documents as evidence in enforcement or other
5159 proceedings.
5160

5161 BOARD NOTE: Subsection (e) derives from 40 CFR 3.4 and 3.2000(c).
5162

5163 f) Public Document Subject to State Laws. Any electronic document a person files
5164 with the Board is a public document. The document, its submission, its retention
5165 by the Board, and its availability for public inspection and copying are subject to
5166 various State laws:
5167

5168 1) The Administrative Procedure Act [5 ILCS 100];
5169

5170 2) The Freedom of Information Act [5 ILCS 140];
5171

5172 3) The State Records Act [5 ILCS 160];
5173

5174 4) The Electronic Commerce Security Act [5 ILCS 175];
5175

5176 5) The Environmental Protection Act;
5177

5178 6) Regulations relating to public access to Board records (2 Ill. Adm. Code
5179 2175); and
5180

5181 7) Board procedural rules relating to protection of trade secrets and
5182 confidential information (35 Ill. Adm. Code 130).
5183

5184 g) Nothing in this Section or any rule adopted under subsection (d)(1) creates any
5185 right or privilege to electronically submit any document.
5186

5187 BOARD NOTE: Subsection (g) derives from 40 CFR 3.2(c).
5188

5189 BOARD NOTE: This Section derives from 40 CFR 3 and 142.10(g).
5190

5191 (Source: Amended at 50 Ill. Reg. _____, effective _____)
5192

5193 **Section 611.126 Using Lead-Free Pipes, Fittings, Fixtures, Solder, and Flux for Drinking**
5194 **Water**
5195

5196 a) Applicability and Scope
5197

5198 1) This Section incorporates federal standards for pipes; pipe or plumbing
5199 fittings; or fixtures, solder, and flux, as sections 1417 and 1461 of SDWA

5200 (42 U.S.C. 300g-6 and 300j-21) require. This Section applies to any
5201 person introducing these products into commerce, such as a manufacturer,
5202 importer, wholesaler, distributor, reseller, or retailer. This Section also
5203 applies to any person using these products when installing or repairing
5204 specific facilities:

- 5205
- 5206 A) A PWS; or
 - 5207
 - 5208 B) A residential or nonresidential facility providing water for human
 - 5209 consumption.
 - 5210

5211 2) This subsection (a)(2) corresponds with 40 CFR 143.10(b), which USEPA
5212 marked "reserved". This statement maintains structural consistency with
5213 the corresponding USEPA rules.

5214

5215 BOARD NOTE: Subsection (a) derives from 40 CFR 143.10.

5216

5217 b) Definitions. The following definitions apply to this Section:

5218

5219 "Accredited third-party certification body" means a body the American National
5220 Standards Institute (ANSI) accredits to provide product certification for meeting
5221 the lead-free requirements of not more than a weighted average of 0.25 percent
5222 lead content for the wetted surfaces, consistent with section 1417 of SDWA and
5223 subsection (c), such as certification to the NSF/ANSI 372 standard.

5224

5225 "Administrator" means the Administrator of USEPA or an authorized
5226 representative.

5227

5228 "Affiliated" means a person or entity directly controlling, indirectly controlling
5229 (through one or more intermediaries), under control of, or under common control
5230 with a specific person or entity. Affiliated persons or entities include any of the
5231 following: a parent company and all wholly or partially owned subsidiaries of the
5232 parent company, or two or more corporations or family partnerships having
5233 overlap in ownership or control.

5234

5235 "Alloy" means a substance composed of two or more metals or of a metal and a
5236 nonmetal.

5237

5238 "Coating" means a thin layer of material, such as paint, epoxy, zinc galvanization,
5239 or other material, usually applied by spraying or in liquid form to coat internal
5240 surfaces of pipes, fittings, or fixtures.

5241

5242 "Custom fabricated product" means a product:

5243
5244 A manufacturer makes on a case-by-case basis to accommodate the unique
5245 needs of a single customer;
5246
5247 Not having an assigned Universal Product Code (UPC);
5248
5249 That no manufacturer, importer, wholesaler, distributor, retailer, or other
5250 source stocks or makes available through inventory for distribution; and
5251
5252 That no person catalogs in print or on the internet with a specific item
5253 number or code.
5254
5255 "Drinking water cooler" means any mechanical device that is affixed to drinking
5256 water supply plumbing actively cools water for human consumption.
5257
5258 "Fitting" means a pipe fitting or plumbing fitting.
5259
5260 "Fixture" means a receptacle or device connected to a water supply system or
5261 discharging to a drainage system or both. Fixtures used for potable uses include:
5262
5263 Drinking water coolers, drinking water fountains, drinking water bottle
5264 fillers, and dishwashers;
5265
5266 Plumbed-in devices, such as point-of-use treatment devices, coffee
5267 makers, and refrigerator ice and water dispensers; and
5268
5269 Water heaters, water meters, water pumps, and water tanks, unless nobody
5270 uses them for potable uses.
5271
5272 "Flux" means a substance someone uses to help melt or join metals, such as by
5273 removing oxides and other coatings or residues from the metals before joining by
5274 using solder or other means.
5275
5276 "Importer" means any person introducing any pipe, pipe or plumbing fitting or
5277 fixture, solder, or flux entering the United States into commerce; any "importer",
5278 as defined in 19 CFR 101.1, incorporated by reference in Section 611.102; or
5279 both.
5280
5281 "Introduce into commerce" or "introduction into commerce" means selling or
5282 distributing products or offering products for sale or distribution in the United
5283 States.
5284
5285 "Liner" means a rigid lining, such as a plastic or copper sleeve, that is:

5286
5287 Sealed with a permanent barrier to exclude lead-bearing surfaces from
5288 water contact; and
5289
5290 Of sufficient thickness and otherwise has physical properties necessary to
5291 prevent erosion and cracking for the expected useful life of the product.
5292
5293 "Manufacturer" means a person or entity conducting either of certain activities:
5294
5295 Processing or making a product; or
5296
5297 Having a second person process or make products under a contractual
5298 arrangement for distribution, using the first person's or entity's brand name
5299 or trademark.
5300
5301 "Non-potable services" means all product uses and applications that are not
5302 potable uses.
5303
5304 "Person" means an individual, corporation, company, association, partnership,
5305 municipality, or State or federal agency, including an officer, employee, or agent
5306 of a corporation, company, association, municipality, or State or federal agency.
5307
5308 "Pipe" means a conduit, conductor, tubing, or hose and may also include
5309 permanently attached end fittings.
5310
5311 "Pipe fitting" means any piece, such as a coupling, elbow, or gasket, a person uses
5312 for connecting pipe lengths or other plumbing pieces together or for changing
5313 direction.
5314
5315 "Plumbing fitting" means a plumbing component controlling the volume or
5316 directional flow of water, such as a kitchen faucet, bathroom lavatory faucet,
5317 manifold, or valve.
5318
5319 "Point-of-use treatment device" means point-of-use treatment device, as defined
5320 in Section 611.102.
5321
5322 "Potable uses", for purposes only of this subsection (b), means services or
5323 applications providing water for human ingestion, such as drinking, cooking,
5324 preparing food, dishwashing, brushing teeth, or maintaining oral hygiene.
5325
5326 "Product" means a pipe, fitting, or fixture.
5327
5328 "Public water system" or "PWS" is defined in Section 611.101.

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"Solder" means a type of metal persons use to join metal parts, such as sections of pipe, without melting the existing metal in the joined parts. Solder usually appears on the market in the form of wire rolls or bars.

"State" means the State of Illinois and its authorized agencies.

"United States" includes its commonwealths, districts, states, tribes, and territories.

"Water distribution main" means a pipe, typically found under or adjacent to a roadway, supplying water to buildings via service lines.

BOARD NOTE: Subsection (b) derives from 40 CFR 143.11.

c) Definition of Lead-Free and Calculation Methodology

- 1) "Lead-free", for the purposes of this Section, means:
 - A) Not containing more than 0.2 percent lead, for solder and flux; and
 - B) Not more than a weighted average of 0.25 percent lead if the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures.
- 2) Calculate the weighted average lead content of a pipe, pipe fitting, plumbing fitting, or fixture using the following formula:
 - A) For each wetted component, multiply the percentage of lead in the component by the ratio of the wetted surface area of that component to the total wetted surface area of the entire product to derive the weighted percentage of lead of the component.
 - B) The sum of the weighted percentage of lead of all wetted components gives the weighted average lead content of the product.
 - C) Use the lead content of the material used to produce wetted components to determine compliance with subsection (c)(1)(B).
 - D) For lead content of materials given as a range, use the maximum content of the range.

- 5372 3) If a coating is applied to the internal surfaces of a pipe, fitting, or fixture
5373 component, use the maximum lead content of both the coating and the
5374 alloy to calculate the lead content of the component.
5375
- 5376 4) If a liner is manufactured into a pipe, fitting or fixture, use the maximum
5377 lead content of the liner to calculate the lead content of the component.
5378
- 5379 5) If a fixture contains any media (e.g., activated carbon, ion exchange resin)
5380 contained in filters, do not use the media in determining the "total wetted
5381 surface area of the entire product" in subsection (c)(2).
5382
- 5383 6) In addition to the definitions of "lead-free" in subsections (c)(1) through
5384 (c)(5), no drinking water cooler containing any solder, flux, or storage
5385 tank interior surface that may come into contact with drinking water is
5386 lead-free if the solder, flux, or storage tank interior surface contains more
5387 than 0.2 percent lead. The manufacturer must make its drinking water
5388 coolers so that each individual part or component that may come in
5389 contact with drinking water does not contain more than eight percent lead
5390 while still meeting the maximum 0.25 percent weighted average lead
5391 content of the wetted surfaces of the entire product.
5392

5393 BOARD NOTE: Subsection (c) derives from 40 CFR 143.12.
5394

5395 d) Use Prohibitions
5396

- 5397 1) No person may use any pipe, pipe or plumbing fitting or fixture, solder, or
5398 flux that is not lead-free in the installation or repair of specific facilities:
5399
- 5400 A) Any PWS; or
5401
- 5402 B) Any plumbing in a residential or nonresidential facility providing
5403 water for human consumption.
5404
- 5405 2) Subsection (d)(1) does not apply to leaded joints necessary for the repair
5406 of cast iron pipes.
5407

5408 BOARD NOTE: Subsection (d) derives from 40 CFR 143.13.
5409

- 5410 e) This subsection (e) corresponds with 40 CFR 143.14, requiring authorized states
5411 to implement the requirements of section 1417(a)(1) of SDWA (42 U.S.C. 300g-
5412 6(a)(1)) and 40 CFR 143.13. This statement maintains structural consistency with
5413 the corresponding USEPA rule.
5414

- 5415 f) Introduction into Commerce Prohibitions
5416
5417 1) No person may introduce into commerce any pipe, pipe or plumbing
5418 fitting or fixture, solder, or flux that is not lead-free, except for a pipe for
5419 use in manufacturing or industrial processing;
5420
5421 2) No person engaged in the business of selling plumbing supplies in the
5422 United States, except a manufacturer, may sell solder or flux that is not
5423 lead-free; and
5424
5425 3) No person may introduce into commerce any solder or flux that is not
5426 lead-free, unless the solder or flux bears a prominent label stating that it is
5427 illegal to use the solder or flux in the installation or repair of any plumbing
5428 providing water for human consumption.
5429

5430 BOARD NOTE: Subsection (f) derives from 40 CFR 143.15.
5431

- 5432 g) Exemptions. Subsections (d), (f), and (j) do not apply to certain products:
5433
5434 1) Pipes, pipe fittings, plumbing fittings, or fixtures, including backflow
5435 preventers, exclusively for use in non-potable services such as
5436 manufacturing, industrial processing, irrigation, outdoor watering, or any
5437 other uses in which no person would reasonably anticipate that someone
5438 would use the water for human consumption. Additional products that
5439 could be "used exclusively for non-potable services" include:
5440
5441 A) Products clearly labeled, on the product, package, or tag with a
5442 phrase like, "Not for use with water for human consumption", or
5443 another phrase conveying the same meaning in plain language;
5444
5445 B) Products incapable of use in potable services (e.g., physically
5446 incompatible) with other products needed to convey water for
5447 potable uses; and
5448
5449 C) Products plainly identifiable and marketed as solely for a use other
5450 than conveying water. These other uses include conveying air,
5451 chemicals other than water, hydraulic fluids, refrigerants, gases, or
5452 other non-water fluids.
5453
5454 2) Toilets, bidets, urinals, fill valves, flushometer valves, tub fillers, shower
5455 valves, fire hydrants, service saddles, and water distribution main gate
5456 valves (~~if provided~~ the valves are at least two inches (5.1 cm) in diameter
5457 or larger).

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- 3) Clothes washing machines, emergency drench showers, emergency face wash equipment, eyewash devices, fire suppression sprinklers, steam-capable clothes dryers, and sump pumps.

BOARD NOTE: Subsection (g) derives from 40 CFR 143.16.

- h) This subsection (h) corresponds with 40 CFR 143.17, which USEPA marked "Reserved". This statement maintains structural consistency with the corresponding USEPA rule.
- i) Required Labeling of Solder and Flux That Is Not Lead-Free. Solder and flux that is not "lead-free", as defined in subsection (c)(1)(A), must bear a prominent label stating that it is illegal to use the solder or flux in the installation or repair of any plumbing providing water for human consumption.
BOARD NOTE: Subsection (i) derives from 40 CFR 143.18.
- j) Required Certification of Products
 - 1) A manufacturer or importer introducing into commerce products that must meet the lead-free requirements of section 1417 of the Safe Drinking Water Act and subsection (c) must ensure, except as provided in subsections (j)(1)(A) through (j)(1)(C), that the products are certified compliant, as specified in subsections (j)(2) and (j)(3), by September 1, 2023, or before introducing the product into commerce, whichever occurs later. The manufacturer or importer must maintain documentation substantiating the certification for at least five years after the date the manufacturer or importer last sold the product.
 - A) Product components of assembled pipes, fittings, or fixtures do not need to be individually certified if the entire product in its final assembled form is lead-free certified.
 - B) Direct replacement parts for previously installed lead-free certified products do not need to be individually certified if the weighted average lead content of wetted surface area for the part does not exceed the lead content of the original part.
 - C) Dishwashers do not need to be certified.
 - 2) The manufacturer or importer must obtain certification of its products from an accredited third-party certification body, except as provided in subsection (j)(3). The manufacturer or importer must keep records for all

- 5501 products an accredited third-party certification body certifies, minimally
5502 including documents substantiating certification, certification dates, and
5503 expiration dates. The manufacturer or importer must provide these
5504 documents upon request to the Agency or USEPA, as specified in
5505 subsection (k)(2).
5506
- 5507 3) A manufacturer or importer may self-certify its products under subsection
5508 (j)(3)(A) or (j)(3)(B). A manufacturer or importer electing to self-certify
5509 its products must comply with subsections (j)(4) through (j)(7).
5510
- 5511 A) Manufacturers having fewer than ten employees, or importers
5512 entering products purchased from or manufactured by
5513 manufacturers having fewer than ten employees, may elect to self-
5514 certify products in lieu of obtaining certification from an
5515 accredited third-party certification body. The number of
5516 employees includes any persons employed by the manufacturer
5517 and its affiliated entities. The number of employees must be
5518 calculated by averaging the number of persons that the
5519 manufacturer and its affiliated entities employ, regardless of part-
5520 time, full-time, or temporary status, for each pay period over the
5521 manufacturer's and affiliated entities' latest 12 calendar months or
5522 averaged over the number of months in existence if less than 12
5523 months. Any firm that subsequently expands employment to ten or
5524 more employees, based on the most recent 12-month average
5525 number of persons employed, is no longer eligible to self-certify
5526 products and must obtain third-party certification within 12 months
5527 after having ten or more employees.
5528
- 5529 B) A manufacturer or importer may elect to self-certify any custom-
5530 fabricated product in lieu of obtaining certification from an ANSI-
5531 accredited third-party certification body, regardless of the number
5532 of persons the manufacturer or importer employs.
5533
- 5534 4) To self-certify products, the eligible manufacturer or importer must attest
5535 that its products comply with the definition of "lead-free" in subsection (c)
5536 by developing and maintaining a "certificate of conformity". The
5537 certificate of conformity must be:
5538
- 5539 A) Signed by a responsible corporate officer; general partner;
5540 proprietor; or an authorized representative of a responsible
5541 corporate officer, general partner, or proprietor; and
5542

- 5543 B) Posted the certificate to a website with continuing public access in
5544 the United States, unless the certificate is being distributed by
5545 other means (e.g., electronically or in hard copy) with the product
5546 through the distribution channel for final delivery to the end-use
5547 installer of the product.
5548
- 5549 5) The certificate of conformity must be in English and include:
5550
- 5551 A) Contact information for the manufacturer or importer:
5552
- 5553 i) The entity's or proprietor's name;
 - 5554 ii) Street and mailing addresses;
 - 5555 iii) Phone number; and
 - 5556 iv) Email address;
- 5557
- 5558
- 5559
- 5560
- 5561 B) For products imported into the United States, contact information
5562 for the manufacturer;
- 5563
- 5564 C) A brief listing of the products, including, when applicable, unique
5565 identifying information such as model names and numbers;
- 5566
- 5567 D) A statement attesting that the products meet the lead-free
5568 requirements of section 1417 of the Safe Drinking Water Act (42
5569 U.S.C. 300g-6) and subpart B of 40 CFR 143 and that the
5570 manufacturer or importer is eligible to self-certify the product
5571 under that rule;
- 5572
- 5573 E) A statement indicating how the manufacturer or importer verified
5574 conformance with section 1417 of the Safe Drinking Water Act (42
5575 U.S.C. 300g-6) and subpart B of 40 CFR 143; and
- 5576
- 5577 F) The signature, date, name, and position of the signatory and the
5578 name and position of the officer, partner, or proprietor who is
5579 principal if the signatory certifies as agent on behalf of a
5580 responsible corporate officer.
- 5581
- 5582 6) A manufacturer or importer self-certifying products must maintain, at a
5583 primary place of business within the United States, certificates of
5584 conformity and sufficient documentation to confirm that products meet the
5585 lead-free requirements of this Section. Sufficient documentation may

5586 include detailed schematic drawings of the products indicating
5587 dimensions, records of calculations of the weighted average lead content
5588 of the products, documentation of the lead content of materials used in
5589 manufacture, and other documentation the manufacturer or importer used
5590 in verifying the lead content of a plumbing device. The manufacturer or
5591 importer must provide this documentation and certificates of conformity
5592 upon request to the Agency or USEPA, as specified in subsection (k)(2).
5593 The manufacturer or importer must also maintain this documentation and
5594 certificates of conformity for at least five years after it last sold the
5595 product.

- 5596
5597 7) The manufacturer or importer must complete the certificate of conformity
5598 and documents before introducing a product into commerce.
5599

5600 BOARD NOTE: Subsection (j) derives from 40 CFR 143.19.

5601
5602 k) Compliance Provisions
5603

- 5604 1) Not complying with the Act or this Section may subject a person to
5605 enforcement action. Enforcement action may include injunctive or
5606 declaratory relief, a Board order to cease and desist, civil penalties, or
5607 criminal penalties.
5608
5609 2) USEPA or the Agency may, on a case-by-case basis, request any
5610 information, such as records it deems necessary to determine whether a
5611 person complies with section 1417 of the Safe Drinking Water Act (42
5612 U.S.C. 300g-6); subpart B of 40 CFR 143, incorporated by reference in
5613 Section 611.102; and this Section. The manufacturer or importer must
5614 provide requested information to USEPA or the Agency at a time and in a
5615 format as reasonably requested by USEPA or the Agency.
5616

5617 BOARD NOTE: Subsection (k) derives from 40 CFR 143.20.

5618
5619 (Source: Amended at 50 Ill. Reg. _____, effective _____)
5620

5621 **Section 611.130 Special Requirements for Certain Variances and Adjusted Standards**
5622

5623 a) Relief from the Fluoride MCL
5624

- 5625 1) When granting any variance or adjusted standard to a CWS supplier from
5626 the maximum contaminant level for fluoride in Section 611.301(b), the
5627 Board will require the supplier to apply the BAT identified in subsection
5628 (a)(4) as a condition to the relief, unless the supplier demonstrates through

- 5629 comprehensive engineering assessments that applying BAT is not
5630 technically appropriate and technically feasible for that supplier.
5631
- 5632 2) If the Board does not require the supplier to apply BAT, the Board will
5633 require specific conditions for relief from the fluoride MCL:
5634
- 5635 A) The supplier must continue investigating certain methods as
5636 alternative means of significantly reducing the fluoride level on a
5637 definite schedule:
5638
- 5639 i) Modifying lime softening;
 - 5640 ii) Alum coagulation;
 - 5641 iii) Electrodialysis;
 - 5642
 - 5643 iv) Anion exchange resins;
 - 5644
 - 5645 v) Well-field management;
 - 5646
 - 5647 vi) Using alternative sources of raw water; and
 - 5648
 - 5649 vii) Regionalization; and
 - 5650
- 5651
- 5652 B) The supplier must report results of its investigations to the Agency.
5653
- 5654
- 5655 3) The Agency must petition the Board to reconsider or modify a variance or
5656 adjusted standard under Subpart I of 35 Ill. Adm. Code 101 if the Agency
5657 determines that an alternative method the supplier identified under
5658 subsection (a)(2) is technically feasible and would result in a significant
5659 reduction in fluoride.
5660
- 5661 4) Two processes are BAT for fluoride:
5662
- 5663 A) Activated alumina absorption centrally applied; and
 - 5664
 - 5665 B) Reverse osmosis centrally applied.
 - 5666
- 5667 BOARD NOTE: This subsection derives (a) from 40 CFR 142.61.
5668
- 5669 b) Relief from an IOC, VOC, or SOC MCL
5670
- 5671 1) A CWS or NTNCWS must first apply the appropriate BAT for the

5672 contaminant before the Board may grant any variance or adjusted standard
5673 from the maximum contaminant levels for any VOC or SOC in Section
5674 611.311(a) or (c) or any IOC in Section 611.301, unless the supplier
5675 demonstrates through comprehensive engineering assessments that
5676 applying BAT would achieve only a minimal and insignificant reduction
5677 in the contaminant level.

5678
5679 BOARD NOTE: USEPA lists BAT for each SOC and VOC at 40 CFR
5680 142.62(a) for the purposes of variances and exemptions (adjusted
5681 standards). That list is identical to the ~~lists~~ [list](#) at 40 CFR 141.61(b) [and](#)
5682 [\(d\)](#), which corresponds with Section 611.311(b).

- 5683
5684 2) The Board may require any of certain conditions in any relief from an
5685 MCL in Section 611.301 or 611.311:
- 5686 A) The supplier must continue investigating alternative means for
5687 complying on a definite schedule; and
 - 5688 B) The supplier must report results of its investigation to the Agency.
- 5689
5690
5691
5692 3) The Agency must petition the Board to reconsider or modify a variance or
5693 adjusted standard, under Subpart I of 35 Ill. Adm. Code 101 if the Agency
5694 determines that an alternative method the supplier identified under
5695 subsection (b)(2) is technically feasible.

5696
5697 BOARD NOTE: This subsection (b) derives from 40 CFR 142.62(a) through (e).

- 5698
5699 c) Conditions Requiring Use of Bottled Water, a Point-of-Use Treatment Device, or
5700 a Point-of-Entry Treatment Device. When granting any variance or adjusted
5701 standard from the MCLs for organic and inorganic chemicals or an adjusted
5702 standard from the treatment technique for lead and copper, the Board may impose
5703 certain conditions requiring the use of bottled water, a point-of-entry treatment
5704 device, or a point-of-use treatment device to avoid an unreasonable risk to human
5705 health, limited as subsections (d) and (e) provide.
- 5706
5707 1) Relief from an MCL. When granting a variance or adjusted standard from
5708 an MCL in Section 611.301 or 611.311, the Board may impose a condition
5709 requiring a supplier to use bottled water, a point-of-entry treatment device,
5710 a point-of-use treatment device, or other means to avoid an unreasonable
5711 risk to human health.
 - 5712
5713 2) Relief from Corrosion Control Treatment. When granting an adjusted
5714 standard from the corrosion control treatment requirements for lead and

5715 copper under Sections 611.351 and 611.352, the Board may impose a
5716 condition requiring a supplier to use bottled water, a point-of-use
5717 treatment device, or other means but not a point-of-entry treatment device
5718 to avoid an unreasonable risk to human health.

5719
5720 3) Relief from Source Water Treatment or Replacing Service Lines. When
5721 granting an exemption from the source water treatment and lead service
5722 line replacement requirements under Section 611.353 or 611.354, the
5723 Board may impose a condition requiring a supplier to use a point-of-entry
5724 treatment device to avoid an unreasonable risk to human health.

5725
5726 BOARD NOTE: This subsection (c) derives from 40 CFR 142.62(f).

5727
5728 d) Using Bottled Water. A supplier proposing to use or using bottled water as a
5729 condition for receiving a variance or an adjusted standard from requirements in
5730 Section 611.301 or 611.311 or an adjusted standard from requirements in Sections
5731 611.351 through 611.354 must comply with either subsections (d)(1), (d)(2),
5732 (d)(3), and (d)(6) or (d)(4), (d)(5), and (d)(6).

5733
5734 1) The supplier must develop a monitoring program for Board approval
5735 providing reasonable assurances that the bottled water meets all MCLs in
5736 Sections 611.301 and 611.311, and the supplier must describe this
5737 program in its petition. The description must demonstrate how the
5738 supplier will comply with this subsection (d).

5739
5740 2) The supplier must monitor representative samples of the bottled water for
5741 all contaminants under Sections 611.301 and 611.311 during the first
5742 three-month period that it supplies the bottled water to the public, then
5743 annually after that.

5744
5745 3) The supplier must annually provide the results of its monitoring to the
5746 Agency.

5747
5748 4) The supplier must receive a certification from the bottled water company:

5749
5750 A) That the supplier provides bottled water from an approved source
5751 of bottled water, as Section 611.101 defines;

5752
5753 B) That the approved source of bottled water monitors as 21 CFR
5754 129.80(g)(1) through (g)(3) require; and

5755
5756 C) That the bottled water does not exceed any MCLs or quality limits
5757 in 21 CFR 110, 129, and 165.110.

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- 5) The supplier must provide the certification subsection (d)(4) requires to the Agency during the first quarter after it begins supplying bottled water then annually after that.
- 6) The supplier must provide sufficient quantities of bottled water to every affected person the supplier serves via door-to-door bottled water delivery.

BOARD NOTE: This subsection (d) derives from 40 CFR 142.62(g).

- e) Using a Point-of-Entry Treatment Device. Before the Board grants any PWS a variance or adjusted standard from an NPDWR, including a condition requiring use of a point-of-entry treatment device, the supplier must demonstrate certain facts to the Board:
 - 1) That the supplier will operate and maintain the device;
 - 2) That the device protects human health equivalent to central treatment;
 - 3) That the supplier will maintain the microbiological safety of the water at all times;
 - 4) That the supplier has standards for performance, conducted a rigorous engineering design review, and field tested the device;
 - 5) That operating and maintaining the device will account for any potential for increased concentrations of heterotrophic bacteria resulting from using activated carbon by backwashing, post-contactor disinfection, and heterotrophic plate count monitoring;
 - 6) That buildings connected to the supplier's distribution system have sufficient devices properly installed, maintained, and monitored to ensure protecting all consumers; and
 - 7) That using the device will not cause increased corrosion of lead- and copper-bearing materials between the device and tap that could increase contaminant levels at the tap.

BOARD NOTE: This subsection (e) derives from 40 CFR 142.62(h).

- f) Relief from the Maximum Contaminant Levels for Radionuclides
 - 1) Relief from the Maximum Contaminant Levels for Combined Radium-226

- 5801 and Radium-228, Uranium, Gross Alpha Particle Activity (Excluding
5802 Radon and Uranium), and Beta Particle and Photon Radioactivity
5803
5804 A) For relief equivalent to a federal section 1415 variance or section
5805 1416 exemption, Section 611.330(g) lists what USEPA identifies
5806 as BAT, treatment techniques, or other means for complying with
5807 the MCLs for the radionuclides in Section 611.330(b), (c), (d), and
5808 (e).
5809
5810 B) For relief equivalent to a federal section 1415 variance or section
5811 1416 exemption for a small system, defined here as one serving
5812 10,000 persons or fewer, Section 611.330(h) lists what USEPA
5813 identifies as BAT, treatment techniques, or other means available
5814 for complying with the MCLs for the radionuclides listed in
5815 Section 611.330(b), (c), (d), and (e), in addition to the technologies
5816 in Section 611.330(g) for issuing relief equivalent to a federal
5817 section 1415 small system variance or a section 1416 exemption.
5818
5819 2) As a condition for relief equivalent to a federal 1415 variance or section
5820 1416 exemption, the Board will require a CWS supplier to install and use
5821 any treatment technology in Section 611.330(g) ~~or 611.330(h)~~ for a small
5822 system serving 10,000 persons or fewer, except as subsection (f)(3)
5823 provides otherwise. If the supplier cannot meet the MCL after installing
5824 the treatment technology, the supplier is eligible for relief.
5825
5826 3) If a CWS supplier demonstrates by comprehensive engineering
5827 assessments, which may include pilot plant studies, that the treatment
5828 technologies identified in this Section would only achieve a de minimis
5829 reduction in the contaminant level, the Board may issue a schedule of
5830 compliance requiring the system to examine other treatment technologies
5831 as a condition of obtaining relief equivalent to a federal section 1415
5832 variance or section 1416 exemption.
5833
5834 4) If the Agency determines that a treatment technology identified under
5835 subsection (f)(3) is technically feasible, the Agency may request that the
5836 Board require the supplier to install and use that treatment technology on a
5837 compliance schedule under Section 36 of the Act. The Agency must base
5838 its determination on the supplier's studies and other relevant information.
5839
5840 5) To avoid unreasonable risk to human health, the Board may require a
5841 CWS supplier to use bottled water, point-of-use devices, point-of-entry
5842 devices, or other means as a condition of relief equivalent to a federal
5843 section 1415 variance or a section 1416 exemption from requirements in

5844 Section 611.330.

5845

5846 6) A CWS supplier using bottled water as a condition to relief equivalent to a
5847 federal section 1415 variance or a section 1416 exemption from the
5848 requirements of Section 611.330 must comply with subsection (d)(6) and
5849 either subsections (d)(1) through (d)(3) or (d)(4) and (d)(5).

5850

5851 7) A CWS supplier using point-of-use or point-of-entry devices as a
5852 condition to relief equivalent to a federal section 1415 variance or a
5853 section 1416 exemption from the radionuclides NPDWRs must meet the
5854 conditions in subsections (e)(1) through (e)(6).

5855

5856 BOARD NOTE: This subsection (f) derives from 40 CFR 142.65.

5857

5858 (Source: Amended at 50 Ill. Reg. _____, effective _____)

5859

5860 SUBPART B: FILTRATION AND DISINFECTION

5861

5862 **Section 611.276 Recycle Provisions**

5863

5864 a) Applicability. A Subpart B system supplier employing conventional filtration or
5865 direct filtration treatment that recycles spent filter backwash water, thickener
5866 supernatant, or liquids from dewatering processes must comply with subsections
5867 (b) through (d).

5868

5869 b) Reporting. A supplier must notify the Agency in writing if the supplier recycles
5870 spent filter backwash water, thickener supernatant, or liquids from dewatering
5871 processes. This notification must minimally include the information subsections
5872 (b)(1) and (b)(2) specify:

5873

5874 1) A plant schematic showing the origin of all recycled flows (including
5875 spent filter backwash water, thickener supernatant, and liquids from
5876 dewatering processes), the hydraulic conveyance used to transport these
5877 fluids, and the location where the supplier reintroduces these fluids back
5878 into the treatment plant.

5879

5880 2) The typical recycle flow in gallons per minute (gpm), the highest plant
5881 flow the supplier observed in the previous year (gpm), design flow for the
5882 treatment plant (gpm), and the Agency-approved operating capacity for
5883 the plant if the Agency makes this determination.

5884

5885 c) Treatment Technique Requirement. Any supplier recycling spent filter backwash
5886 water, thickener supernatant, or liquids from dewatering processes must return

5887 these flows through the processes of the supplier's existing conventional filtration
5888 or direct filtration system, as defined in Section 611.101, or at an alternative
5889 location approved by a permit issued by the Agency.
5890

5891 d) Recordkeeping. The supplier must collect and ~~keep~~retain on file the recycle flow
5892 information subsections (d)(1) through (d)(6) specify for review and evaluation by
5893 the Agency:

- 5894 1) A copy of the recycle notification and information the supplier submitted
5895 to the Agency under subsection (b).
- 5896 2) A list of all recycle flows and the frequency with which the supplier
5897 returns them.
- 5898 3) The average and maximum backwash flow rate through the filters and the
5899 average and maximum filter backwash process duration in minutes.
- 5900 4) The typical filter run length and a written summary of how filter the run
5901 length is determined.
- 5902 5) The type of treatment the supplier provides for the recycle flow.
- 5903 6) Data on the physical dimensions of the equalization or treatment units,
5904 typical and maximum hydraulic loading rates, type of treatment chemicals
5905 used and average dose and frequency of use, and the frequency at which
5906 the supplier removes solids if applicable.

5907 BOARD NOTE: This Section derives from 40 CFR 141.76.

5908 (Source: Amended at 50 Ill. Reg. _____, effective _____)

5909 SUBPART F: MAXIMUM CONTAMINANT LEVELS (MCLs) AND MAXIMUM
5910 RESIDUAL
5911 DISINFECTANT LEVELS (MRDLs)
5912

5913 **Section 611.311 ~~Revised~~ MCLs for Organic Chemical Contaminants**

5914 a) Maximum Contaminant Levels for Volatile Organic Chemical Contaminants. The
5915 MCLs for VOCs apply to CWS suppliers and NTNCWS suppliers:
5916

CAS No.	Contaminant	MCL (mg/L)
71-43-2	Benzene	0.005

56-23-5	Carbon tetrachloride	0.005
95-50-1	o-Dichlorobenzene	0.6
106-46-7	p-Dichlorobenzene	0.075
107-06-2	1,2-Dichloroethane	0.005
75-35-4	1,1-Dichloroethylene	0.007
156-59-2	cis-1,2-Dichloroethylene	0.07
156-60-5	trans-1,2-Dichloroethylene	0.1
75-09-2	Dichloromethane (methylene chloride)	0.005
78-87-5	1,2-Dichloropropane	0.005
100-41-4	Ethylbenzene	0.7
108-90-7	Monochlorobenzene	0.1
100-42-5	Styrene	0.1
127-18-4	Tetrachloroethylene	0.005
108-88-3	Toluene	1
120-82-1	1,2,4-Trichlorobenzene	0.07
71-55-6	1,1,1-Trichloroethane	0.2
79-00-5	1,1,2-Trichloroethane	0.005
79-01-6	Trichloroethylene	0.005
75-01-4	Vinyl chloride	0.002
1330-20-7	Xylenes (total)	10

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b) USEPA, [under section 1412 of SDWA](#) identifies [in this subsection \(b\)](#) granular activated carbon (GAC), packed tower aeration (PTA), or oxidation (OX) as BAT, [treatment technique, or other means available](#) for achieving compliance with the MCLs for VOCs₂ and SOCs in subsections (a) and (c) [except for per-and polyfluoroalkyl substances \(PFAS\)](#), as indicated:

CAS No.	Contaminant	BATMCL (mg/L)
15972-60-8	Alachlor	GAC
116-06-3	Aldicarb*	GAC
1646-87-4	Aldicarb sulfone*	GAC
1646-87-3	Aldicarb sulfoxide*	GAC
1912-24-9	Atrazine	GAC
71-43-2	Benzene	GAC, PTA
50-32-8	Benzo(a)pyrene	GAC
1563-66-2	Carbofuran	GAC
56-23-5	Carbon tetrachloride	GAC, PTA
57-74-9	Chlordane	GAC
94-75-7	2,4-D	GAC
75-99-0	Dalapon	GAC
96-12-8	Dibromochloropropane	GAC, PTA

95-50-1	o-Dichlorobenzene	GAC, PTA
106-46-7	p-Dichlorobenzene	GAC, PTA
107-06-2	1,2-Dichloroethane	GAC, PTA
156-59-2	cis-1,2-Dichloroethylene	GAC, PTA
156-60-5	trans-1,2-Dichloroethylene	GAC, PTA
75-35-4	1,1-Dichloroethylene	GAC, PTA
75-09-2	Dichloromethane	PTA
78-87-5	1,2-Dichloropropane	GAC, PTA
103-23-1	Di(2-ethylhexyl)adipate	GAC, PTA
117-81-7	Di(2-ethylhexyl)phthalate	GAC
88-85-7	Dinoseb	GAC
85-00-7	Diquat	GAC
145-73-3	Endothall	GAC
72-20-8	Endrin	GAC
106-93-4	Ethylene dibromide (EDB)	GAC, PTA
100-41-4	Ethylbenzene	GAC, PTA
1071-53-6	Glyphosate	OX
76-44-8	Heptachlor	GAC
1024-57-3	Heptachlor epoxide	GAC
118-74-1	Hexachlorobenzene	GAC
77-47-3	Hexachlorocyclopentadiene	GAC, PTA
58-89-9	Lindane	GAC
72-43-5	Methoxychlor	GAC
108-90-7	Monochlorobenzene	GAC, PTA
23135-22-0	Oxamyl	GAC
87-86-5	Pentachlorophenol	GAC
1918-02-1	Picloram	GAC
1336-36-3	Polychlorinated biphenyls (PCB)	GAC
122-34-9	Simazine	GAC
100-42-5	Styrene	GAC, PTA
1746-01-6	2,3,7,8-TCDD	GAC
127-18-4	Tetrachloroethylene	GAC, PTA
108-88-3	Toluene	GAC, PTA
8001-35-2	Toxaphene	GAC
120-82-1	1,2,4-trichlorobenzene	GAC, PTA
71-55-6	1,1,1-Trichloroethane	GAC, PTA
79-00-5	1,1,2-trichloroethane	GAC, PTA
79-01-6	Trichloroethylene	GAC, PTA
93-72-1	2,4,5-TP	GAC
75-01-4	Vinyl chloride	PTA
1330-20-7	Xylene	GAC, PTA

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*See the Board note at the end of this Section.

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c) The following maximum contaminant levels (MCLs) in Tables 1 and 2 to subsection (c) for synthetic organic contaminants apply to CWS and NTNCWS suppliers; Table 2 also contains health-based water concentrations (HBWCs) for selected per-and poly-fluoroalkyl substances (PFAS) used in calculating the Hazard Index. ~~Synthetic Organic Chemical Contaminants. MCLs for SOCs apply to CWS and NTNCWS suppliers:~~

1) MCLs for SOCs (except for PFAS) apply to CWS and NTNCWS suppliers:

CAS Number	Contaminant	MCL (mg/L)
15972-60-8	Alachlor	0.002
116-06-3	Aldicarb*	0.002 0.003
1646-87-4	Aldicarb sulfone*	0.002
1646-87-3	Aldicarb sulfoxide*	0.004
1912-24-9	Atrazine	0.003
50-32-8	Benzo(a)pyrene	0.0002
1563-66-2	Carbofuran	0.04
57-74-9	Chlordane	0.002
94-75-7	2,4-D	0.07
75-99-0	Dalapon	0.2
96-12-8	Dibromochloropropane	0.0002
103-23-1	Di(2-ethylhexyl)adipate	0.4
117-81-7	Di(2-ethylhexyl)phthalate	0.006
88-85-7	Dinoseb	0.007
85-00-7	Diquat	0.02
145-73-3	Endothall	0.1
72-20-8	Endrin	0.002
106-93-4	Ethylene dibromide	0.00005
1071-53-6	Glyphosate	0.7
76-44-8	Heptachlor	0.0004
1024-57-3	Heptachlor epoxide	0.0002
118-74-1	Hexachlorobenzene	0.001
77-47-4	Hexachlorocyclopentadiene	0.05
58-89-9	Lindane	0.0002
72-43-5	Methoxychlor	0.04
23135-22-0	Oxamyl (Vydate)	0.2
87-86-5	Pentachlorophenol	0.001
1918-02-1	Picloram	0.5
1336-36-3	Polychlorinated biphenyls (PCBs)	0.0005
122-34-9	Simazine	0.004

1746-01-6	2,3,7,8-TCDD (Dioxin)	0.00000003
8001-35-2	Toxaphene	0.003
93-72-1	2,4,5-TP	0.05

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* See the Board note at the end of this Section.

2) MCLs and HBWCs for PFAS apply to CWS and NTNCWS suppliers:

<u>CAS Number</u>	<u>Contaminant</u>	<u>MCL (mg/ L)</u>	<u>HBWC (mg/l)</u>
<u>Not applicable</u>	<u>Hazard Index</u> <u>PFAS</u> <u>(HFPO-DA,</u> <u>PFBS, PFHxS, and</u> <u>PFNA)</u>	<u>1 (unitless)¹</u>	<u>Not applicable</u>
<u>122499-17-6</u>	<u>HFPO-DA</u>	<u>.00001</u>	<u>.00001</u>
<u>45187-15-3</u>	<u>PFBS</u>	<u>No Individual MCL</u>	<u>.002</u>
<u>108427-53-8</u>	<u>PFHxS</u>	<u>.00001</u>	<u>.00001</u>
<u>72007-68-2</u>	<u>PFNA</u>	<u>.00001</u>	<u>.00001</u>
<u>45285-51-6</u>	<u>PFOA</u>	<u>.0000040</u>	<u>Not applicable</u>
<u>45298-90-6</u>	<u>PFOS</u>	<u>.0000040</u>	<u>Not applicable</u>

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¹ The PFAS Mixture Hazard Index (HI) is the sum of component hazard quotients (HQs), which are calculated by dividing the measured component PFAS concentration in water by the relevant health-based water concentration when expressed in the same units (shown in ng/l for simplification). The HBWC for PFHxS is 10 ng/l; the HBWC for HFPO-DA is 10 ng/l; the HBWC for PFNA is 10 ng/l; and the HBWC for PFBS is 2000 ng/l.

$$\text{Hazard Index} = \left(\frac{\text{HFPO-DA}_{\text{water}} \text{ ng/l}}{10 \text{ ng/l}} \right) + \left(\frac{\text{PFBS}_{\text{water}} \text{ ng/l}}{2000 \text{ ng/l}} \right) + \left(\frac{\text{PFNA}_{\text{water}} \text{ ng/l}}{10 \text{ ng/l}} \right) + \left(\frac{\text{PFHxS}_{\text{water}} \text{ ng/l}}{10 \text{ ng/l}} \right)$$

HBWC = health-based water concentration

HQ = hazard quotient

ng/l = nanograms per liter

PFAS_{water} = the concentration of a specific PFAS in water

d) USEPA, under section 1412 of SDWA identifies in Table 1 to subsection (d) the BAT, treatment technique, or other means available for achieving compliance with the maximum contaminant levels for all regulated PFAS identified in subsection (c).

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Table 1 to Subsection (d) BAT for PFAS Listed in Subsection (c)(2)

<u>CAS No.</u>	<u>Contaminant</u>	<u>BAT</u>
<u>Not Applicable</u>	<u>Hazard Index PFAS</u>	<u>GAC, HPAE, RO, NF</u>
<u>122499-17-6</u>	<u>HFPO-DA</u>	<u>GAC, HPAE, RO, NF</u>
<u>108427-53-8</u>	<u>PHF_xS</u>	<u>GAC, HPAE, RO, NF</u>
<u>72007-68-2</u>	<u>PFNA</u>	<u>GAC, HPAE, RO, NF</u>
<u>45285-51-6</u>	<u>PFOA</u>	<u>GAC, HPAE, RO, NF</u>
<u>45298-90-6</u>	<u>PFOS</u>	<u>GAC, HPAE, RO, NF</u>

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e) USEPA, under section 1412 of SDWA, identifies in Table 1 to subsection (e) the affordable technology, treatment technique, or other means available to suppliers serving 10,000 persons or fewer for achieving compliance with the MCLs for all regulated PFAS identified in subsection (c)(2)

Section 611.311(e) List of SSCTs for PFAS.

<u>Small System Compliance Technologies¹</u>	<u>Affordable for Listed Small System Categories²</u>
<u>Anion Exchange</u>	<u>All size categories.</u>
<u>GAC</u>	<u>All size categories.</u>
<u>Reverse Osmosis,³ Nanofiltration³</u>	<u>3,301-10,000.</u>

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¹Section 1412(b)(4)(E)(ii) of SDWA specifies that small system compliance technologies (SSCTs) must be affordable and technically feasible for small systems.

²SDWA specifies three categories of small systems: (i) those serving 25 or more, but fewer than 501, (ii) those serving more than 500, but fewer than 3,301, and (iii) those serving more than 3,300, but fewer than 10,001.

³Technology rejects a large volume of water and may not be appropriate for areas where water quantity may be an issue.

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BOARD NOTE: This Section derives from 40 CFR 141.61. More stringent state MCLs for 2,4-D, heptachlor, and heptachlor epoxide appear at Section 611.310. In 40 CFR 141.6(g), USEPA postponed the effectiveness of the MCLs for aldicarb, aldicarb sulfone, and aldicarb sulfoxide until it took further action on those MCLs. See 40 CFR 141.6(g) and 57 Fed. Reg. 22178 (May 27, 1992). USEPA later stated that it anticipated taking no action until 2005 on a federal national primary drinking water regulation (NPDWR) applicable to the aldicarbs. 68 Fed. Reg. 31108 (May 27, 2003). In 2005, USEPA indicated no projected date for final action on the aldicarbs. See 70 Fed. Reg. 27501, 671 (May 16, 2005). An entry for the aldicarbs last appeared

6004 in USEPA's Spring 2007 semiannual regulatory agenda, indicating no projected dates for further
 6005 action. *See* 72 Fed. Reg. 23156, 97 (Apr. 30, 2007); *see also* 72 Fed. Reg. 70118, 23 (Dec. 10,
 6006 2007) (the first USEPA regulatory agenda that included no entry for the aldicarbs). As of early
 6007 2022, USEPA did not include the aldicarbs among the NPDWRs on its webpage. USEPA,
 6008 Ground Water and Drinking Water, National Primary Drinking Water Regulations
 6009 (www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations;
 6010 accessed February 16, 2022). While the Board must maintain entries for aldicarb, aldicarb
 6011 sulfoxide, and aldicarb sulfone to maintain consistency with the literal text of the federal rules
 6012 (*see* Sections 7.2 and 17.5 of the Act; 42 U.S.C. 300g-2; 40 CFR 142.10), the Board intends that
 6013 no aldicarb requirements apply in Illinois until after USEPA adopts such requirements, and the
 6014 Board removes this statement.

6015 (Source: Amended at 50 Ill. Reg. _____, effective _____)

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 6018 SUBPART G: LEAD AND COPPER

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 6020 **Section 611.350 General Requirements and Action Levels**

6021
 6022 a) Applicability, effective date, compliance deadlines, and scope.~~Scope~~ The
 6023 requirements for Subparts G, AG, and AH constitute NPDWRs for lead and
 6024 copper.

6025
 6026 1) ~~Applicability of and Compliance with this Subpart G. This Subpart G and~~
 6027 ~~Subpart AG constitute NPDWRs for lead and copper.~~ This Subpart G, and
 6028 Subpart AG, and Subpart AH apply to all community water systems
 6029 (CWSs) and non-transient, non-community water systems (NTNCWSs) as
 6030 defined in Section 611.101.

6031
 6032 ~~A) A supplier must comply with this Subpart G by October 16, 2024,~~
 6033 ~~except as otherwise required by Section 611.351, 611.354,~~
 6034 ~~611.355, 611.356, or 611.360.~~

6035
 6036 ~~B) If the Agency issued a SEP before December 16, 2021, that expires~~
 6037 ~~on or after October 16, 2024, and the SEP exempts a supplier~~
 6038 ~~under any rule in former Subpart G (now redesignated Subpart~~
 6039 ~~AG), the supplier must comply with this Subpart G after the SEP~~
 6040 ~~expires, regardless of subsection (a)(1)(A). If the SEP expires~~
 6041 ~~before October 16, 2024, the supplier must comply with this~~
 6042 ~~Subpart G as required by subsection (a)(1)(A).~~

6043
 6044 ~~C) The Agency may issue a SEP requiring a supplier to comply with~~
 6045 ~~specified rules in this Subpart G before subsection (a)(1)(A) or~~
 6046 ~~(a)(1)(B) otherwise requires or as necessary to address issues in a~~

6047 ~~notice the Agency received from USEPA under 40 CFR 142.23 or~~
6048 ~~142.30. The SEP must specify the rules in this Subpart G with~~
6049 ~~which the supplier must comply and their counterparts in Subpart~~
6050 ~~AG with which the supplier no longer needs to comply. The~~
6051 ~~supplier must comply with the SEP specified Subpart G rules in~~
6052 ~~lieu of their counterparts in Subpart AG.~~

6053
6054 2) The requirements of this subpart are effective within 30 days of the
6055 effective date of this Subpart G.

6056
6057 3) Community water system suppliers and non-transient non-community
6058 water system suppliers must comply with the requirements of this subpart
6059 G no later than November 1, 2027, except where otherwise specified in
6060 Sections 611.351, 611.354, 611.355, 611.356, and 611.360 or where an
6061 exemption in compliance with 40 CFR part 142, subpart C or F, has been
6062 issued by the Agency.

6063
6064 4) Compliance Dates

6065
6066 A) Between October 30, 2024, and November 1, 2027, community
6067 water systems and non-transient non-community water systems
6068 must comply with Subpart AH Sections 611.350(b), 611.840(d),
6069 and 611.350 through 611.361, except systems must also comply
6070 with this subpart G Sections 611.354(a)(1) through (10) (excluding
6071 paragraphs (a)(6) and (7)), 611.355(a)(1)(B) and (e), Section
6072 360(e)(1) and (13), (f)(4), and (h)(3); Subpart V Sections
6073 611.901(a)(3)(F), and (c)(3), and 611.902(a)(10); Section
6074 611.Appendix G, entry I.C.1 (excluding Section 611.360, except
6075 paragraphs (e)(1) and (13) and (f)(4)) and entry I.C.2; Section
6076 611.Appendix H, entry D.23; and Section 611.840(d)(2) within 30
6077 days of the effective date of this subpart G.

6078
6079 B) If an exemption from Subpart AG was issued in compliance with
6080 40 CFR 142, subpart C or F, prior to December 15, 2021 then the
6081 supplier must comply with Sections 611.350 to 611.361 as codified
6082 in Subpart AG until the expiration of the exemption.

6083
6084 BOARD NOTE: This subsection (a)(~~4~~) derives from 40 CFR 141.80(a).
6085 USEPA's Lead and Copper Rule Improvements~~Rules Revisions~~
6086 (LCRI~~LCRR~~) apply to all suppliers on November 1, 2027~~December 16,~~
6087 ~~2021~~. However, USEPA delays complying with LCRI~~LCRR~~ until
6088 November 1, 2027~~October 16, 2024~~, when any previously granted
6089 exemption expires, or as provided otherwise by any of several specified

6090 rules for corrosion control treatment; lead service line replacement; public
 6091 education, supplemental monitoring, and mitigation; monitoring; and
 6092 reporting (corresponding with 35 Ill. Adm. Code 611.351, 622.354,
 6093 611.355, 611.356, or 611.360). Until a supplier must comply with the
 6094 ~~LCRI~~~~LCRR~~, USEPA requires the supplier to comply with subpart I of 40
 6095 CFR 141 (~~2024~~~~2020~~). This requires the Board to codify ~~three~~~~two~~ versions
 6096 of the Lead and Copper Rule: one in Subpart AG, representing the Lead
 6097 and Copper Rules prior to the LCRR (40 CFR 141 (2020)), one in Subpart
 6098 AH representing the Lead and Copper Rules prior to the LCRI (40 CFR
 6099 141 (2024)) and the other in this Subpart G, representing 40 CFR 141
 6100 incorporating the ~~LCRI~~~~LCRR~~.

6101
 6102 5) Scope. The regulations in this Subpart G constitute a treatment technique
 6103 rule that includes treatment techniques to control corrosion, treat source
 6104 water, replace service lines, and provide public education. The regulations
 6105 in this subpart include requirements to support the treatment technique
 6106 including a service line inventory, tap sampling, and monitoring for lead
 6107 in schools and childcare facilities. Some of the requirements in this
 6108 subpart only apply if there is an exceedance of the lead or copper action
 6109 levels, specified in subsection (c), as measured in samples collected at
 6110 consumers' taps.

6111
 6112 2) ~~Scope. This Subpart G establishes a treatment technique including~~
 6113 ~~requirements for corrosion control treatment, source water treatment, lead~~
 6114 ~~service line inventory, replacing lead service lines, public notice,~~
 6115 ~~monitoring for lead in schools and child care facilities, and public~~
 6116 ~~education. Lead and copper action levels and the lead trigger level in~~
 6117 ~~samples collected at consumers' taps prompt these requirements. The~~
 6118 ~~rules in this Subpart G requiring lead sampling in schools and child care~~
 6119 ~~facilities and public education apply to all CWS.~~

6120
 6121 b) Definitions. For this Subpart G only, this subsection (b) defines certain terms:

6122
 6123 "Action level" means the ~~concentrations~~~~computed concentration~~ of lead or
 6124 copper in water under subsection (c) determining applicability of some
 6125 treatment requirements under this Subpart G. The action level for lead is
 6126 0.010 mg/L~~0.015 mg/L~~, and the action level for copper is 1.3 mg/L.

6127
 6128 "Aerator" means the device embedded in a water faucet to enhance air
 6129 flow in the water stream and prevent splashing.

6130
 6131 "~~Childcare~~ ~~Child care~~ facility" means a location that houses a provider of
 6132 childcare~~facility providing child care~~, day care, or early learning services

6133 to children ~~as licensed~~under a license issued by ~~the~~a State, local, or Tribal
6134 licensing~~local~~ agency.

6135 BOARD NOTE: See, e.g., the Childcare~~Child Care~~ Act of 1969 [225
6136 ILCS 10].

6137
6138 "Connector, also referred to as a gooseneck or pigtail" means a short
6139 segment of piping, not exceeding three feet that can be bent and is used for
6140 connections between service piping, typically connecting the service line
6141 to the main. For purposes of this subpart G, lead connectors are not
6142 considered to be part of the service line.

6143
6144 "Corrosion inhibitor" means a substance that can reduce corrosivity of
6145 water toward metal plumbing materials, especially lead and copper, by
6146 forming a protective film on the interior surface of those materials.

6147
6148 "Distribution system and site assessment" means the requirements under
6149 this Subpart G under Section 611.352(j) that water systems must perform
6150 at every tap sampling site yielding a lead result above 0.010 mg/ L.

6151
6152 "Effective corrosion inhibitor residual" means a concentration of corrosion
6153 inhibitor in the drinking water sufficient to form a passivating film on the
6154 interior walls of pipe.

6155
6156 "Elementary school" means a school classified as elementary by State and
6157 local practice ~~as elementary~~ and composed of~~comprising~~ any span of
6158 grades (including pre-school) not above~~through~~ grade 8.

6159
6160 "Exceed" or "exceedance", relative to either the lead or the copper action
6161 level, means that the 90th percentile concentration of the samples the
6162 supplier collected during a six-month tap monitoring period~~eyele~~ is greater
6163 than the lead or copper action level.

6164
6165 "Fifth-liter ~~tap~~ sample" means a one-liter ~~tap water~~ sample of tap water
6166 collected in compliance with~~a supplier collects under~~ Section 611.356(b).

6167
6168 ~~"Find and fix" means the requirements under this Subpart G that water~~
6169 ~~systems must perform at every tap sampling site yielding a lead result~~
6170 ~~above 15 µg/L.~~

6171
6172 "First-liter sample~~First draw tap sample~~" means a~~the first one-liter~~ sample
6173 collected of the first one-liter volume of tap water drawn in compliance
6174 with Section 611.356(b)~~a supplier collects under Section 611.356(b)(2).~~

6175

6176 ~~"Full lead service line replacement" means replacing a lead service line (as~~
6177 ~~well as galvanized service lines requiring replacement) resulting in the~~
6178 ~~entire length of the service line, regardless of service line ownership,~~
6179 ~~complying with Section 611.126 at the time of replacement. A full lead~~
6180 ~~service line replacement includes replacing a service line having only one~~
6181 ~~portion that is lead, such as a service line previously subject to a partial~~
6182 ~~lead service line replacement, as long as the entire service line complies~~
6183 ~~with Section 611.126 after the replacement. A full lead service line~~
6184 ~~replacement requires replacing galvanized service lines downstream of a~~
6185 ~~lead service line. A full lead service line replacement could leave a lead~~
6186 ~~service line in place in the ground but out of service if using a new non-~~
6187 ~~lead service line replaces the out of service lead service line.~~

6188
6189 "Galvanized requiring replacement service line" ~~means~~refers to a
6190 galvanized service line that currently is or ever was downstream of a lead
6191 service line; or is currently downstream of a lead status unknown service
6192 line. For this definition, downstream means in the direction of flow
6193 through the service line. If the supplier is unable to demonstrate that the
6194 galvanized service line was never downstream of a lead service line, it is a
6195 galvanized requiring replacement service line for purposes of the service
6196 line inventory and replacement requirements in Section 611.354~~Section~~
6197 ~~611.354(a)(4)(B) describes.~~

6198
6199 BOARD NOTE: This definition derives from 40 CFR 141.84~~40 CFR~~
6200 ~~141.84(a)(4)(ii) for a term used in various rules.~~

6201
6202 "Galvanized service line" means a service line that is made of iron or steel
6203 that has been dipped in zinc~~zinc dipped~~ to prevent corrosion and
6204 rusting.

6205
6206 ~~"Gooseneck, pigtail, or connector" is a short section of flexible piping,~~
6207 ~~typically not exceeding two feet, connecting segments of rigid service~~
6208 ~~piping. Lead goosenecks, pigtails, and connectors are not part of the lead~~
6209 ~~service line, but Section 611.354(e) may require replacing them.~~

6210
6211 "Large supplier" means a supplier regularly serving water to more than
6212 50,000 persons.

6213
6214 "Lead service line" means a service line that is made of lead or where a
6215 portion of the service line is made of lead. A lead-lined galvanized service
6216 line is defined as a lead service line.~~portion of pipe made of lead~~
6217 ~~connecting the water main to the building inlet. A lead service line may~~
6218 ~~be owned by the water system, the property owner, or both. A galvanized~~

6219 ~~service line is a lead service line if it was or is downstream of any lead~~
6220 ~~service line or service line of unknown material. If the only lead piping~~
6221 ~~serving a home is a lead gooseneck, pigtail, or connector, and it is not a~~
6222 ~~galvanized service line that is considered a lead service line, the service~~
6223 ~~line is not a lead service line. Under Section 611.356(a) only, a~~
6224 ~~galvanized service line is not considered a lead service line.~~

6225
6226 "Lead status unknown service line" means a service line whose pipe
6227 material has not been demonstrated to be a lead service line, galvanized
6228 requiring replacement service line, or a non-lead service line in
6229 compliance with Section 611.354(a)(3).~~that has not been shown to comply~~
6230 ~~with Section 611.126. Physically verifying the material composition of a~~
6231 ~~service line (e.g., copper or plastic) is not necessary for its lead status to be~~
6232 ~~identified (e.g., if records demonstrate that the service line was installed~~
6233 ~~after a municipal, State, or federal lead ban).~~

6234
6235 ~~BOARD NOTE: See the description of "lead status unknown" in Section~~
6236 ~~611.354(a)(4)(D).~~

6237
6238 "Lead trigger level" means a particular concentration of lead in water that
6239 prompts certain activities under this Subpart G. The trigger level for lead
6240 is a concentration of 10 µg/L.

6241
6242 "Maximum permissible concentration" or "MPC" means the concentration
6243 of lead or copper in finished water entering the supplier's distribution
6244 system, which the Agency designates in a SEP based on the contaminant
6245 removal ability of the treatment properly operated and maintained.

6246
6247 BOARD NOTE: This definition derives from 40 CFR 141.83(b)(4). (See
6248 Section 611.353(b)(4)(B).)

6249
6250 "Meet" or "comply with", relating to either the lead or the copper action
6251 level, means that the 90th percentile concentration of the supplier's samples
6252 collected during a six-month tap monitoring ~~period~~eyele is less than or
6253 equal to the lead or copper action level.

6254
6255 "~~Medium~~Mid-sized supplier" means a supplier that serves~~regularly~~
6256 ~~serving~~ water to ~~greater~~more than 10,000 persons and less than or equal
6257 to~~up to~~ 50,000 persons.

6258
6259 "Multiple-family residence" means a building in which multiple families
6260 currently reside, but not one that is also a "single-family structure".
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"Newly regulated public water system" refers to either:

- 1) An existing public water system that was not subject to National Primary Drinking Water Regulations on October 16, 2024, because the system met the requirements of section 1411 of the Safe Drinking Water Act and Section 611.100(d); or
- 2) An existing water system that did not meet the definition of a public water supplier in Section 611.101 on October 16, 2024. This term does not include existing water systems under new or restructured ownership or management.

BOARD NOTE: This definition derives from 40 CFR 141.2

"90th percentile concentration" means the concentration of lead or copper the supplier computes under subsection (c)(4) using the results of tap water sampling under Section 611.356.

BOARD NOTE: This definition derives from 40 CFR 141.80(c)(4).

"Optimal corrosion control treatment" or "OCCT" means the corrosion control treatment that minimizes~~minimizing~~ the lead and copper concentrations at users' taps while ensuring that the treatment does not cause the water system to~~will not~~ violate any National Primary Drinking Water Regulations in this subpart~~national primary drinking water regulations~~.

"Partial~~lead~~ service line replacement" means replacement of~~replacing~~ any portion of a lead service line or galvanized requiring replacement service line as defined in this section, that leaves in service~~leaving~~ any length of the lead~~service line~~ or galvanized requiring replacement service line in service and requiring replacement upon completion of the work.~~40 CFR 141.84(d) allows partial lead service line replacements under limited circumstances, but these do not count towards the mandatory or goal-based lead service line replacement rate under Section 611.354.~~

"Pitcher filter" means a non-plumbed water filtration device consisting of a gravity-fed water filtration cartridge and a filtered drinking water reservoir ~~that is~~ certified by an American National Standards Institute accredited certifier to reduce lead in drinking water~~its manufacturer, importer, or an accredited third party certifying body as complying with~~

6304 ~~the version of NSF/ANSI 53 in effect on the date of manufacture or~~
6305 ~~import.~~

6306
6307 BOARD NOTE: NSF/ANSI 53 is the health-based standard for lead and
6308 several other contaminants for water filter devices, including pitcher filter-
6309 type devices. Identifying a device as certified under NSF/ANSI 53 at the
6310 time of purchase is possible. NSF maintains an on-line list of certified
6311 devices at info.nsf.org/Certified/dwtu/listings_leadreduction.asp. See the
6312 definition of "accredited third-party ~~certification~~~~certifying~~ body" in 35 Ill.
6313 Adm. Code 611.126(b) relating to NSF/ANSI 372.

6314
6315 "Practical quantitation limit" or "PQL" means the lowest concentration of
6316 an analyte (substance) that a well-operated laboratory can measure with a
6317 high degree of confidence that the analyte is present at or above that
6318 concentration.

6319
6320 BOARD NOTE: This definition derives from 40 CFR 141.89(a)(1)(ii)
6321 and (a)(1)(iv).

6322
6323 "Pre-stagnation flushing" means opening taps to flush standing water from
6324 plumbing before a minimum six-hour stagnation period before lead and
6325 copper tap sampling under Subpart G.

6326
6327 "School" means any building or building complex associated with public,
6328 private, or charter institutions that primarily provides teaching and
6329 learning for elementary or secondary students.

6330
6331 "Secondary school" means a school comprising any span of grades
6332 beginning with the next grade following an elementary ~~or middle~~ school
6333 (usually 7, 8, or 9) and ending with ~~or below~~ grade 12. Secondary schools
6334 include~~This definition includes~~ both junior high schools and senior high
6335 schools and typically span grades 7 through 12.

6336
6337 "Service line" means a portion of pipe that connects the water main (or
6338 other conduit for distributing water to individual consumers or groups
6339 of consumers) to the building inlet. Where a building is not present,
6340 the service line connects the water main (or other conduit for
6341 distributing water to individual consumers or groups of consumers) to
6342 the outlet.

6343
6344 "Single-family structure" means a building constructed as a residence for a
6345 single-family that the occupant currently uses as a residence or place of
6346 business.

6347
6348 "Small-~~system~~ supplier" or "small CWS supplier" means a CWS serving
6349 10,000 or fewer persons.

6350
6351 BOARD NOTE: A small CWS is a small supplier that is a CWS. This
6352 definition derives from the preamble of 40 CFR 141.93. Corresponding
6353 Section 611.363 distinguishes a small CWS supplier from an NTNCWS
6354 supplier.

6355
6356 "Small supplier" means a supplier regularly serving water to 10,000 or
6357 fewer persons.

6358 BOARD NOTE: USEPA did not revise its corresponding definition of
6359 "small water system" in 40 CFR 141.2 from 3,300 or fewer to 10,000 or
6360 fewer persons. This creates an inconsistency the Board corrected.

6361
6362 "Source water monitoring period" means any of the six-month periods
6363 during which a supplier must complete source water monitoring under
6364 Section 611.358.

6365
6366 BOARD NOTE: The Board added this definition to avoid confusion with
6367 "tap sampling period," "tap monitoring ~~period~~eyele", and "water quality
6368 monitoring period", as used under this Subpart G, and "compliance
6369 period" and "compliance cycle", as used elsewhere in this Part and Section
6370 611.101 defines.

6371
6372 "Supplier ~~without~~not applying corrosion control treatment" means a water
6373 system supplier that does not have~~PWS not fulfilling either of two~~
6374 ~~conditions~~ or purchases~~purchasing~~ all of its water from a supplier that
6375 does not have~~not fulfilling either of two conditions~~:

6376
6377 An optimal corrosion control treatment approved by the Agency;
6378 or~~Neither the PWS nor the supplier providing its water has~~
6379 ~~Agency approved optimal corrosion control treatment; or~~

6380
6381 Any pH~~No other water quality~~ adjustment, alkalinity adjustment,
6382 and/or corrosion inhibitor addition resulting from other water
6383 quality adjustments as part of its~~in either the PWS's or the~~
6384 supplier's treatment train infrastructure ~~includes adjusting pH or~~
6385 ~~alkalinity or adding corrosion inhibitor.~~

6386
6387 "Tap monitoring ~~period~~eyele" means the period of time during which
6388 each a supplier must conduct tap sampling~~sample taps~~ for lead and copper
6389 analyses. The applicable tap monitoring period is determined by~~The~~ lead

6390 and copper concentrations in tap samples. The length of the tap
6391 monitoring period ~~determine the tap monitoring cycle, and the frequency~~
6392 can range from ~~every~~ six months (i.e., ~~semi-annually~~) to ~~once every~~ nine
6393 years. ~~A supplier semi-annually sampling taps must collect samples no~~
6394 ~~less frequently than every six months, while a supplier annually sampling~~
6395 ~~taps must sample no less frequently than every year. A supplier triennially~~
6396 ~~sampling taps must collect samples no less frequently than every three~~
6397 ~~years, and a supplier sampling taps under an Agency issued waiver must~~
6398 ~~sample no less frequently than every nine years. The start of each new tap~~
6399 ~~monitoring cycle, with the exception of semi-annual monitoring, must~~
6400 ~~begin on January 1.~~

6401 BOARD NOTE: This term is equivalent to "tap sampling monitoring
6402 period" in 40 CFR 141. "Tap monitoring cycle" describes sampling
6403 frequency.

6404
6405 "Tap sampling period" means the time period within a tap monitoring
6406 period, within a tap monitoring period, during which ~~cycle when~~ the
6407 supplier is required to ~~must~~ collect samples for lead and copper analysis.
6408 ~~For a supplier sampling at a reduced frequency, the supplier must sample~~
6409 ~~taps between June and September, unless the Agency issues a SEP~~
6410 ~~approving a different four month period.~~

6411
6412 BOARD NOTE: "Tap sampling period" describes when the supplier
6413 collects samples.

6414
6415 "Tap sampling protocol" means the method for collecting tap
6416 samples ~~instructions a supplier gives to residents or those sampling on the~~
6417 ~~supplier's behalf to sample taps~~ under Section 611.356(b) ~~this Subpart G.~~

6418
6419 "Water quality monitoring period" means any of the six-month periods
6420 during which a supplier must complete a cycle of tap and entry point water
6421 quality monitoring under Section 611.357.

6422
6423 BOARD NOTE: The Board added this definition. USEPA refers to these
6424 as "monitoring periods". The Board uses "water quality monitoring
6425 period" to avoid confusion with "tap sampling period," "tap monitoring
6426 period ~~eyele~~", and "source water monitoring period", as used under this
6427 Subpart G, and "compliance period" and "compliance cycle", as used
6428 elsewhere in this Part and Section 611.101 defines.

6429
6430 "Wide-mouthed bottles" means bottles one liter in volume having a mouth
6431 that is at least 40 mm ~~55 mm~~ wide.

6432

BOARD NOTE: This subsection (b) derives from 40 CFR 141.2.

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- c) ~~Lead Trigger Level and Lead~~ and copper action levels and method for determining whether there is an exceedance of the action level~~Copper Action Levels. A supplier must determine action levels based on tap water samples that must be considered for inclusion under Section 611.356(e) for the purpose of calculating the 90th percentile and tested using the analytical methods specified in Section 611.359. The action levels described in this subsection (c) are applicable to all sections of Subpart G. Action levels for lead and copper are as follows:~~~~The supplier determines the lead trigger levels and lead and copper action levels based on tap water samples it collects under 40 CFR 141.86 to calculate the 90th percentile concentration and tests using the analytical methods in 40 CFR 141.89.~~
- 1) The supplier exceeds the lead ~~action trigger~~ level if the 90th percentile concentration of lead derived as specified in subsection (c)(3)~~concentration as subsection (c)(4) specifies~~ is ~~determined to be~~ greater than 010 mg/L~~10 µg/L~~.
 - 2) The supplier exceeds the copper action level if the 90th percentile concentration of copper as specified in subsection (c)(3) is greater than 1.3 mg/L.~~The supplier exceeds the lead action level if the 90th percentile lead concentration is greater than 15 µg/L.~~
 - 3) For purposes of this subpart, the 90th percentile concentration must be derived as follows:~~The supplier exceeds the copper action level if the 90th percentile copper concentration is greater than 1.3 mg/L.~~
 - A) For suppliers that do not have Tier 1 and/or Tier 2 sites and only have sites identified as Tier 3, 4, or 5 under Section 611.356(a):
 - i) The results of all lead or copper samples taken during a tap sampling period and eligible for inclusion in the 90th percentile calculation under Section 611.356(e) must be placed in ascending order from the sample with the lowest concentration of lead or copper to the sample with the highest concentration of lead or copper. Each sampling result must be assigned a number, in ascending order beginning with the number 1 for the sample with the lowest concentration of lead or copper. The number assigned to the sample with the highest concentration must be equal to the total number of samples taken and considered for inclusion in the 90th percentile calculation, in compliance with Section 611.356(e).

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- ii) The number of samples taken during the tap sampling period must be multiplied by 0.9.
- iii) The 90th percentile concentration is the concentration of lead or copper in the numbered sample yielded after multiplying the number of samples by 0.9 in subsection (c)(3)(A)(ii).
- iv) For suppliers that collect five samples per tap sampling period, the 90th percentile concentration is the average of the highest and second highest concentration from the results in subsection (c)(3)(A)(i).
- v) For a supplier that is allowed by the Agency to collect fewer than five samples in compliance with Section 611.356(a)(2) or fails to meet their required minimum number of samples and collected fewer than five samples, the samples result with the highest concentration from the results in subsection (c)(3)(A)(i) is considered the 90th percentile value.

B) For suppliers with sites identified as Tier 1 or 2 under Section 611.356(a) with sufficient Tier 1 and 2 sites to meet the minimum number of sites required in Section 611.356(c) or (d) as applicable:

- i) For lead, suppliers must include the higher of the first-liter and fifth-liter lead sample results at each Tier 1 and 2 site (or first-liter lead sample if tiering is based on premise plumbing) taken during the tap sampling period in subsections (c)(3)(B)(ii) through (iv). For copper, suppliers must include all first-liter copper samples collected at each Tier 1 and 2 site taken during the tap sampling period. Lead or copper sample results from Tier 3, 4, or 5 sites cannot be included in this calculation.
- ii) The results of the lead or copper samples taken during a tap sampling period and eligible for inclusion in the 90th percentile calculation under Section 611.356(e) identified in subsection (c)(3)(B)(i) must be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. Each sampling result must be assigned a number, in ascending order

- 6519 beginning with the number 1 for the sample with the lowest
6520 concentration. The number assigned to the sample with the
6521 highest concentration must be equal to the total number of
6522 samples.
- 6523
- 6524 iii) The number of samples identified in subsection
6525 (c)(3)(B)(ii) must be multiplied by 0.9.
- 6526
- 6527 iv) The 90th percentile concentration is the concentration of
6528 lead or copper in the numbered sample yielded after
6529 multiplying the number of samples by 0.9 in subsection
6530 (c)(3)(B)(iii).
- 6531
- 6532 v) For suppliers that collect samples from five sites per tap
6533 sampling period, the 90th percentile concentration is the
6534 average of the highest and second highest concentration
6535 from the results in subsection (c)(3)(B)(ii).
- 6536
- 6537 iv) For a supplier allowed by the Agency to collect fewer than
6538 five copper samples or five first-liter and fifth-liter-paired
6539 lead samples in compliance with Section 611.356(a)(2), or
6540 has failed to collect at least five copper samples or five
6541 first-liter and fifth-liter-paired lead samples, the sample
6542 result with the highest concentration from the results in
6543 paragraph (c)(3)(B)(ii) is considered the 90th percentile
6544 value.
- 6545
- 6546 C) For suppliers with sites identified as Tier 1 or 2 under Section
6547 611.356(a) with an insufficient number of Tier 1 or 2 sites to meet
6548 the minimum number of sites required in Section 611.356(c) or (d)
6549 as applicable:
- 6550
- 6551 i) For lead, the supplier must use the higher value of the first-
6552 liter and fifth-liter lead sample for each Tier 1 or 2 site (or
6553 first-liter lead sample if tiering is based on premise
6554 plumbing) and the first-liter lead samples from sites in the
6555 next highest available tier (i.e., Tier 3, 4, and 5) to meet the
6556 minimum number of sites required in Section 611.356(c) or
6557 (d) sampled during a tap sampling period for the steps in
6558 subsections (c)(3)(C)(ii) through (iv). For copper, the
6559 supplier must use all first-liter copper samples collected.
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6603
- ii) The results of all of the lead or copper samples identified in subsection (c)(3)(C)(i) must be placed in ascending order from the sample with the lowest concentration to the sample with the highest concentration. The supplier must reduce this list to only include samples with the highest concentrations such that the number of sample results equals the minimum number of sites required to be sampled by Section 611.356(c) or (d), as applicable. From this reduced list, each sampling result must be assigned a number, in ascending order beginning with the number 1 for the sample with the lowest concentration. The number assigned to the sample with the highest concentration must be equal to the minimum number of sites required by Section 611.356(c) or (d), as applicable.
 - iii) The number of samples identified in subsection (c)(3)(C)(ii) must be multiplied by 0.9.
 - iv) The 90th percentile concentration is the concentration of lead or copper in the numbered sample yielded after multiplying the number of samples by 0.9 in subsection (c)(3)(C)(iii).
 - v) For suppliers that collect samples from five sites per tap sampling period, the 90th percentile concentration is the average of the highest and second highest concentration from the results in subsection (c)(3)(C)(ii).
 - vi) For a supplier that is allowed by the Agency to collect fewer than five copper samples or five first-liter and fifth-liter-paired lead samples in compliance with Section 611.356(a)(2), or has failed to collect at least five copper samples or five first-and-fifth-liter-paired lead samples, the sample result with the highest concentration from the results in subsection (c)(3)(C)(ii) is considered the 90th percentile value.
 - vii) If a supplier does not collect enough samples sufficient to meet the minimum number of sites required in Section 611.356(c) or (d), the supplier must calculate the 90th percentile lead and copper levels following the steps in Section 611.350(c)(3)(A)(i) through (iii).

- 6604 4) The supplier must compute the 90th percentile lead and copper
6605 concentrations using the specified procedure:
6606
6607 A) Suppliers Not Having Sites with a Lead Service Line and Only
6608 Having Tier 3, 4, or 5 Sites Under 40 CFR 141.86(a)
6609
6610 i) The supplier must list the results of all lead or copper
6611 samples it took during a tap sampling period in ascending
6612 order, ranging from the sample with the lowest
6613 concentration to the sample with the highest concentration.
6614 The supplier must assign each sampling result an ordinal
6615 number, ascending by single integers, assigning the number
6616 1 for the sample with the lowest contaminant level. The
6617 number the supplier assigns to the sample with the highest
6618 contaminant level must equal the total number of samples
6619 the supplier took.
6620
6621 ii) To determine the 90th percentile sample, the supplier must
6622 multiply the total number of samples taken during the tap
6623 sampling period times 0.9.
6624
6625 iii) The contaminant concentration in the sample corresponding
6626 with the ordinal number subsection (c)(4)(A)(ii) yields is
6627 the 90th percentile concentration.
6628
6629 iv) For a supplier collecting five samples per tap sampling
6630 period, the 90th percentile concentration is the average of
6631 the highest and second highest concentrations.
6632
6633 v) For a supplier the Agency allows to collect fewer than five
6634 samples under Section 611.356(e) or failing to collect five
6635 samples, the result for the sample with the highest
6636 concentration is the 90th percentile concentration.
6637
6638 B) Suppliers Having Enough Sites with a Lead Service Line Identified
6639 as Tier 1 or 2 Under 40 CFR 141.86(a) to Meet the Minimum
6640 Number of Sites 40 CFR 141.86(e) Requires
6641
6642 i) The supplier must arrange the results of all lead or copper
6643 samples it took at Tier 1 or Tier 2 sites during a tap
6644 sampling period in ascending order from the sample with
6645 the lowest concentration to the sample with the highest
6646 concentration. The supplier must not include sample

- 6647 results from Tier 3, 4, or 5 sites in this calculation. The
6648 supplier must assign each sampling result a number,
6649 beginning with the number 1 for the sample with the lowest
6650 contaminant concentration and ascending by single integers
6651 through increasing concentrations. The number assigned to
6652 the sample with the highest contaminant concentration
6653 must equal the total number of samples the supplier took.
6654
- 6655 ii) The supplier must multiply the number of Tier 1 or Tier 2
6656 sites during the tap sampling period times 0.9.
6657
- 6658 iii) The 90th percentile concentration is the contaminant
6659 concentration in the numbered sample corresponding with
6660 the number the calculation under subsection (c)(4)(B)(ii)
6661 yields.
6662
- 6663 iv) For a supplier serving fewer than 100 people that collects
6664 five samples per tap sampling period, the 90th percentile
6665 concentration is the average of the highest and second
6666 highest concentration.
6667
- 6668 v) For a supplier the Agency allows to collect fewer than five
6669 samples under Section 141.86(c), or failing to collect five
6670 samples, the highest sample concentration is the 90th
6671 percentile concentration.
6672
- 6673 C) Suppliers Having Sites with a Lead Service Line Identified as Tier
6674 1 or 2 Under Section 141.86(a) but Fewer Than the Minimum
6675 Number of Sites Section 141.86(c) Requires
6676
- 6677 i) The supplier must combine the results of all lead or copper
6678 samples it took at Tier 1 or Tier 2 sites with a sufficient
6679 number of the highest results from Tier 3, 4, or 5 sites to
6680 complete the minimum number of sites. The supplier must
6681 arrange the combined results in ascending order from the
6682 sample with the lowest concentration to the sample with the
6683 highest concentration. The supplier must not include
6684 sample results from any remaining Tier 3, 4, and 5 sites in
6685 this calculation. The supplier must assign each sampling
6686 result a number, beginning with the number 1 for the
6687 sample with the lowest contaminant concentration and
6688 ascending by single integers through increasing
6689 concentrations. The number the supplier assigns to the

6690 ~~sample with the highest contaminant concentration must~~
6691 ~~equal the total minimum number of sites listed in Section~~
6692 ~~141.86(c).~~

6693
6694 ii) ~~The supplier must multiply the number of Tier 1 or Tier 2~~
6695 ~~sites during the tap sampling period times 0.9.~~

6696
6697 iii) ~~The 90th percentile concentration is the contaminant~~
6698 ~~concentration in the numbered sample corresponding with~~
6699 ~~the number the calculation under subsection (c)(4)(C)(ii)~~
6700 ~~yields.~~

6701
6702 iv) ~~For a supplier serving fewer than 100 people that collects~~
6703 ~~five samples per tap sampling period, the 90th percentile~~
6704 ~~concentration is the average of the highest and second~~
6705 ~~highest concentration.~~

6706
6707 v) ~~For a supplier the Agency allows to collect fewer than five~~
6708 ~~samples under Section 611.356(c) or failing to collect five~~
6709 ~~samples, the highest sample concentration is the 90th~~
6710 ~~percentile concentration.~~

6711
6712 d) ~~Corrosion Control Requirements~~

6713
6714 1) ~~Every supplier must install and operate corrosion control treatment under~~
6715 ~~Sections 611.351 and 611.352 meeting the definition of optimal corrosion~~
6716 ~~control treatment.~~

6717
6718 2) ~~Any supplier complying with the applicable corrosion control treatment~~
6719 ~~requirements the Agency specifies under Sections 611.351 and 611.352 is~~
6720 ~~deemed as complying with subsection (d)(1).~~

6721
6722 3) ~~A small CWS or NTNCWS supplier complying with the applicable small~~
6723 ~~supplier compliance flexibility requirements the Agency specifies under~~
6724 ~~Sections 611.351(a)(3) and 611.363 complies with the treatment~~
6725 ~~requirement in subsection (d)(1).~~

6726
6727 4) ~~A supplier must notify the Agency in writing under 40 CFR 141.90(a)(3)~~
6728 ~~of any upcoming long term change in water treatment or plan to add a new~~
6729 ~~source as Section 611.360(a)(3) describes. The supplier must not~~
6730 ~~implement a long term change in water treatment or add a new source~~
6731 ~~until after the Agency reviews and approves the action in a SEP. The SEP~~
6732 ~~may require the supplier to conduct additional monitoring or take other~~

6733 ~~action the Agency deems appropriate to ensure that the supplier maintains~~
6734 ~~minimal levels of corrosion control in its distribution system.~~

6735
6736 e) ~~Source Water Requirements~~

6737
6738 1) ~~Any supplier exceeding the lead or copper action level must implement all~~
6739 ~~applicable source water treatment requirements the Agency specifies~~
6740 ~~under Section 611.353.~~

6741
6742 2) ~~A supplier planning changes in its source water or making long-term~~
6743 ~~treatment changes must describe the change to the Agency in writing~~
6744 ~~under Sections 611.351(a)(3), 611.356(d)(2)(D), and 611.360(a)(3). The~~
6745 ~~supplier must not implement the change until the Agency reviews and~~
6746 ~~approves the change in a SEP.~~

6747
6748 f) ~~Lead Service Line Replacement and Inventory. A supplier must conduct lead~~
6749 ~~service line replacements as this subsection (f) requires.~~

6750
6751 1) ~~Any supplier whose system exceeds the lead action level subsection (e)~~
6752 ~~specifies must complete mandatory lead service line replacement. The~~
6753 ~~supplier must conduct lead service line replacement under Section~~
6754 ~~611.354(g) and must include public education under Section 611.355(a)~~
6755 ~~and (b).~~

6756
6757 2) ~~A supplier exceeding the lead trigger level subsection (e) specifies must~~
6758 ~~complete goal-based lead service line replacement under Section~~
6759 ~~611.354(f) and public education under Section 611.355(g) and (h).~~

6760
6761 3) ~~All suppliers must prepare an inventory of service lines connected to their~~
6762 ~~distribution systems, whether or not the supplier owns or controls the~~
6763 ~~service lines, to identify lead service lines and lead status unknown service~~
6764 ~~lines. The supplier must prepare the inventory under Section 611.354(a).~~

6765
6766 g) ~~Public Education and Notification Requirements. Under Section 611.355(d), the~~
6767 ~~supplier must provide notification of the lead tap water monitoring results to the~~
6768 ~~persons served at each tested site (tap). A CWS supplier must conduct annual~~
6769 ~~outreach to the Illinois Department of Public Health and local health agencies~~
6770 ~~under Section 611.355(i). The supplier must complete additional actions:~~

6771
6772 1) ~~Any supplier exceeding the lead action level must implement the public~~
6773 ~~education requirements under Section 611.355.~~
6774

- 6775 2) ~~Any supplier exceeding the lead trigger level subsection (c) specifies must~~
6776 ~~notify all customers with a lead service line under Section 611.355(g).~~
6777
6778 3) ~~Any supplier exceeding the lead action level subsection (c) specifies must~~
6779 ~~notify the public under Subpart V.~~
6780
6781 4) ~~Any supplier with lead service lines, galvanized service lines needing~~
6782 ~~replacement, or lead status unknown service lines in its inventory, as~~
6783 ~~Section 611.354(a) specifies, must notify all consumers with a lead service~~
6784 ~~line, galvanized service line needing replacement, or a lead status~~
6785 ~~unknown service line under Section 611.355(e).~~
6786
6787 5) ~~Any supplier failing to reach its lead service line replacement rate goal, as~~
6788 ~~required under Section 611.354(f) must conduct outreach activities in~~
6789 ~~accordance with Section 611.355(h).~~
6790
6791 h) ~~Monitoring and Analytical Requirements. A supplier must complete all tap water~~
6792 ~~monitoring for lead and copper, monitoring for water quality parameters, and~~
6793 ~~source water monitoring for lead and copper and analyze the monitoring results~~
6794 ~~under this Subpart G as Sections 611.356, 611.357, 611.358, and 611.359 require.~~
6795
6796 i) ~~Reporting Requirements. A supplier must report any information the treatment~~
6797 ~~provisions of this Subpart G and Section 611.360 require to the Agency.~~
6798
6799 j) ~~Recordkeeping Requirements. A supplier must maintain records as Section~~
6800 ~~611.361 requires.~~
6801
6802 k) ~~Violating National Primary Drinking Water Regulations. Failing to comply with~~
6803 ~~this Subpart G, including conditions the Agency imposes in a SEP, violates the~~
6804 ~~lead and copper NPDWR.~~
6805
6806 l) ~~Testing in Schools and Child Care Facilities. A supplier must collect samples~~
6807 ~~from all schools and child care facilities within its distribution system under~~
6808 ~~Section 611.362.~~

6809
6810 BOARD NOTE: This Section derives from 40 CFR 141.80.

6811
6812 (Source: Amended at 50 Ill. Reg. _____, effective _____)

6813
6814 **Section 611.351 Applicability of Corrosion Control**

- 6815
6816 a) Corrosion ~~control treatment~~~~Control Treatment~~. All suppliers are required to
6817 install, optimize, or re-optimize optimal corrosion control treatment (OCCT) in

6818 compliance with this section. This ~~section~~Section provides when a supplier must
6819 complete the corrosion control treatment steps in subsection (d) or (e) ~~to optimize~~
6820 ~~or re-optimize corrosion control treatment~~ based on size, whether the supplier's
6821 system~~supplier~~ has corrosion control treatment, and whether the supplier
6822 exceeded the lead practical quantitation limit~~trigger level~~, lead action level, and/or
6823 copper action level.

6824
6825 1) Large Suppliers (serving >50,000 people)

6826
6827 A) A large supplier with~~applying~~ corrosion control treatment that
6828 exceeds either the lead action~~trigger~~ level or copper action level
6829 must complete the re-optimized OCCT~~corrosion control treatment~~
6830 steps specified in subsection (d) ~~unless the supplier specifies.~~

6831
6832 i) Has re-optimized OCCT once under subsection (d) after the
6833 compliance date in Section 611.350(a)(3);

6834
6835 ii) Is meeting optimal water quality parameters designated by
6836 the Agency; and

6837
6838 iii) Is continuing to operate and maintain corrosion control
6839 treatment in compliance with Section 611.352(g).

6840
6841 B) The Agency may require a large supplier that does not have to re-
6842 optimize under subsections (a)(1)(A)(i) through (iii) to re-optimize
6843 under Section 611.352(h).~~A large supplier not applying corrosion~~
6844 ~~control treatment with 90th percentile concentration results under~~
6845 ~~Section 611.350(e)(4) that exceeds either the lead practical~~
6846 ~~quantitation limit of 0.005 mg/L or the copper action level must~~
6847 ~~complete the corrosion control treatment steps subsection (e)~~
6848 ~~specifies.~~

6849
6850 C) A large supplier must meet the requirements under subsection (d)
6851 if it exceeds the lead action level at the end of a tap sampling
6852 period after completing service line replacement in compliance
6853 with Section 611.354(d) and there are no lead, galvanized
6854 requiring replacement, or lead status unknown service lines
6855 remaining in the supplier's inventory.~~The Agency may issue a SEP~~
6856 ~~requiring a large supplier applying corrosion control treatment with~~
6857 ~~90th percentile concentration results under Section 611.350(e)(4)~~
6858 ~~exceeding the lead practical quantitation limit but not exceeding~~
6859 ~~the lead trigger level or the copper action level to complete the~~
6860 ~~corrosion control treatment steps in subsection (d).~~

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- D) Large suppliers with corrosion control treatment with 90th percentile results as calculated in compliance with Section 611.350(c)(3) that exceed the lead practical quantitation limit of 0.005 mg/L but do not exceed the lead action level or copper action level may be required by the Agency to complete the re-optimized OCCT steps in subsection(d).
 - E) Large suppliers without corrosion control treatment with 90th percentile results calculated in compliance with Section 611.350(c)(3) that exceed either the lead practical quantitation limit of 0.005 mg/L or the copper action level must complete steps to study and install OCCT, as specified in subsection (e).
- 2) Medium~~Mid-Sized~~ Suppliers (serving >10,000 and ≤50,000 people)
- A) Medium Suppliers with~~A mid-sized supplier applying~~ corrosion control treatment that ~~exceed~~exceeds either the lead ~~action trigger~~ level or the copper action level must complete the re-optimized OCCT~~corrosion control treatment~~ steps specified in subsection (d) ~~unless the supplier specifies.~~
 - i) Has re-optimized OCCT once under subsection (d) after the compliance date in Section 611.350(a)(3);
 - ii) Is meeting optimal water quality parameters designated by the Agency; and
 - iii) Is continuing to operate and maintain corrosion control treatment in compliance with Section 611.352(g).
 - B) The Agency may require a medium supplier that does not have to re-optimize under subsections(a)(2)(A)(i) through (iii) to re-optimize under Section 611.352(h)~~A mid-sized supplier not applying corrosion control treatment that exceeds either the lead or copper action level must complete the corrosion control treatment steps subsection (e) specifies.~~
 - C) After completing service line replacement in compliance with Section 611.354(d) and there are no lead, galvanized requiring replacement, or lead status unknown service lines remaining in the inventory, if at the end of a subsequent tap sampling period, the supplier exceeds the lead action level, a medium supplier with

6904 corrosion control treatment must meet the requirements under
6905 subsection (d). ~~A mid-sized supplier not applying corrosion control~~
6906 ~~treatment that exceeds the lead trigger level but does not exceed~~
6907 ~~the lead or copper action level must complete the treatment~~
6908 ~~recommendation step subsection (e)(1) specifies (Step 1). The~~
6909 ~~water system must complete the remaining steps subsection (e)~~
6910 ~~specifies if the supplier subsequently exceeds either the lead or~~
6911 ~~copper action level.~~

6912
6913 D) Medium suppliers with corrosion control treatment that do not
6914 exceed either the lead action level or the copper action level and do
6915 not have optimal water quality parameters designated by the
6916 Agency must complete the steps specified in subsection (d) starting
6917 with step 6 under subsection (d)(6) unless the supplier is deemed
6918 optimized under subsection (b)(3).

6919
6920 E) Medium suppliers without corrosion control treatment that exceed
6921 either the lead or copper action level must complete the OCCT
6922 steps specified in subsection (e).

6923
6924 3) Small suppliers (serving $\leq 10,000$ people) ~~CWS~~ and NTNCWS
6925 suppliers. ~~Non-Transient, Non-Community Water System Suppliers~~

6926
6927 A) ~~Small and A small CWS or~~ NTNCWS suppliers with supplier
6928 ~~applying~~ corrosion control treatment that ~~exceed either~~ exceeds the
6929 ~~lead action level or copper action trigger level, or the lead action~~
6930 ~~level but does not exceed the copper action level~~ must complete
6931 the ~~re-optimized OCCT corrosion control treatment~~ steps specified
6932 ~~in~~ subsection (d) unless the supplier: specifies if the Agency issues
6933 ~~a SEP approving corrosion control treatment as a compliance~~
6934 ~~option under Section 611.363(a).~~

6935
6936 i) Has re-optimized OCCT once under subsection (d) after the
6937 compliance date in Section 611.350(a)(3);

6938
6939 ii) Is meeting optimal water quality parameters designated by
6940 the Agency; and

6941
6942 iii) Is continuing to operate and maintain corrosion control
6943 treatment as required in 611.352(g).

6944
6945 B) The Agency may require a small supplier that does not have to re-
6946 optimize under subsection(a)(3)(A)(i) through (iii) to re-optimize

6947 under Section 611.352(h).~~A small CWS or NTNCWS supplier~~
 6948 ~~applying corrosion control treatment that exceeds the copper action~~
 6949 ~~level must complete the corrosion control treatment steps~~
 6950 ~~subsection (d) specifies.~~

6951
 6952 C) After completing service line replacement in compliance with
 6953 611.354(d) and there are no lead, galvanized requiring
 6954 replacement, or lead status unknown service lines remaining in the
 6955 inventory, if at the end of a subsequent tap sampling period, the
 6956 supplier exceeds the lead action level, a small supplier with
 6957 corrosion control treatment must meet the requirements in
 6958 subsection (d).~~A small CWS or NTNCWS supplier not applying~~
 6959 ~~corrosion control treatment that exceeds the lead action level must~~
 6960 ~~complete the corrosion control treatment steps subsection (e)~~
 6961 ~~specifies if the Agency issues a SEP approving corrosion control~~
 6962 ~~treatment as a compliance option under Section 611.363.~~

6963
 6964 D) Small and NTNCWS suppliers without corrosion control treatment
 6965 that exceed either the lead action level or copper action level must
 6966 complete the corrosion control treatment steps specified in
 6967 subsection (e).~~A small CWS or NTNCWS supplier not applying~~
 6968 ~~corrosion control treatment that exceeds the copper action level~~
 6969 ~~must complete the corrosion control treatment steps subsection (e)~~
 6970 ~~specifies.~~

6971
 6972 b) Suppliers ~~deemed~~**Deemed** to have optimized corrosion control~~Have Optimized~~
 6973 ~~Corrosion Control.~~ A supplier without corrosion control treatment is deemed to
 6974 have OCCT as defined in Section 611.350(b) if the supplier's system meets the
 6975 requirements of either subsection (b)(1) or (3). A supplier with corrosion control
 6976 treatment is deemed to have OCCT as defined in Section 611.350(b) or re-
 6977 optimized OCCT if the supplier meets the requirements of either subsection (b)(1)
 6978 and (4) or (b)(3) and (4). Suppliers must submit documentation of meeting
 6979 applicable requirements to the Agency in compliance with Section 611.360(c)(1)
 6980 by the deadline for submitting tap sampling results under Section
 6981 611.360(a)(2).~~Subsection (b)(1), (b)(2), or (b)(3) deems a supplier to have OCCT~~
 6982 ~~or re-optimized OCCT if the supplier satisfies one of the criteria specified in the~~
 6983 ~~subsection. Any system subsection (b)(1), (b)(2), or (b)(3) deems to have OCCT~~
 6984 ~~having corrosion control treatment in place must continue operating and~~
 6985 ~~maintaining that treatment and meeting any additional requirements the Agency~~
 6986 ~~determines are appropriate to ensure that the supplier maintains OCCT.~~

6987
 6988 1) ~~Small and Mid-Sized Suppliers Not Applying Corrosion Control~~
 6989 ~~Treatment.~~ A medium supplier without corrosion control treatment or a

6990 small-~~or mid-sized~~ supplier ~~not applying corrosion control treatment~~ is
 6991 deemed to have OCCT if the supplier~~it~~ does not exceed the lead action
 6992 level and~~or~~ copper action level during two consecutive six-month tap
 6993 monitoring periods~~eyes~~ and then remains at or below the lead
 6994 action~~trigger~~ level and copper action level in all ~~subsequent~~ tap sampling
 6995 periods conducted in compliance with~~monitoring eyes under~~ Section
 6996 611.356.

6997
 6998 A) A small supplier with corrosion control treatment is not eligible to
 6999 be deemed to have OCCT under this subsection (b)(1) where the
 7000 Agency has set optimal water quality parameters (OWQPs) under
 7001 subsection (d) or (e).

7002
 7003 B) If a medium supplier without corrosion control treatment or a small
 7004 supplier deemed to have OCCT under this subsection (b)(1)
 7005 exceeds the lead action level or copper action level, the supplier
 7006 must follow the requirements in subsection (a).

7007
 7008 2) This subsection (b)(2) corresponds with 40 CFR 141.81(b)(2), which
 7009 USEPA marked "Reserved". This statement maintains structural
 7010 consistency with USEPA's rule, ~~Small and Mid-Sized Suppliers Applying~~
 7011 ~~Corrosion Control Treatment and Not Exceeding Levels. A small or mid-~~
 7012 ~~sized supplier applying corrosion control treatment is deemed to have~~
 7013 ~~OCCT if it does not exceed the lead or copper action level during two~~
 7014 ~~consecutive six-month tap monitoring cycles under Section 611.356 and~~
 7015 ~~remains at or below the lead trigger level and copper action level in all~~
 7016 ~~subsequent tap monitoring cycles under Section 611.356. If a small or~~
 7017 ~~mid-sized supplier applying corrosion control treatment exceeds the lead~~
 7018 ~~trigger level but does not exceed the lead or copper action level during two~~
 7019 ~~consecutive six-month tap monitoring cycles and remains at or below the~~
 7020 ~~lead and copper action levels in all subsequent tap monitoring cycles the~~
 7021 ~~supplier conducts under Section 611.356, that supplier is deemed to have~~
 7022 ~~re-optimized OCCT by complying with this Section. If the Agency issued~~
 7023 ~~a SEP setting optimal water quality parameters (OWQPs) under~~
 7024 ~~subsection (d) or (e), a supplier is not eligible to be deemed as having~~
 7025 ~~optimized or re-optimized OCCT under subsection (b).~~

7026
 7027 3) A ~~Results Less Than or Equal to the Practical Quantitation Level (PQL) for~~
 7028 ~~Lead. Monitoring results deem a supplier is deemed~~ to have optimized or
 7029 re-optimized corrosion control treatmentOCCT if it~~the supplier~~ submits
 7030 tap sampling results in compliance with~~of tap water monitoring under~~
 7031 Section 611.356 demonstrating that the 90th percentile lead
 7032 level~~concentration~~ is less than or equal to the lead PQL of 0.005 mg/L for

7033 two consecutive six-month tap monitoring periods, it ~~and~~ does not exceed
 7034 the copper action level for two consecutive six-month tap monitoring
 7035 periods ~~tap monitoring cycles~~, and it does not have ~~the Agency did not issue~~
 7036 a SEP setting ~~OWQPs designated by the Agency~~ under subsection (d) or
 7037 (e). ~~Any water system this subsection (b)(3) deems to have optimized~~
 7038 ~~corrosion control must continue tap water monitoring for lead and copper~~
 7039 ~~no less frequently than once every three calendar years using the reduced~~
 7040 ~~number of sites Section 611.356(e) specifies and collecting the samples at~~
 7041 ~~times and locations Section 611.356(d)(4)(E) specifies. If 90th percentile~~
 7042 ~~tap sample results exceeds the lead practical quantitation level (0.005~~
 7043 ~~mg/L) or copper action level during any tap sampling period, the supplier~~
 7044 ~~is no longer eligible to be deemed to have optimized OCCT under this~~
 7045 ~~subsection without first completing the treatment steps specified in~~
 7046 ~~subsection (d) and (e) of this section.~~

7047
 7048 A) A supplier with 90th percentile tap sampling results that later
 7049 exceeds the lead practical quantitation limit of 0.005 mg/L or
 7050 copper action level during any tap sampling period is not eligible
 7051 to be deemed to have optimized OCCT in compliance with this
 7052 subsection (b)(3) until the supplier completes the treatment steps
 7053 specified in subsection (d) or (e).

7054
 7055 B) A supplier deemed to have OCCT in compliance with this
 7056 subsection (b)(3) must continue monitoring for lead and copper at
 7057 the tap no less frequently than once every three calendar years
 7058 using the reduced number of sites specified in 611.356(d)(1) and
 7059 collecting samples at times and locations specified in
 7060 611.356(d)(2)(C).

7061
 7062 4) A supplier with corrosion control treatment deemed to have OCCT under
 7063 this subsection (b) must continue to operate and maintain the corrosion
 7064 control treatment and also meet any additional requirements that the
 7065 Agency determines are appropriate to ensure OCCT is maintained.

7066
 7067 c) This subsection (c) corresponds with 40 CFR 141.81(c), which USEPA marked
 7068 "Reserved". This statement maintains structural consistency with USEPA's
 7069 rule. ~~Completing Corrosion Control Steps for Small and Mid-Sized Suppliers Not~~
 7070 ~~Applying Corrosion Control Treatment~~

7071
 7072 1) Any small or mid-sized supplier not applying corrosion control treatment,
 7073 otherwise required to complete the corrosion control steps in subsection
 7074 (e) because it exceeded the lead or copper action level, may cease
 7075 completing the steps after not exceeding either the lead or copper action

7076 levels during each of two consecutive six-month tap monitoring cycles
 7077 under Section 611.363 before beginning Step 3 under subsection (e)(3) or
 7078 Step 5 under subsection (e)(5). The supplier needs not begin the
 7079 applicable of Step 3 or Step 5, except that a mid-sized supplier with lead
 7080 service lines or a small supplier with lead service lines choosing the
 7081 corrosion control option under Section 611.363 must complete a corrosion
 7082 control treatment study under subsection (e)(3)(A). A supplier initiating
 7083 Step 5 may not cease the steps and must complete all remaining steps in
 7084 subsections (e)(6) through (e)(8).
 7085

2) A supplier ceasing the steps prior to either Step 3 or Step 5 and later
 7087 exceeding the lead or copper action level may not cease the steps a second
 7088 time and must complete the applicable treatment steps beginning with the
 7089 first treatment step that the supplier previously did not complete in its
 7090 entirety.
 7091

3) The Agency may issue a SEP requiring a supplier to repeat treatment steps
 7093 the supplier previously completed if the Agency determines that this is
 7094 necessary to properly implement the treatment requirements of this
 7095 Section. The Agency must explain the basis for its decision in any SEP.
 7096

4) A small or mid-sized supplier exceeding the lead or copper action level
 7098 must implement corrosion control treatment steps under subsection (e)
 7099 (including a supplier deemed to have optimized corrosion control under
 7100 subsection (b)(1)).
 7101

d) Treatment ~~steps~~Steps and ~~deadlines~~Deadlines for ~~suppliers re-optimizing~~Suppliers
 7103 ~~Re-Optimizing~~ OCCT. ~~Suppliers~~Except as subsection (b)(2) or Section 611.363
 7104 provides otherwise, a supplier with corrosion control treatment required to re-
 7105 optimize OCCT under subsection (a) must complete the following~~the following~~
 7106 ~~corrosion control treatment~~ steps ~~(described in the referenced portions of Sections~~
 7107 ~~611.352, 611.356, and 611.357 the steps describe) by~~before the indicated time
 7108 periods. Suppliers must conduct tap sampling for lead and copper in compliance
 7109 with the requirements of Section 611.356 while they complete the corrosion
 7110 control steps in this section.~~times:~~
 7111

1) Step 1: Initiate mandatory pipe rig/loop or CCT study or treatment
 7113 recommendation.
 7114

A) Large or medium suppliers with lead service lines that exceed the
 7116 lead action level must harvest lead service lines from its
 7117 distribution system and construct flowthrough pipe rigs/loops and
 7118 operate the rigs/loops with finished water within one year after the

7119 tap sampling period in which they exceed the lead action level.
 7120 These suppliers must proceed to Step 3 under subsection (d)(3) and
 7121 conduct the corrosion control studies for re-optimization under
 7122 subsection (d)(3)(A) using the pipe rigs/loops.~~A supplier other than~~
 7123 ~~one to which subsection (d)(1)(B) applies must recommend re-~~
 7124 ~~optimized OCCT (Section 611.352(e)) within six months after the~~
 7125 ~~end of the tap sampling period during which the supplier exceeds~~
 7126 ~~either the lead trigger level or copper action level. The Agency~~
 7127 ~~may issue a SEP allowing a supplier to modify its existing~~
 7128 ~~corrosion control treatment without a study for a supplier~~
 7129 ~~exceeding the lead trigger level but not the lead or copper action~~
 7130 ~~level. The Agency must specify re-optimized OCCT within six~~
 7131 ~~months after receiving the supplier's treatment recommendation.~~
 7132 ~~The supplier must modify its corrosion control treatment to install~~
 7133 ~~re-optimized OCCT within six months after the Agency specifies~~
 7134 ~~re-optimized OCCT.~~

7135
 7136 B) Large suppliers without lead service lines that exceed the lead
 7137 action level or copper action level must conduct the corrosion
 7138 control studies for re-optimization under subsection (d)(3)(B) (step
 7139 3).~~A supplier having lead service lines that exceeds the lead action~~
 7140 ~~level must harvest lead pipes from its distribution system, construct~~
 7141 ~~flow through pipe loops, and operate the loops with finished water~~
 7142 ~~within one year after the end of the tap sampling period during~~
 7143 ~~which the supplier exceeds the lead action level. The supplier~~
 7144 ~~must proceed to Step 3 under subsection (d)(3) and conduct the~~
 7145 ~~corrosion control studies for re-optimizing OCCT under subsection~~
 7146 ~~(d)(3)(A) using the pipe loops.~~

7147
 7148 C) A supplier other than those covered in subsection (d)(1)(A) or (B)
 7149 must recommend re-optimized optimal corrosion control treatment
 7150 (Section 611.352(a)) within six months after the end of the tap
 7151 sampling period in which the supplier exceeded the lead action
 7152 level or copper action level.

7153
 7154 D) Suppliers may make an existing corrosion control treatment
 7155 modification recommendation to the Agency within six months
 7156 after the end of the tap sampling period in which the supplier
 7157 exceeded the lead action level. The Agency must evaluate a
 7158 supplier's past corrosion control treatment study results prior to
 7159 approving an existing treatment modification. When the Agency
 7160 approves existing treatment modifications, the Agency must
 7161 specify re-optimized OCCT within 12 months after the end of the

7162 tap sampling period in which the supplier exceeded the lead action
7163 level. The supplier must complete modifications to corrosion
7164 control treatment to have re-optimized OCCT installed within six
7165 months of the Agency specifying re-optimized OCCT. These
7166 suppliers must proceed to step 6 in subsection (d)(6) and conduct
7167 follow-up monitoring.
7168

7169 2) Step 2: Agency requires CCT study or Agency designates re-optimized
7170 OCCT. Within one year after the end of the tap sampling period in which
7171 a medium supplier without lead service lines or a small supplier exceeded
7172 the lead action level or copper action level, the Agency may require the
7173 supplier to perform corrosion control studies for re-optimization (Section
7174 611.352 (c)(2)). If the Agency does not require the supplier to perform
7175 such studies, the Agency must specify re-optimized optimal corrosion
7176 control treatment (Section 611.352(d) within the timeframes in
7177 subsections (d)(2)(A) and (d)(2)(B). The Agency must provide its
7178 determination to the supplier in writing:
7179

7180 A) For a medium supplier, within one year after the end of the tap
7181 sampling period during which the supplier exceeded the lead
7182 action level or copper action level.~~A large supplier must conduct~~
7183 ~~the corrosion control studies for re-optimizing OCCT under~~
7184 ~~subsection (d)(3) (Step 3), unless the system is at or below the lead~~
7185 ~~action level and the Agency issues a SEP modifying the existing~~
7186 ~~corrosion control treatment the Agency specified under subsection~~
7187 ~~(d)(1)(A) (Step 1).~~
7188

7189 B) For a small supplier, within 18 months after the end of the tap
7190 sampling period in which the supplier exceeded the lead action
7191 level or copper action level.~~Within 12 months after the end of the~~
7192 ~~tap sampling period during which a small or mid-sized supplier~~
7193 ~~applying corrosion control treatment exceeds the lead trigger level~~
7194 ~~or copper action level, the Agency may issue a SEP requiring the~~
7195 ~~supplier to perform corrosion control studies for re-optimizing~~
7196 ~~OCCT (Section 611.352(c)(1) or (c)(2)). If the Agency does not~~
7197 ~~require the supplier to perform corrosion control studies, the~~
7198 ~~Agency must issue a SEP specifying re-optimized OCCT (Section~~
7199 ~~611.352(d)(2)) within the timeframes in subsections (d)(2)(B)(i)~~
7200 ~~and (d)(2)(B)(ii).~~
7201

7202 i) ~~A mid-sized supplier must perform corrosion control~~
7203 ~~studies for re-optimizing OCCT within 12 months after the~~

~~end of the tap sampling period during which the supplier exceeded the lead trigger level or copper action level.~~

~~ii) A small supplier must perform corrosion control studies for re-optimizing OCCT within 18 months after the end of the tap sampling period during which the supplier exceeded the lead trigger level or copper action level.~~

3) Step 3: Study duration.

A) ~~Any~~A supplier ~~with~~having lead service lines that exceeds the lead action level in subsection (d)(1)(A) must complete the pipe rig/loop corrosion control treatment studies and recommend re-optimized~~for re-optimizing~~ OCCT within 30 months after the end of the tap sampling period in~~during~~ which the supplier exceeded the lead action level.

B) If the supplier is required to perform corrosion control studies under subsection (d)(1)(B) or (d)(2)~~If subsection (d)(2) (Step 2) requires the supplier to perform corrosion control studies,~~ the supplier must complete the studies (Section 611.352(e)~~Section 611.352(e)(2)~~) and recommend re-optimized OCCT within 18 months after the end of the tap sampling period in which the supplier exceeded the lead or copper action level or after the Agency ~~requires~~issues a SEP requiring the supplier to conduct the studies.

4) Step 4: Agency designation of re-optimized OCCT based on CCT study results. The Agency must designate re-optimized OCCT (Section 611.352(d)) within six months after the supplier completes subsection (d)(3)(A) or (B) (step 3).

~~A) The Agency must issue a SEP designating re-optimized OCCT (subsection (d)(3)(A) within six months after the supplier completes subsection (d)(3)(A) (Step 3).~~

~~B) If the supplier performed corrosion control studies under subsection (d)(2) (Step 2), the Agency must issue a SEP designating re-optimized OCCT (Section 611.352(d)(2) or (d)(4)) within six months after the supplier completes subsection (d)(3)(B) (Step 3).~~

5) Step 5: Re-optimized OCCT installation deadlines. Suppliers must install

7247 re-optimized OCCT (611.352(e)) within one year after the Agency
 7248 completes subsection (d)(4) (Step 4) or the Agency completes subsection
 7249 (d)(2)(A) or (B) (Step 2)

7250
 7251 ~~A) A large supplier must complete modifying its corrosion control~~
 7252 ~~treatment to have installed re-optimized OCCT within 12 months~~
 7253 ~~after the supplier completes subsection (d)(4)(A) (Step 4).~~

7254
 7255 ~~B) A small or mid-sized supplier must install re-optimized OCCT~~
 7256 ~~(Section 611.352(e)(1)) within 12 months after the supplier~~
 7257 ~~completes subsection (d)(4)(B) (Step 4).~~

7258
 7259 6) Step 6: Follow-up monitoring. Suppliers must complete standard
 7260 monitoring for at least two consecutive tap monitoring periods under
 7261 Section 611.356(c)(2)(C)(iv) and water quality parameter monitoring
 7262 under Section 611.357(b)(3) after completing subsection (d)(5) (step 5).
 7263 The first tap monitoring period for standard monitoring must begin on
 7264 January 1 or July 1, whichever is sooner, after completing subsection
 7265 (d)(5) (step 5). ~~A supplier must complete follow-up sampling (Sections~~
 7266 ~~611.356(d)(2) and 611.357(c)) within 12 months after the supplier~~
 7267 ~~completes subsection (d)(5)(A) or (d)(5)(B) (Step 5).~~

7268
 7269 7) Step 7: Agency sets optimal water quality parameters.(OWQPs) The
 7270 Agency must review the supplier's re-optimized OCCT ~~installed treatment~~
 7271 and designate OWQPs (611.352(f)) ~~optimal water quality control~~
 7272 ~~parameters (Section 611.352(f)(1))~~ within six months after completing
 7273 subsection (d)(6) (Step 6).

7274
 7275 8) Step 8: Suppliers meet OWQPs to demonstrate compliance. Suppliers
 7276 ~~The supplier must comply~~ operate complying with the Agency-designated
 7277 OWQPs ~~optimal water quality control parameters~~ (Section 611.352(g)) and
 7278 conduct ~~continue conducting~~ tap sampling under Section
 7279 611.356(c)(2)(C)(v) ~~(Section 611.356(d)(3))~~ and water quality parameter
 7280 monitoring ~~water quality parameters~~ under Section 611.357.(b)(4) ~~Section~~
 7281 ~~611.357(d)).~~

7282
 7283 e) Treatment steps ~~Steps~~ and deadlines ~~Deadlines~~ for suppliers without corrosion
 7284 control treatment ~~Suppliers Not Applying Corrosion Control Treatment.~~ Except as
 7285 provided in subsection (b) suppliers without ~~or Section 611.363 provides~~
 7286 ~~otherwise, a supplier not applying~~ corrosion control treatment must complete the
 7287 following ~~certain~~ corrosion control treatment steps (described in the referenced
 7288 portions of Sections 611.352, 611.356, and 611.357) by ~~before~~ the indicated time
 7289 periods ~~times.~~ Suppliers must conduct tap sampling for lead and copper in

7290 compliance with the requirements of Section 611.356 while completing the
 7291 corrosion control steps in this section.

7292
 7293 1) Step 1: Initiate mandatory pipe rig/loop or CCT study or treatment
 7294 recommendation.

7295
 7296 A) A medium or large supplier with lead service lines that exceeds the
 7297 lead action level must harvest lead pipes from the distribution
 7298 system and construct flowthrough pipe rigs/loops and operate the
 7299 rigs/loops with finished water within one year after the end of the
 7300 tap sampling period during which the supplier exceeded the lead
 7301 action level. These suppliers must proceed to step 3 in subsection
 7302 (e)(3) and conduct the corrosion control studies for optimization
 7303 under subsection (e)(3)(A) using the pipe rigs/loops.~~A supplier~~
 7304 ~~other than one to which subsection (e)(1)(B) or (e)(1)(C) applies~~
 7305 ~~must recommend OCCT (Section 611.352(a)(1), (a)(2), (a)(3), or~~
 7306 ~~(a)(4)) within six months after the end of the tap sampling period~~
 7307 ~~during which the supplier exceeds either the lead trigger level or~~
 7308 ~~copper action level.~~

7309
 7310 B) Large water suppliers under subsection (a)(1)(E) must conduct the
 7311 corrosion control studies for optimization under subsection (e)(3)
 7312 (step 3).~~A supplier having lead service lines and exceeding the lead~~
 7313 ~~action level must harvest lead pipes from its distribution system,~~
 7314 ~~construct flowthrough pipe loops, and operate the loops with~~
 7315 ~~finished water within one year after the end of the tap sampling~~
 7316 ~~period during which the supplier exceeds the lead action level.~~
 7317 ~~The supplier must proceed to Step 3 in subsection (e)(3) of this~~
 7318 ~~section and conduct the corrosion control studies under subsection~~
 7319 ~~(e)(3) using the pipe loops, for optimizing OCCT under subsection~~
 7320 ~~(e)(3)(A).~~

7321
 7322 C) A supplier other than those covered in subsection (e)(1)(A) or (B)
 7323 must recommend optimal corrosion control treatment (OCCT)
 7324 (Section 611.352(a)) within six months after the end of the tap
 7325 sampling period during which the supplier exceeded either the lead
 7326 action level or copper action level.~~A large supplier subsection~~
 7327 ~~(a)(1)(B) directs to perform corrosion control treatment under this~~
 7328 ~~subsection (e) must conduct the corrosion control studies for~~
 7329 ~~optimizing OCCT under subsection (e)(3) (Step 3).~~

7330
 7331 2) Step 2: Agency requires CCT study or designates OCCT. Within one
 7332 year~~12 months~~ after the end of the tap sampling period in~~during~~ which

7333 ~~the~~ a supplier ~~exceeded~~~~exceeds~~ the lead or copper action level, ~~if not~~
 7334 ~~otherwise required by this rule~~, the Agency may ~~require~~~~issue a SEP~~
 7335 ~~requiring~~ the supplier to perform corrosion control studies (Section
 7336 611.352(b)(1)) ~~if those studies are not otherwise required by this subpart.~~
 7337 The Agency must notify the supplier in writing when a corrosion control
 7338 study is required. If the Agency does not require the supplier to perform
 7339 corrosion control studies, the Agency must ~~specify~~~~issue a SEP specifying~~
 7340 OCCT (~~Section 611.(d)~~~~under Section 611.352(d)(1)~~) within the
 7341 ~~timeframes established~~~~applicable timeframe~~ in subsections (e)(2)(A) and
 7342 (e)(2)(B). The Agency must provide its determination to the supplier in
 7343 writing:

7344
 7345 A) For a ~~medium~~~~mid-sized~~ supplier, within 18 months after the end of
 7346 the tap ~~sampling period in~~~~monitoring cycle during~~ which ~~such~~~~the~~
 7347 supplier ~~exceeds~~~~exceeded~~ the lead ~~action~~~~trigger~~ level or copper
 7348 action level; or

7349
 7350 B) For a small supplier, within 24 months after the end of the tap
 7351 ~~sampling period in~~~~monitoring cycle during~~ which the supplier
 7352 ~~exceeds~~~~exceeded~~ the lead ~~action~~~~trigger~~ level or copper action
 7353 level.

7354
 7355 3) Step 3: Study duration.

7356
 7357 A) Large and medium suppliers with~~A large supplier having or not~~
 7358 ~~having~~ lead service lines that ~~exceed~~~~exceeds~~ the lead action level
 7359 ~~or a small or mid-sized supplier having lead service lines that~~
 7360 ~~exceeds the lead action level~~ must complete the corrosion control
 7361 treatment studies and recommend~~for optimizing~~ OCCT within 30
 7362 months after the end of the tap sampling period ~~in~~~~during~~ which
 7363 ~~they exceeded~~~~the supplier exceeds~~ the lead action level.

7364
 7365 B) If a supplier is required~~the Agency requires a supplier~~ to perform
 7366 corrosion control studies under subsection (e)(1)(B) or
 7367 (e)(2)~~subsection (e)(2) (Step 2)~~, the supplier must complete the
 7368 studies (Section 611.352(c)~~Section 611.352(e)(1)~~) and recommend
 7369 OCCT within 18 months after the end of the tap sampling period in
 7370 which the supplier exceeded the lead or copper action level or the
 7371 Agency notifies the supplier in writing, that such studies must be
 7372 conducted.~~issues a SEP requiring the supplier to conduct the~~
 7373 ~~studies.~~

7374
 7375 4) Step 4: Agency designation of OCCT based on CCT study results. The

7376 Agency must designate OCCT (Section 611.352(d)) within six months
 7377 after the supplier completes subsection (e)(3)(A) or (B) (Step 3).

7378
 7379 ~~A) The Agency must issue a SEP designating re-optimized OCCT~~
 7380 ~~(Section 611.352(d)(3)) within six months after the supplier~~
 7381 ~~completes subsection (d)(3)(A) (Step 3).~~

7382
 7383 ~~B) If the supplier has performed corrosion control studies under~~
 7384 ~~subsection (e)(2) (Step 2), the Agency must issue a SEP~~
 7385 ~~designating OCCT (Section 611.352(d)(1)) within six months after~~
 7386 ~~subsection (e)(3) (Step 3) is complete.~~

7387
 7388 5) Step 5: OCCT Installation deadlines. Suppliers~~The supplier~~ must install
 7389 OCCT (Section 611.352(e)) within 24 months after the Agency designates
 7390 OCCT under subsection (e)(2) or (e)(4) (Step 2 or Step 4).

7391
 7392 6) Step 6: Follow-up monitoring. Suppliers~~The supplier~~ must complete
 7393 standard monitoring for at least two consecutive tap monitoring periods
 7394 under Section 611.356(c)(2)(C)(iv) and water quality parameter
 7395 monitoring under Section 611.357(b)(3) after completing subsection (e)(5)
 7396 (step 5). The first tap monitoring period for standard monitoring must
 7397 begin on January 1 or July 1, whichever is sooner, after completing
 7398 subsection (e)(5) (step 5).~~follow up sampling under Sections~~
 7399 ~~611.356(d)(2)(A) and 611.357(e) within 12 months after completing~~
 7400 ~~subsection (e)(5) (Step 5).~~

7401
 7402 7) Step 7: The Agency sets optimal water quality parameters (OWQPs). The
 7403 Agency must review the supplier's installation of treatment and designate
 7404 OWQPs.~~issue a SEP approving optimal water quality control parameters~~
 7405 ~~(Section 611.352(f)Section 611.352(f)(1)) within six months after~~
 7406 completing subsection (e)(6) (Step 6)~~the supplier completes subsection~~
 7407 ~~(e)(5) (Step 5).~~

7408
 7409 8) Step 8: Suppliers meet OWQPs to demonstrate compliance. Suppliers
 7410 The supplier must comply with the Agency-designated OWQPs~~approved~~
 7411 ~~optimal water quality control parameters (Section 611.352(g)Section~~
 7412 ~~611.352(g)(1)) and conduct~~~~continue~~ tap sampling under Section
 7413 611.356(c)(2)(C)(v)(Section 611.356(d)(3)) and ~~monitoring~~ water quality
 7414 parameter monitoring under Section 611.357(b)(4)~~parameters (Section~~
 7415 ~~611.357(d)).~~

7416
 7417 f) Suppliers with lead or galvanized requiring replacement service lines that can
 7418 complete full service line replacement in five years or less.~~Treatment Steps and~~

~~Deadlines for Small CWS and NTNCWS Suppliers Electing Corrosion Control Treatment (CCT) As a Compliance Option under Section 611.363 or As the Agency Requires. A small CWS or NTNCWS supplier selecting the corrosion control treatment option as small supplier compliance flexibility under Section 611.363(a)(2) must complete two steps by the indicated times:~~

- 1) ~~A supplier with one or more lead or galvanized requiring replacement service lines is not required to complete the steps under subsection (d) or (e) if the supplier meets all the following requirements: Step 1. A supplier must recommend the corrosion control treatment option as small supplier compliance flexibility under Section 611.363(a)(2) within six months after the end of the tap sampling period during which the supplier exceeds either the lead trigger level or the lead action level. When recommending to the Agency, the supplier must comply with Section 611.352(a)(1).~~

A) Deadline to complete mandatory service line replacement.

i) A supplier must complete the service line replacement requirements under Section 611.354(d) in five years or less from the date of the end of the tap sampling period in which the supplier first exceeds the lead action level; or

ii) A large supplier without corrosion control treatment must complete the service line replacement requirements under Section 611.354.(d) in five years or less from the date of the end of the tap sampling period in which the supplier's 90th percentile results first exceed the lead practical quantitation limit; and

iii) For a supplier with less than five years remaining to complete mandatory service line replacement in compliance with Section 611.354(d), the supplier must complete the service line replacement requirements under subsection (f)(1)(A) by that deadline

B) At a minimum, a supplier must replace the total number of lead and/or galvanized requiring replacement service lines each year, as identified in that supplier's inventory on the date of the end of the tap sampling period in which the supplier first exceeds the lead action level or in which the supplier's 90th percentile first exceeds the lead practical quantitation limit, whichever applies, at an annual rate equally divided by the total number of years for service line replacement provided in subsection (f)(1)(A). For purposes of

7462 calculating the annual rate, the supplier must replace all lead and
7463 galvanized requiring replacement service lines within the least
7464 number of years feasible not to exceed five years from the date of
7465 the end of the tap sampling period in which the supplier first
7466 exceeds the lead action level or in which the supplier's 90th
7467 percentile first exceeds the lead practical quantitation limit,
7468 whichever applies. If the Agency determines a replacement
7469 deadline less than five years is feasible for a supplier, the supplier
7470 must replace service lines by that deadline and establish an annual
7471 replacement rate based on that number of years until that deadline.
7472

7473 C) By the end of the five-year-or-less period in subsection (f)(1)(A),
7474 the supplier must have replaced all lead and galvanized requiring
7475 replacement service lines calculated in compliance with Section
7476 611.354(d)(6) (i.e., no lead, galvanized requiring replacement or
7477 lead status unknown service lines remain in the inventory), and
7478 identified the material of all lead status unknown service lines,
7479 completed the inventory validation requirements in compliance
7480 with Section 611.354(b)(5), and replaced all unknowns found to be
7481 lead or galvanized requiring replacement service lines.
7482

7483 D) Except as provided in this section, all other requirements in
7484 Section 611.354(d) apply.
7485

7486 2) Throughout the five-year-or-less period in subsection(f)(1)(A), suppliers
7487 with corrosion control treatment must continue to operate and maintain
7488 corrosion control treatment in addition to completing the mandatory
7489 service line replacement requirements under this section.~~Step 2. The~~
7490 ~~Agency must issue a SEP approving the recommendation of corrosion~~
7491 ~~control treatment option as small supplier compliance flexibility or~~
7492 ~~designating an alternative option under Section 611.363(a) within six~~
7493 ~~months after the supplier recommends the option under subsection (f)(1)~~
7494 ~~(Step 1). A supplier the Agency requires to optimize or re-optimize~~
7495 ~~OCCT must follow the schedules in subsection (d) or (e), beginning with~~
7496 ~~Step 3 in subsection (d)(3) or (e)(3), unless the Agency specifies OCCT~~
7497 ~~under the applicable of subsection (d)(2)(B) or (e)(2)(B).~~
7498

7499 3) A supplier that does not replace lead and/or galvanized requiring
7500 replacement service lines calculated in compliance with Section
7501 611.354(d)(6) at the minimum annual rate provided in subsection (f)(1)(B)
7502 in any one year of the five-year-or-less period in subsection (f)(1)(A) or
7503 complete the service line replacement requirements under Section
7504 611.354(d) in compliance with subsection (f)(1)(C), must meet the

- 7505 requirements in subsection (d) or (e), as applicable, starting immediately
7506 after the supplier fails to meet the annual removal requirement in
7507 subsection (f)(1)(B).
7508
- 7509 4) At the end of each year of the five-year-or-less period, the supplier must
7510 submit written documentation to the Agency about the number of lead and
7511 galvanized requiring replacement service lines removed that year and
7512 whether the minimum annual replacement rate in subsection (f)(1)(B). If a
7513 supplier reports or the Agency determines that the supplier did not meet its
7514 minimum annual replacement rate that year, the supplier is no longer
7515 eligible to defer the requirements under subsection (d) or (e) and must
7516 meet those requirements, as applicable.
7517
- 7518 5) After completing service line replacement in compliance with the
7519 requirements in subsection (f), a supplier must meet the requirements
7520 under subsection (d) or (e), as applicable, if at the end of a subsequent tap
7521 sampling period, the supplier either exceeds the lead action level or the
7522 lead practical quantitation limit, whichever is applicable.
7523
- 7524 g) Completing corrosion control steps for small and medium suppliers without
7525 corrosion control treatment.
7526
- 7527 1) Any small or medium supplier without corrosion control treatment
7528 required to complete the steps in subsection (e) that does not exceed the
7529 lead action level or copper action level during two consecutive six-month
7530 tap monitoring periods under Section 611.356 prior to the start of step 3 in
7531 subsection (e)(3) or before or concurrent with the end of step 4 in
7532 subsection (e)(4) may stop completing the steps and is not required to
7533 complete subsection (e)(3) or (5) (step 3 or step 5), respectively, except
7534 that medium suppliers without corrosion control treatment and with lead
7535 service lines must complete a corrosion control treatment study under
7536 subsection (e)(3)(A). A 90th percentile level at or below the lead action
7537 level or copper action level based on less than the required minimum
7538 number of samples under Section 611.356 cannot be used to meet the
7539 requirements of this subsection (g)(1). Eligible suppliers can only use the
7540 exception in subsection (g)(1) once.
7541
- 7542 2) Any supplier that starts step 5 in compliance with subsection (e)(5) must
7543 complete the remaining steps (i.e., steps 6 through 8) in subsection (e)(6)
7544 through (8) and is not permitted to stop the steps.
7545
- 7546 3) Any small or medium supplier without corrosion control treatment under
7547 subsection (g)(1) that stopped the steps in subsection (e) and subsequently

7548 exceeds either the lead action level or copper action level must complete
7549 the corrosion control treatment steps in subsection (e) beginning with the
7550 first treatment step that was not completed.

7551
7552 4) The Agency may require a supplier to repeat treatment steps previously
7553 completed by the supplier when the Agency determines it is necessary to
7554 implement the treatment requirements of this subsection. The Agency
7555 must notify the supplier in writing of such a determination and explain the
7556 basis for its decision.

7557
7558 h) Notification requirements for upcoming long-term change in treatment or source.
7559 At a time specified by the Agency, or if no specific time is designated, as early as
7560 possible but no later than six months prior to the addition of a new source or any
7561 long-term change in water treatment, a supplier must submit written
7562 documentation describing the addition of a new source or long-term change in
7563 treatment to the Agency. Suppliers may not implement the addition of a new
7564 source or long-term treatment change without Agency approval. The Agency
7565 must review and approve the addition of a new source or long-term change in
7566 water treatment before it can be implemented by the supplier. The Agency may
7567 require any such supplier to take action before or after the addition of a new
7568 source or long-term treatment change to ensure that the supplier operates and
7569 maintains optimal corrosion control treatment, such as additional water quality
7570 parameter monitoring, additional lead or copper tap sampling, and re-evaluating
7571 corrosion control treatment. Examples of long-term treatment changes include
7572 but are not limited to the addition of a new treatment process or modification of
7573 an existing treatment process. Examples of modifications include switching
7574 secondary disinfectants, switching coagulants (e.g., alum to ferric chloride), and
7575 switching corrosion inhibitor products (e.g., orthophosphate to blended
7576 phosphate). Long-term treatment changes can also include dose changes to
7577 existing chemicals if the system is planning long-term changes to its finished
7578 water pH or residual inhibitor concentration. Long-term treatment changes would
7579 not include chemical dose fluctuations associated with daily raw water quality
7580 changes where a new source has not been added.

7581
7582 BOARD NOTE: This Section derives from 40 CFR 141.81.

7583
7584 (Source: Amended at 50 Ill. Reg. _____, effective _____)

7585
7586 **Section 611.352 Corrosion Control Treatment**

7587
7588 Description of corrosion control treatment requirements. This section provides the requirements
7589 for suppliers and the Agency designating optimal corrosion control treatment (OCCT) for a
7590 supplier that is optimizing or re-optimizing OCCT. All suppliers **Designating Optimal Corrosion**

7591 ~~Control Treatment for Systems Optimizing or Re-Optimizing Corrosion Control Treatment. A~~
7592 ~~supplier~~ must complete the corrosion control treatment requirements in this Section as applicable
7593 ~~under as they apply to the supplier under~~ Section 611.351.

7594

7595 a) Supplier recommendation regarding corrosion control.~~System Recommendation~~
7596 ~~Regarding Corrosion Control Treatment for Suppliers Not Having Lead Service~~
7597 ~~Lines and Suppliers Having Lead Service Lines but Not Exceeding the Lead~~
7598 ~~Action Level~~

7599

7600 1) Any~~A~~ supplier without corrosion control treatment that is required to~~that~~
7601 ~~must~~ recommend a treatment option in compliance with~~under~~ Section
7602 611.351(e)(1)(C) must, based on the results of lead and copper tap
7603 sampling and water quality parameter monitoring, recommend designating
7604 one or more of the corrosion control treatments in subsection(c)(1)
7605 to subsection (e)(1)(A) for the Agency as the optimal corrosion control
7606 treatment for that supplier. The Agency may require the supplier to
7607 conduct additional water quality parameter monitoring to assist the
7608 Agency in reviewing the supplier's recommendation.~~to designate must~~
7609 ~~base its recommendation on the results of lead and copper tap monitoring~~
7610 ~~and water quality parameter monitoring.~~

7611

7612 A) ~~A small CWS supplier or NTNCWS supplier exceeding the copper~~
7613 ~~action level and recommending corrosion control treatment to the~~
7614 ~~Agency under Section 611.363(a) must comply with this~~
7615 ~~subsection (a)(1).~~

7616

7617 B) ~~The Agency may issue a SEP requiring the supplier to conduct~~
7618 ~~additional water quality parameter monitoring to assist the Agency~~
7619 ~~in reviewing the supplier's recommendation.~~

7620

7621 2) Any supplier with corrosion control treatment that exceeds the lead action
7622 level that is required to recommend a treatment option to the Agency in
7623 compliance with Section 611.351(d)(1)(C) must recommend designating
7624 one or mor of the corrosion control treatments listed in subsection (c)(2) as
7625 the optimal corrosion control treatment for that supplier.~~A small CWS~~
7626 ~~supplier or NTNCWS supplier subject to this subsection (a) not applying~~
7627 ~~corrosion control treatment that chooses to pursue a small water system~~
7628 ~~compliance flexibility option and is required to recommend an option in~~
7629 ~~compliance with Section 611.351(f) must, based on the results of lead tap~~
7630 ~~sampling and water quality parameter monitoring, recommend designation~~
7631 ~~of one of the options listed in Section 611.363. A supplier not having lead~~
7632 ~~service lines, exceeding the lead action level, and selecting corrosion~~
7633 ~~control under Section 611.363(a)(2) must recommend that the Agency~~

- 7634 designate one or more of the corrosion control treatments in subsection
7635 (c)(1) as OCCT for that system.
7636
7637 3) The Agency may waive the requirement for a supplier to recommend
7638 OCCT if the Agency requires the supplier, in writing, to complete a
7639 corrosion control study within three months after the end of the tap
7640 sampling period in which the lead or copper action level exceedance
7641 occurred. These suppliers must proceed directly to subsection (c) and
7642 complete a corrosion control study.~~A supplier exceeding the lead action~~
7643 ~~level and selecting corrosion control treatment under Section~~
7644 ~~611.363(a)(2) must recommend that the Agency designate one or more of~~
7645 ~~the corrosion control treatments in subsection (c)(1)(A) as the OCCT for~~
7646 ~~its system. A small or mid-sized supplier exceeding the lead trigger level~~
7647 ~~but not exceeding the lead or copper action level does not need to perform~~
7648 ~~a corrosion control study under subsection (c) unless the Agency issues a~~
7649 ~~SEP requiring the supplier to do so.~~
7650
7651 4) ~~A small CWS or NTNCWS supplier applying corrosion control treatment~~
7652 ~~exceeding the lead action level and selecting corrosion control under~~
7653 ~~Section 611.363(a)(2) must recommend designation of one or more of the~~
7654 ~~corrosion control treatments in subsection (c)(2) as OCCT for its system.~~
7655
7656 5) ~~The Agency may issue a SEP waiving subsection (a)(4)'s OCCT~~
7657 ~~recommendation requirement for a supplier if the SEP requires the~~
7658 ~~supplier to complete a corrosion control study within three months after~~
7659 ~~the end of the tap sampling period during which the supplier exceeded the~~
7660 ~~lead action level. In that case, the supplier must proceed directly to~~
7661 ~~subsection (c) and complete a corrosion control study.~~
7662
7663 b) ~~Agency decision~~Required Studies to require studies to identify initial OCCT
7664 under Section 611.351.(e)(2)Identify Initial Optimal Corrosion Control Treatment
7665 and re-optimized~~Re-Optimized~~ OCCT under Section 611.351(d)(2). Except for
7666 Large Suppliers and Small and Mid-Sized Suppliers Having Lead Service Lines
7667 and Exceeding the Lead Action Level. Certain suppliers must conduct corrosion
7668 control treatment studies: large suppliers exceeding the lead action level, large
7669 suppliers not applying corrosion control treatment whose 90th percentile
7670 concentration results exceed either the lead practical quantitation limit of 0.005
7671 mg/L or the copper action level, mid-sized water system suppliers having lead
7672 service lines and exceeding the lead action level, and small suppliers having lead
7673 service lines and exceeding the lead action level and selecting the corrosion
7674 control treatment option under Section 611.363(a).
7675
7676 1) The Agency may require any~~issue a SEP requiring a small or~~ medium~~mid-~~

7677 ~~sized~~ supplier ~~without~~~~not applying~~ corrosion control treatment ~~that~~
7678 ~~exceeds either~~~~exceeding~~ the lead action level or copper action level to
7679 perform corrosion control treatment studies under subsection (c)(1) to
7680 identify OCCT for the supplier's system.

7681
7682 2) The Agency may require any small or medium supplier with corrosion
7683 control treatment exceeding either the lead or copper action level to
7684 perform corrosion control treatment studies under subsection (c)(2) to
7685 identify re-optimized OCCT for its system (i.e., OCCT after a re-
7686 optimization evaluation).~~The Agency may issue a SEP requiring a small or~~
7687 ~~mid-sized supplier not applying corrosion control treatment and exceeding~~
7688 ~~the lead trigger level but not the lead or copper action level to perform~~
7689 ~~corrosion control treatment studies under subsection (c)(1) to identify~~
7690 ~~OCCT for its system. The supplier must install this corrosion control~~
7691 ~~treatment if the supplier subsequently exceeds the lead or copper action~~
7692 ~~level.~~

7693
7694 3) ~~The Agency may issue a SEP requiring a small or mid-sized supplier~~
7695 ~~applying corrosion control treatment exceeding either the lead trigger level~~
7696 ~~or copper action level to perform corrosion control treatment studies under~~
7697 ~~subsection (c)(2) to identify re-optimized OCCT for its system (i.e., after~~
7698 ~~evaluating re-optimized OCCT).~~

7699
7700 c) Performing corrosion control studies.~~Corrosion Control Studies~~

7701
7702 1) Suppliers without~~A supplier not applying~~ corrosion control treatment ~~that~~
7703 ~~is~~ required to conduct corrosion control studies under subsection
7704 611.351(e) must evaluate the effectiveness of each of the following
7705 treatments, and if appropriate, combinations of the following treatments to
7706 identify OCCT for the system;~~complete certain actions:~~

7707
7708 A) Alkalinity and pH adjustment; ~~A supplier not applying corrosion~~
7709 ~~control treatment must evaluate the effectiveness of each of certain~~
7710 ~~treatments and combinations of those treatments if appropriate to~~
7711 ~~identify the OCCT for its system:~~

7712
7713 i) ~~Adjusting alkalinity and pH;~~

7714
7715 ii) ~~Adding an orthophosphate or silicate-based corrosion~~
7716 ~~inhibitor at a concentration sufficient to maintain an~~
7717 ~~effective corrosion inhibitor residual concentration in all~~
7718 ~~test samples.~~

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- iii) ~~Adding an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain an orthophosphate residual concentration of 1 mg/L (as PO₄) in all test samples; and~~
 - iv) ~~Adding an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain an orthophosphate residual concentration of 3 mg/L (as PO₄) in all test samples.~~
- B) The addition of an orthophosphate- or silicate-based corrosion inhibitor at a concentration sufficient to maintain an effective corrosion inhibitor residual concentration in all test samples;~~The supplier must evaluate each of the corrosion control treatments using pipe rig/loop tests; metal coupon tests; partial-system tests; or analyses based on documented analogous treatments in other systems of similar size, water chemistry, and distribution system configuration. A large or mid-sized supplier or a small CWS or NTNCWS supplier selecting the corrosion control treatment option under Section 611.363 having lead service lines and exceeding the lead action level must conduct pipe rig/loop studies using harvested lead service lines from its distribution system to assess the effectiveness of corrosion control treatment options on the existing pipe scale. The supplier may use metal coupon tests as a screen to reduce the number of options the supplier evaluates using pipe rig/loop tests to the current conditions and two options.~~
- C) The addition of an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain an orthophosphate residual concentration of 1 mg/ L (as PO₄) in all test samples; and~~The supplier must measure specific water quality parameters in any tests the supplier conducts under this subsection (c)(1)(C) before and after evaluating the corrosion control treatments in subsections (e)(1)(A) and (e)(1)(B):~~
- i) ~~Lead;~~
 - ii) ~~Copper;~~
 - iii) ~~pH;~~
 - iv) ~~Alkalinity;~~

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- v) ~~Orthophosphate as PO₄ (when the supplier uses an orthophosphate-based inhibitor); and;~~
 - vi) ~~Silicate (when the supplier uses an inhibitor containing a silicate compound).~~
- D) The addition of an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain an orthophosphate residual concentration of 3 mg/ L (as PO₄) in all test samples. ~~The supplier must identify all chemical or physical constraints that limit or prohibit using any particular corrosion control treatment and document those constraints:~~
- i) ~~With data and documents showing that a particular corrosion control treatment adversely affected other drinking water treatment processes when that treatment was used by another supplier with water having comparable water quality characteristics. Systems using coupon studies to screen or pipe loop/rig studies to evaluate treatment options must not exclude treatment strategies from the studies based on the constraints identified in this section.~~
 - ii) ~~With data and documents demonstrating that the supplier previously evaluated a particular corrosion control treatment, finding either that the treatment is ineffective or adversely affects other drinking water quality treatment processes. Systems using coupon studies to screen or pipe loop/rig studies to evaluate treatment options must not exclude treatment strategies from the studies based on the constraints identified in this section unless the treatment was found to be ineffective in a previous pipe loop/rig study.~~
- E) ~~The supplier must evaluate the effect of the evaluated corrosion control treatment chemicals on other water quality treatment processes. A supplier using coupon studies to screen or pipe loop/rig studies to evaluate treatment options must not exclude treatment strategies from the studies based on the effects the supplier identifies under this Section.~~
- F) ~~Based on an analysis of the data the supplier generated during each evaluation, the supplier must recommend in writing to the Agency the treatment option the corrosion control studies indicate~~

7806 ~~constitutes OCCT for the supplier's system. The supplier must~~
7807 ~~give a rationale for its recommendation together with all~~
7808 ~~supporting documentation subsections (c)(2)(A) through (c)(2)(E)~~
7809 ~~specify.~~

7810
7811 2) Suppliers with corrosion control treatment required to conduct corrosion
7812 control studies under Section 611.351(d) must evaluate the effectiveness
7813 of the following treatments, and if appropriate, combinations of the
7814 following treatments, to identify re-optimized OCCT for the system:~~A~~
7815 ~~supplier applying corrosion control treatment that must conduct corrosion~~
7816 ~~control studies to determine re-optimized OCCT must complete specific~~
7817 ~~tasks:~~

7818
7819 A) Alkalinity and/or pH adjustment or re-adjustment;~~The supplier~~
7820 ~~must evaluate the efficacy of certain treatments and appropriate~~
7821 ~~combinations of those treatments to identify the re-optimized~~
7822 ~~OCCT for its system:~~

7823
7824 i) ~~Alkalinity or pH adjustment or re-adjustment;~~

7825
7826 ii) ~~Adding an orthophosphate or silicate-based corrosion~~
7827 ~~inhibitor at a concentration sufficient to maintain an~~
7828 ~~effective corrosion inhibitor residual concentration in all~~
7829 ~~test samples if the supplier does not already use the~~
7830 ~~inhibitor;~~

7831
7832 iii) ~~Adding an orthophosphate-based corrosion inhibitor at a~~
7833 ~~concentration sufficient to maintain an orthophosphate~~
7834 ~~residual concentration of 1 mg/L (PO₄) in all test samples~~
7835 ~~unless the current inhibitor process already meets this~~
7836 ~~residual; and~~

7837
7838 iv) ~~Adding an orthophosphate-based corrosion inhibitor at a~~
7839 ~~concentration sufficient to maintain an orthophosphate~~
7840 ~~residual concentration of 3 mg/L (PO₄) in all test samples~~
7841 ~~unless the current inhibitor process already meets this~~
7842 ~~residual.~~

7843
7844 B) The addition of an orthophosphate- or a silicate-based corrosion
7845 inhibitor at a concentration sufficient to maintain an effective
7846 corrosion inhibitor residual concentration in all test samples if no
7847 such inhibitor is currently utilized;~~The supplier must evaluate each~~
7848 ~~of the corrosion control treatments using pipe rig/loop tests, metal~~

7849 coupon tests, partial system tests, or analyses based on
 7850 documented analogous treatments with other systems of similar
 7851 size, water chemistry, and distribution system configurations. If
 7852 the supplier's system has lead service lines and exceeds the lead
 7853 action level, the supplier must conduct pipe rig/loop studies using
 7854 harvested lead service lines from its distribution system to assess
 7855 the efficacy of corrosion control treatment options on the existing
 7856 pipe scale. The supplier can use metal coupon tests as a screen to
 7857 reduce the number of options it evaluates using pipe rig/loops to
 7858 the current conditions and two options.
 7859

7860 C) The addition of an orthophosphate-based corrosion inhibitor at a
 7861 concentration sufficient to maintain an orthophosphate residual
 7862 concentration of 1 mg/ L (PO₄) in all test samples unless the
 7863 current inhibitor process already meets this residual; and~~The~~
 7864 ~~supplier must measure specific water quality parameters in any~~
 7865 ~~tests conducted under this subsection (c)(2)(C) before and after~~
 7866 ~~evaluating the corrosion control treatments in subsections (c)(2)(A)~~
 7867 ~~and (c)(2)(B):~~

- 7868 i) Lead;
- 7869
- 7870 ii) Copper;
- 7871
- 7872 iii) pH;
- 7873
- 7874 iv) Alkalinity;
- 7875
- 7876 v) Orthophosphate as PO₄ (if the supplier uses an
- 7877 orthophosphate-based inhibitor); and
- 7878
- 7879 vi) Silicate (if the supplier uses a silicate-based inhibitor).
- 7880

7881 D) The addition of an orthophosphate-based corrosion inhibitor at a
 7882 concentration sufficient to maintain an orthophosphate residual
 7883 concentration of 3 mg/L (as PO₄) in all test samples unless the
 7884 current inhibitor process already meets this residual.~~The supplier~~
 7885 ~~must identify all chemical or physical constraints limiting or~~
 7886 ~~prohibiting using a particular corrosion control treatment and~~
 7887 ~~document those constraints with certain information:~~

- 7888 i) ~~Data and documents showing that a particular corrosion~~
- 7889 ~~control treatment adversely affected other drinking water~~
- 7890
- 7891

~~treatment processes when another supplier with comparable water quality characteristics used the treatment. A supplier using coupon studies to screen or pipe loop/rig studies to evaluate treatment options must not exclude treatment strategies from the studies based on the constraints the supplier identifies under this Section; or~~

~~ii) Data and documents demonstrating that the supplier previously evaluated a particular corrosion control treatment and found that the treatment is ineffective or adversely affects other drinking water quality treatment processes. A supplier using coupon studies to screen or pipe loop/rig studies to evaluate treatment options must not exclude treatment strategies from the studies based on the constraints the supplier identifies under this Section, unless the supplier found the treatment ineffective in a previous pipe loop/rig study.~~

~~E) The supplier must evaluate the effect of the chemicals it uses for corrosion control treatment on other drinking water quality treatment processes. A supplier using coupon studies to screen or pipe loop/rig studies to evaluate treatment options must not exclude treatment strategies from the studies based on the effects the supplier identifies under this Section.~~

~~F) Based on its analysis of the data the supplier generated during each evaluation, the supplier must recommend to the Agency in writing the treatment option that the corrosion control studies indicate constitutes OCCT for its system. The supplier must provide a rationale for its recommendation together with all supporting documentation subsections (e)(1)(A) through (e)(1)(E) specify.~~

3) Suppliers must evaluate each of the corrosion control treatments in subsection (c)(1) or (2) individually or, if appropriate, in combinations, using pipe rig/loop tests, metal coupon tests, partial-system tests, and/or analyses based on documented analogous treatments with similar size systems that have a similar water chemistry, and similar distribution system configurations. Large and medium suppliers with lead service lines and other systems as required by the Agency, that exceed the lead action level must conduct pipe rig/loop studies using harvested lead service lines from their distribution systems to assess the effectiveness of corrosion control treatment options on the existing pipe scale. Metal coupon tests can be used as a screen to reduce the number of options

- 7935 evaluated in the pipe rig/loop studies to the current water quality and at
7936 least two additional treatment options.
7937
- 7938 4) Suppliers must measure the following water quality parameters in any
7939 tests conducted under subsection (c)(3) both before and after evaluating
7940 the corrosion control treatments listed in subsections (c)(1) or (c)(2):
7941
- 7942 A) Lead;
7943
7944 B) Copper;
7945
7946 C) pH;
7947
7948 D) Alkalinity;
7949
7950 E) Orthophosphate as PO₄ (when an orthophosphate-based inhibitor is
7951 used);
7952
7953 F) Silicate (when a silicate-based inhibitor is used); and
7954
7955 G) Any additional parameters necessary to evaluate the effectiveness
7956 of a corrosion control treatment as determined by the Agency.
7957
- 7958 5) Suppliers must identify all chemical or physical constraints that limit or
7959 prohibit the use of a particular corrosion control treatment and document
7960 those constraints by providing either of the following:
7961
- 7962 A) Data and documentation showing a particular corrosion control
7963 treatment has adversely affected other drinking water treatment
7964 processes when used by another supplier with comparable water
7965 quality characteristics. Suppliers using metal coupon tests to
7966 screen and/or pipe rig/loop studies to evaluate treatment options
7967 cannot exclude treatment strategies from the studies based on the
7968 constraints identified in subsection (c)(5)(A).
7969
- 7970 B) Data and documentation demonstrating the supplier previously
7971 attempted to evaluate a particular corrosion control treatment and
7972 found the treatment was ineffective or adversely affects other
7973 drinking water quality treatment processes. Suppliers using metal
7974 coupon tests to screen and/or pipe rig/loop studies to evaluate
7975 treatment options cannot exclude treatment strategies from the
7976 studies based on the constraints identified in subsection (c)(5)(B).

7977 unless the treatment was found to be ineffective in a previous pipe
7978 rig/loop study.

7979
7980 6) Suppliers must evaluate the effect of the chemicals used for corrosion
7981 control treatment on other drinking water quality treatment processes.
7982 Suppliers using metal coupon tests to screen and/or pipe rig/loop/ studies
7983 to evaluate treatment options cannot exclude any of the required treatment
7984 strategies specified in subsection (c)(1) or (c)(2) from the studies based on
7985 the effects identified in this Section.

7986
7987 7) Based on the data and analysis for each treatment option evaluated under
7988 this subsection (c), suppliers must recommend to the Agency, in writing,
7989 the treatment option that the corrosion control studies indicate constitutes
7990 OCCT for its system as defined in Section 611.350(b). Suppliers must
7991 provide the Agency with a rationale for the OCCT recommendation, and
7992 all supporting documentation specified in subsections (c)(1) or (c)(2) and
7993 subsection (c)(3) through (c)(7).

7994
7995 d) Agency designation of OCCT~~Approval of Optimized and re-optimized OCCT~~~~Re-~~
7996 ~~Optimized Corrosion Control Treatment. When designating OCCT, the Agency~~
7997 ~~must consider the effects of additional corrosion control treatment on water~~
7998 ~~quality parameters and other water quality treatment processes. The Agency must~~
7999 ~~notify the supplier of the basis for designating OCCT in any SEP it issues under~~
8000 ~~this subsection (d).~~

8001
8002 1) Designation of~~Designating~~ OCCT or re-optimized OCCT. Based on
8003 available information, including, where applicable, studies conducted
8004 under subsection (c)(1) or (c)(2) and/or a supplier's recommended
8005 corrosion control treatment option, the Agency must either approve the
8006 supplier-recommended corrosion control treatment option or designate
8007 alternative corrosion control treatment(s) from among those listed in
8008 subsection (c)(1) or (c)(2), as applicable. The Agency must notify the
8009 supplier, in writing, of its designation of OCCT or re-optimized OCCT
8010 and explain the basis for this determination.~~for a Supplier Without~~
8011 ~~Corrosion Control Treatment. Considering available information,~~
8012 ~~including applicable studies conducted under subsection (c)(1) or the~~
8013 ~~supplier's recommended corrosion control treatment option, the Agency~~
8014 ~~must issue a SEP designating from among the supplier recommended~~
8015 ~~corrosion control treatment option, alternative corrosion control treatments~~
8016 ~~from among those in subsection (c)(1)(A), or an applicable alternative~~
8017 ~~small-supplier compliance flexibility option under Section 611.363(a).~~

8018
8019 A) When designating OCCT, the Agency must consider the effects

8020 that additional corrosion control treatment has on water quality
8021 parameters and other drinking water quality treatment processes.

8022
8023 B) If the Agency requests additional information to aid its review, the
8024 supplier must provide that information.

8025
8026 2) This subsection (d)(2) corresponds with 40 CFR 141.82(d)(2), which
8027 USEPA marked "Reserved". This statement maintains structural
8028 consistency with USEPA's rule. ~~Designation of Re-Optimized OCCT for~~
8029 ~~Suppliers Applying Corrosion Control Treatment. Considering available~~
8030 ~~information, including applicable studies under subsection (c)(2) or the~~
8031 ~~supplier's recommended corrosion control treatment option, the Agency~~
8032 ~~must issue a SEP designating from among the supplier recommended~~
8033 ~~corrosion control treatment option, alternative corrosion control treatments~~
8034 ~~from among those in subsection (c)(2)(A), or an applicable alternative~~
8035 ~~small supplier compliance flexibility option under Section 611.363(a).~~

8036
8037 e) Installing OCCT and Re-Optimizing OCCT. Each supplier must install and
8038 operate the OCCT or re-optimized OCCT designated by the Agency under
8039 subsection (d) throughout its distribution system. ~~A supplier must properly install~~
8040 ~~and operate the OCCT throughout its distribution system that the Agency~~
8041 ~~approved under subsection (d).~~

8042
8043 f) Agency review of treatment and designation of optimal water quality
8044 parameters ~~Review of Treatment and Specification of Optimal Water Quality~~
8045 ~~Control Parameters~~ for OCCT and re-optimized ~~Re-Optimized~~ OCCT. The
8046 Agency must evaluate the results of all lead and copper tap ~~sampling~~ and water
8047 quality parameter sampling submitted by the supplier ~~the supplier submits~~ and
8048 determine whether the supplier has installed ~~properly installs~~ and operated ~~operates~~
8049 the OCCT designated by the Agency in subsection (d) ~~approves under subsection~~
8050 ~~(d)(1) or (d)(2).~~ Upon reviewing the supplier's tap and water quality parameter
8051 sampling results, both before and after the supplier installs OCCT, or re-
8052 optimized OCCT, the Agency must designate each of the following:

8053
8054 1) A minimum value or a range of values for pH measured at each entry
8055 point to the distribution system. ~~Upon reviewing the results of the~~
8056 ~~supplier's tap water and water quality parameter monitoring, both before~~
8057 ~~and after installing OCCT, the Agency must issue a SEP specifying~~
8058 ~~operating parameters:~~

8059
8060 A) ~~A minimum value or range of values for pH at each entry point to~~
8061 ~~the distribution system.~~

8062

- 8063 B) ~~A minimum pH value for all tap samples. This value must be~~
8064 ~~equal to or greater than 7.0, unless the Agency determines that a~~
8065 ~~pH 7.0 is not technologically feasible or is not necessary for the~~
8066 ~~supplier to optimize corrosion control.~~
- 8067
- 8068 C) ~~If the supplier uses a corrosion inhibitor, a minimum inhibitor~~
8069 ~~concentration or range of concentrations for orthophosphate (as~~
8070 ~~PO₄) or silicate measured at each entry point to the distribution~~
8071 ~~system.~~
- 8072
- 8073 D) ~~If the supplier uses a corrosion inhibitor, the supplier must~~
8074 ~~maintain a minimum orthophosphate or silicate concentration~~
8075 ~~measured in all tap samples that is necessary to form a passivating~~
8076 ~~film on the interior walls of the pipes of the distribution system, as~~
8077 ~~determined by the Agency in a SEP. If the supplier uses~~
8078 ~~orthophosphate, the supplier must maintain an orthophosphate~~
8079 ~~concentration equal to or greater than 0.5 mg/L (as PO₄) for OCCT~~
8080 ~~the Agency designates under subsection (d)(1) or 1.0 mg/L for~~
8081 ~~OCCT the Agency designates under subsection (d)(2), unless the~~
8082 ~~Agency determines that meeting the applicable minimum~~
8083 ~~orthophosphate residual is not technologically feasible or is not~~
8084 ~~necessary for OCCT.~~
- 8085
- 8086 E) ~~If the supplier adjusts alkalinity as part of OCCT, a minimum~~
8087 ~~concentration or a range of concentrations for alkalinity for each~~
8088 ~~entry point to the distribution system and in all tap samples.~~
- 8089
- 8090 2) A minimum pH value measured in all distribution system samples. This
8091 value must be equal to or greater than 7.0, unless the Agency determines
8092 that meeting a pH level of 7.0 is not technologically feasible or is not
8093 necessary for OCCT. The values for the applicable water quality control
8094 parameters in subsection (f)(1) must be those the Agency determines
8095 reflect OCCT for the supplier.
- 8096
- 8097 3) If a corrosion inhibitor is used, a minimum concentration or a range of
8098 concentrations for orthophosphate (as PO₄) or silicate measured at each
8099 entry point to the distribution system. The Agency must explain these
8100 determinations and give the basis for its decisions when issuing a SEP.
- 8101
- 8102 4) If a corrosion inhibitor is used, a minimum orthophosphate (as PO₄) or
8103 silicate concentration measured in all tap samples that the Agency
8104 determines is necessary to form a passivating film on the interior walls of
8105 the pipes of the distribution system. When orthophosphate is used, for

8106 OCCT designations for suppliers previously without corrosion control
 8107 treatment, the orthophosphate concentration must be equal to or greater
 8108 than 0.5 mg/L (as PO₄) and for OCCT designations for suppliers
 8109 previously with corrosion control treatment, the orthophosphate
 8110 concentration must be equal to or greater than 1.0 mg/L, unless the
 8111 Agency determines that meeting the applicable minimum orthophosphate
 8112 residual is not technologically feasible or is not necessary for OCCT.

8113
 8114 5) If alkalinity is adjusted as part of OCCT, a minimum concentration or a
 8115 range of concentrations for alkalinity, measured at each entry point to the
 8116 distribution system and in all tap samples.

8117
 8118 6) The values for the applicable water quality parameters in subsections
 8119 (f)(1) through (f)(5) must be the values the Agency determines reflect
 8120 OCCT or re-optimized OCCT for the supplier's water system. The Agency
 8121 may designate values for additional water quality parameters the Agency
 8122 determines reflect OCCT or re-optimized OCCT for the supplier's water
 8123 system. The Agency must notify the supplier, in writing, of these
 8124 determinations and explain the basis for its decisions.

8125
 8126 g) Continued ~~operation~~Operation and ~~monitoring~~Monitoring for OCCT and ~~re-~~re-
 8127 optimized~~Re-Optimized~~ OCCT. All suppliers, including those optimizing or re-
 8128 optimizing ~~OCCT, corrosion control~~ must continue to operate and maintain
 8129 OCCT, including maintaining water quality ~~parameters~~parameter values at or
 8130 above the minimum values or within the ranges designated by the Agency
 8131 ~~approved~~ under subsection (f), in compliance with~~under~~ this subsection (g) for all
 8132 water quality parameter samples ~~collected~~the supplier collects under Section
 8133 611.357(b)(4) through (d)~~Section 611.357(d) through (f)~~. The requirements of
 8134 this~~This~~ subsection (g) apply~~applies~~ to all suppliers ~~that Section 611.357 does not~~
 8135 ~~require to monitor water quality parameters~~, including suppliers with consecutive
 8136 systems that distribute~~system suppliers distributing~~ water that ~~another supplier~~ has
 8137 been treated to control corrosion by another supplier, and any supplier system
 8138 with~~applying~~ corrosion control treatment, OCCT, and any suppliers applying
 8139 ~~corrosion control treatment, OCCT,~~ or re-optimized OCCT that is not required to
 8140 monitor water quality parameters under Section 611.357.

8141
 8142 1) The supplier must determine whether it complies with this subsection (g)
 8143 every six months, as specified in Section 611.357(b)(4)~~Section 611.357(d)~~
 8144 ~~specifies~~. A supplier is out of compliance~~does not comply~~ with this
 8145 subsection (g) for ~~in any~~ six-month period if it~~during which the supplier~~
 8146 has excursions for~~from~~ any Agency-specified ~~water quality~~ parameter on
 8147 more than nine ~~cumulative~~ days, cumulatively, during the ~~six-month~~
 8148 period. An excursion occurs whenever the daily value for one or more of

8149 the water quality parameters measured at a sampling location is below the
8150 ~~Agency designated~~ minimum value or outside the range designated by the
8151 Agency~~Agency designated range~~. Daily~~The supplier calculates daily~~
8152 values are calculated as set out in subsection (g)(2)~~as subsections (g)(1)~~
8153 ~~through (g)(3) provide~~. The Agency has discretion to not include~~may~~
8154 exclude results off from this calculation that it determines are obvious
8155 sampling errors from this calculation. The supplier must record sampling
8156 errors even when not included in calculations.

- 8157
8158 1) ~~On days when the supplier collects more than one measurement for a~~
8159 ~~water quality parameter at a sampling location, the daily value is the~~
8160 ~~average of all results the supplier collected during the day, regardless of~~
8161 ~~whether the supplier collected the samples through continuous monitoring,~~
8162 ~~grab sampling, or a combination of both.~~

8163
8164 ~~BOARD NOTE: Corresponding 40 CFR 141.82(g)(1) further provides as~~
8165 ~~follows: If USEPA approves an alternative formula under 40 CFR~~
8166 ~~142.16(d)(1)(ii) in the State's application for a program revision submitted~~
8167 ~~under 40 CFR 142.12, the approved formula is used to aggregate multiple~~
8168 ~~measurements at a sampling point for the water quality parameters in lieu~~
8169 ~~of the formula in this subsection (g)(1).~~

- 8170
8171 2) Water quality parameter daily value.~~On days when the supplier collects~~
8172 ~~only one measurement for a water quality parameter at a sampling~~
8173 ~~location, the daily value is that measurement.~~

8174
8175 A) On days when the supplier collects more than one measurement for
8176 a water quality parameter at a sampling location, the daily value
8177 must be the average of all results collected at that sampling
8178 location during the same day, regardless of whether they are
8179 collected through continuous monitoring, grab sampling, or a
8180 combination of both.

8181
8182 BOARD NOTE: Corresponding 40 CFR 141.82(g)(2)(i) further provides
8183 as follows: If USEPA approves an alternative formula under 40 CFR
8184 142.16(d)(1)(ii) in the State's application for a program revision submitted
8185 under 40 CFR 142.12, the approved formula must be used to aggregate
8186 multiple measurements at a sampling point for the water quality
8187 parameters in lieu of the formula in this subsection (g)(2).

8188
8189 B) On days when the supplier collects only one measurement for a
8190 water quality parameter at a sampling location, the daily value
8191 must be the result of that measurement.

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C) On days when the supplier collects no measurement for a water quality parameter at a sampling location, the daily value must be the daily value calculated on the most recent day on which the supplier measured the water quality parameter at the sampling location.

~~3) On days when the supplier collects no measurement for a water quality parameter at a sampling location, the daily value is the daily value calculated on the most recent day on which the supplier measured the water quality parameter at the sampling location.~~

h) Modification of Agency treatment determination~~Treatment Decisions~~ for OCCT and re-optimized OCCT. Upon its own initiative or in response to a request by a supplier or other interested party, the Agency may modify its determination of OCCT under subsection (d), or the optimal water quality parameters under subsection (f). A request for modification by a supplier or other interested party must be in writing, explaining why the modification is appropriate, and providing supporting documentation. The Agency may require a supplier to conduct a CCT study to support modification of the determination of OCCT or re-optimized OCCT. The Agency may modify its determination where it concludes that such a change is necessary to ensure that the supplier continues to optimize corrosion control treatment. A revised designation must be made in writing, set forth the new treatment requirements and/or optimal water quality parameters, explain the basis for the Agency's determination, and provide an implementation schedule for completing the treatment modifications for re-optimized corrosion control treatment.

~~1) On its own initiative or in response to a request by the supplier, the Agency may issue a SEP modifying its determination of the OCCT under subsection (d) or of the optimal water quality control parameters under subsection (f).~~

~~2) A supplier must request modification in writing, explaining the propriety of the modification and providing supporting documentation.~~

~~3) The Agency may modify its determination if it determines that a change will ensure that the supplier continues optimizing corrosion control treatment. A revised determination must give the new treatment requirements or water quality parameters, explain the basis for the Agency's decision, and provide an implementation schedule for completing the treatment modifications for re-optimized OCCT.~~

- 8235 4) ~~Any interested person may submit information to the Agency bearing on~~
8236 ~~whether the Agency should exercise its discretion and issue a SEP~~
8237 ~~modifying its determination under subsection (h)(1). An Agency~~
8238 ~~determination not to act on information an interested person submits is not~~
8239 ~~an Agency determination for the purposes of Sections 39 and 40 of the~~
8240 ~~Act.~~
- 8241
- 8242 i) Treatment decisions by USEPA in lieu of the Agency on OCCT and re-optimized
8243 OCCT. Under the procedures in 40 CFR 142.19, USEPA ~~may~~reserves the
8244 ~~prerogative to~~ review ~~Agency~~ OCCT ~~treatment~~ determinations made by the
8245 Agency under subsections (d),(f), or (h)~~subsections (d)(1) or (d)(2), (f), or (h)~~ and
8246 issue federal corrosion control treatment determinations consistent with the
8247 requirements of 40 CFR 141.82(d), (f), or (h) where~~40 CFR 141.82(d)(1) or~~
8248 ~~(d)(2), (f), or (h) if~~ USEPA finds that ~~certain conditions exist~~:
- 8249
- 8250 1) The Agency ~~failed~~fails to issue a treatment determination by the
8251 applicable deadlines in Section 611.351 (corresponding with 40 CFR
8252 141.81);
- 8253
- 8254 2) The Agency ~~abused~~abuses its discretion ~~in a substantial number of~~
8255 ~~instances or in instances affecting a substantial population~~; or
- 8256
- 8257 3) The technical aspects of the Agency's determination would be indefensible
8258 in a federal enforcement action taken against ~~a~~the supplier.
- 8259
- 8260 j) Distribution system and site assessment for tap sampling sites with lead results
8261 that exceed .010 mg/L~~Find and fix Assessment for Tap Sample Sites Exceeding~~
8262 ~~the Lead Action Level~~. The supplier must conduct the following~~specific~~ steps
8263 when the lead results from an individual tap sample site sampled under Section
8264 611.356 exceed 0.010 mg/L and the site is included in the site sample plan under
8265 Section 611.356(a)(1):~~a tap sampling site exceeds the lead action level in~~
8266 ~~monitoring under Section 611.356.~~
- 8267
- 8268 1) Step 1: Corrosion control treatment assessment~~Control Treatment~~
8269 ~~Assessment~~. Within five days of receiving the tap sampling results,
8270 the~~The~~ supplier must sample at a ~~new~~ water quality parameter ~~sampling~~
8271 site in compliance with subsection (j)(1)(B) that is on the same-size~~same-~~
8272 ~~sized~~ water main, in the same pressure zone, and located within a half mile
8273 radius of the ~~sampling~~ site with the lead result that exceeds .010
8274 mg/L~~exceeded the action lead level within five days after receiving the~~
8275 ~~sample results~~. Suppliers without~~A small supplier not applying~~ corrosion
8276 control treatment are not required to collect these samples~~may take up to~~

- 8277 ~~14 days to collect the samples. The supplier must measure certain~~
8278 ~~parameters:~~
8279
8280 A) The supplier must measure the following water quality
8281 parameters:~~pH;~~
8282
8283 i) pH;
8284
8285 ii) Alkalinity;
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8287 iii) Orthophosphate (as PO₄), when an inhibitor containing an
8288 orthophosphate compound is used; and
8289
8290 iv) Silica, when an inhibitor containing a silicate compound is
8291 used.
8292
8293 B) The supplier must measure at the following locations:~~Alkalinity;~~
8294
8295 i) Suppliers with an existing water quality parameter site that
8296 meets the requirements in this subsection (j)(1) can conduct
8297 this sampling at that site.
8298
8299 ii) All suppliers required to meet optimal water quality
8300 parameters but do not have an existing water quality
8301 parameter site that meets the requirements in this
8302 subsection (j)(1) must add new sites to the minimum
8303 number of sites described in Section 611.357(b)(1)(A).
8304 Sites must be added until a supplier has twice the minimum
8305 number of sites listed in Section 611.357(b)(1)(A). When a
8306 supplier exceeds twice the number of sites, the Agency has
8307 discretion to determine if these additional newer sites can
8308 better assess the effectiveness of the corrosion control
8309 treatment and whether to remove existing sites during
8310 sanitary survey evaluation of OCCT.
8311
8312 C) ~~Orthophosphate (as PO₄), if the supplier uses an inhibitor~~
8313 ~~containing an orthophosphate compound;~~
8314
8315 D) ~~Silica, if the supplier uses an inhibitor containing a silicate~~
8316 ~~compound; and~~
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8318 E) ~~A supplier having an existing water quality parameter sampling~~
8319 ~~site complying with this Section may sample from that site.~~

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~~F) A supplier that must meet optimal water quality control parameters but not having an existing water quality parameter sampling site complying with this Section must add new sampling sites to the minimum number of sites Section 611.357(g) requires. The supplier must add sites until it has twice the minimum number of sites Section 611.357(a)(2)(A) requires. If a supplier exceeds this upper threshold for the number of sites, the Agency may issue a SEP determining that a newer site can better assess the efficacy of the corrosion control treatment and remove existing sites during sanitary survey evaluating OCCT.~~

2) Step 2: Site ~~assessment~~Assessment. Within 30 days of receiving the tap sampling results, suppliers~~A supplier~~ must collect and analyze a follow-up sample for lead at any tap ~~sample~~sampling site that exceeds 0.010 mg/L exceeding the lead action level within 30 days after receiving the sample results. The supplier may use these follow-up~~different~~ sample volumes or different ~~sample~~sampling procedures ~~collecting these follow-up samples~~ to assess the source of elevated lead levels. Samples the supplier collected~~The supplier must submit samples it collects~~ under this Section must be submitted to the Agency but cannot be included~~must not include them~~ in ~~calculating~~ the 90th percentile calculation for compliance monitoring~~concentration~~ under Section 611.356. If the supplier is unable to~~cannot~~ collect a follow-up sample at a site, the supplier must provide documentation~~document~~ to the Agency, as specified in Section 611.360(g)(2), explaining why it was unable to collect a follow-up sample.

3) Step 3: Evaluate results~~Evaluating Results~~ and system treatment recommendation~~Recommending OCCT or Other Actions~~. Suppliers~~Within six months after the end of the tap sampling period during which a supplier exceeds the lead action level, the supplier~~ must evaluate the results of the sampling~~monitoring~~ conducted under subsections (j)(1) and (j)(2) to determine if either localized or centralized adjustment of~~the supplier must either locally or centrally adjust the~~ OCCT or other distribution system actions are necessary and submit the recommendation to the Agency within six months after the end of the tap sampling period in which the site(s) exceeded 0.010 mg/L. Corrosion~~Modifying corrosion~~ control treatment modification may~~might~~ not be necessary to address every exceedance of 0.010 mg/L. Other distribution system actions may include flushing to reduce water age. Suppliers~~residence time in the system. If known from the site assessment, the supplier~~ must note the cause of the elevated lead level, if known from the site assessment, in their~~its~~ recommendation to the Agency as~~because~~

- 8363 site-specific issues can be an important factor in why the supplier does not
 8364 recommend any adjustment of corrosion control treatment or other
 8365 distribution system actions. ~~Suppliers~~A supplier in the process of
 8366 optimizing or re-optimizing OCCT under subsections (a) through (f) do
 8367 not need to submit a treatment recommendation for distribution system
 8368 and site assessment~~needs not recommend a find and fix treatment to the~~
 8369 ~~Agency.~~
- 8370
- 8371 4) Step 4: Agency approval of treatment recommendation~~Action~~. The
 8372 Agency must approve~~issue a SEP approving~~ the supplier's treatment
 8373 recommendation or specify a different approach within six months of
 8374 completing~~after the supplier completes~~ Step 3, as described in subsection
 8375 (j)(3) and notify the supplier in writing~~describes~~.
- 8376
- 8377 5) Step 5: Modifications to OCCT~~Implementing the Agency's SEP~~. If the
 8378 Agency-approved treatment recommendation~~issued SEP~~ requires the
 8379 supplier~~water system~~ to adjust the OCCT process, the supplier must
 8380 complete modifications to~~modify~~ its corrosion control treatment within 12
 8381 months of receiving notification from the Agency~~after completing Step 4~~,
 8382 as described in subsection (j)(4)~~describes~~. Suppliers without~~A supplier~~
 8383 not applying corrosion control treatment required~~and needing~~ to install
 8384 OCCT must follow the schedule in Section 611.351(e).
- 8385
- 8386 6) Step 6: Follow-up sampling~~Sampling~~. Suppliers~~A supplier~~ adjusting its
 8387 OCCT must complete follow-up sampling in compliance with Sections
 8388 611.356(c)(2)(C)(iv)~~(Sections 611.356(d)(2))~~ and
 8389 611.357(b)(3)~~611.357(e))~~ within 12 months after completing Step 5, as
 8390 described in subsection (j)(5) and submit sampling results to the Agency
 8391 in compliance with Sections 611.356 and 611.357~~describes~~.
- 8392
- 8393 7) Step 7: Agency OWQP designation~~Review~~. For suppliers~~a supplier~~
 8394 adjusting its OCCT, the Agency must review the supplier's modification
 8395 of~~modified~~ corrosion control treatment, and the Agency must designate
 8396 optimal water quality control~~control~~ parameters in compliance with subsection
 8397 (f)~~(Section 611.352(f)(1))~~ within six months of receiving the sampling
 8398 result described in~~after the supplier completes Step 6, as~~ subsection (j)(6)
 8399 ~~describes~~.
- 8400
- 8401 8) Step 8: Operate in compliance~~Operating and Complying~~. For a~~A~~ supplier
 8402 adjusting its OCCT, the supplier must comply with the Agency-designated
 8403 optimal water quality control~~control~~ parameters in compliance with subsection
 8404 (g)~~(Section 611.352(g))~~ and continue to conduct tap sampling in

8405 [compliance with](#) (Sections [611.356\(c\)\(2\)\(C\)\(v\)](#) and
8406 [611.357\(b\)\(4\)](#)~~611.356(d)(3) and 611.357(d)~~).

8407
8408 BOARD NOTE: This Section derives from 40 CFR 141.82.

8409 (Source: Amended at 50 Ill. Reg. _____, effective _____)
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8412 **Section 611.353 Source Water Treatment**
8413

8414 A supplier must complete source water monitoring and treatment requirements (under subsection
8415 (b) and Sections 611.356 and 611.358) before specific deadlines.

8416 a) Deadlines for Completing Source Water Treatment Steps
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8418 1) Step 1: A supplier exceeding the lead or copper action level must
8419 complete lead and copper source water monitoring (under Section
8420 611.358(b)) and recommend treatment to the Agency (under subsection
8421 (b)(1)) within 180 days after the end of the tap monitoring period during
8422 which the supplier exceeded the action level.
8423

8424 2) Step 2: The Agency must issue a SEP determining source water treatment
8425 (under subsection (b)(2)) within six months after the supplier submits
8426 monitoring results under step 1.
8427

8428 3) Step 3: If the Agency requires installing source water treatment, the
8429 supplier must install that treatment (under subsection (b)(3)) within 24
8430 months after the Agency completes step 2.
8431

8432 4) Step 4: The supplier must complete follow-up tap water monitoring
8433 ([Section 611.356\(c\)\(2\)\(C\)\(vi\)](#)~~under Section 611.356(d)(2)~~) and source
8434 water monitoring (~~under~~ Section 611.358(c)) within 36 months after
8435 completion of step 2 [as described in subsection \(a\)\(2\)](#).
8436

8437 5) Step 5: The Agency must issue a SEP reviewing the supplier's installation
8438 and operation of source water treatment and specify MPCs for lead and
8439 copper (under subsection (b)(4)) within six months after the supplier
8440 completes step 4.
8441

8442 6) Step 6: The supplier must comply with the Agency-specified lead and
8443 copper MPCs (under subsection (b)(4)) and continue source water
8444 monitoring (under Section 611.358(d)).
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8446 b) Source Water Treatment Requirements
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- 1) System Treatment Recommendation. Any supplier exceeding the lead or copper action level must recommend to the Agency in writing one of the source water treatments in subsection (b)(2). A supplier may recommend installing no treatment based on a demonstration that source water treatment is not necessary to minimize lead and copper levels at users' taps.
 - 2) Agency Determination Regarding Source Water Treatment
 - A) The Agency must evaluate the results of all source water samples the supplier submitted to determine whether source water treatment is necessary to minimize lead or copper levels in water the supplier delivers to users' taps.
 - B) If the Agency determines treatment is necessary, the Agency must issue a SEP requiring the supplier to install and operate either the source water treatment the supplier recommended (if any) or another from among specific source water treatment techniques:
 - i) ion exchange;
 - ii) reverse osmosis;
 - iii) lime softening; or
 - iv) coagulation/filtration.
 - C) The Agency may require the supplier to submit, ~~by~~~~on~~~~or~~~~before~~ a certain date, any additional information as the Agency determines is necessary to aid its review.
 - D) The Agency must notify the supplier in writing of its determination, stating the basis for its decision.
 - 3) Installing Source Water Treatment. A supplier must properly install and operate the source water treatment the Agency approves under subsection (b)(2).
 - 4) Agency Reviewing Source Water Treatment and Specifying Maximum Permissible Source Water Levels (MPCs)
 - A) The Agency must review the source water samples the supplier

- 8491 took both before and after the supplier installs source water
8492 treatment and determine whether the supplier properly installs and
8493 operates the approved source water treatment.
8494
- 8495 B) Based on its review, the Agency must issue a SEP approving the
8496 lead and copper MPCs for finished water entering the supplier's
8497 distribution system. The MPC levels must reflect the contaminant
8498 removal capability of the treatment when properly operated and
8499 maintained.
8500
- 8501 C) The SEP issued under subsection (b)(4)(B) must include the
8502 Agency's explanation of the basis for its decision under subsection
8503 (b)(4)(B).
8504
- 8505 5) Continued Operation and Maintenance. A supplier must maintain lead
8506 and copper levels below the MPCs the Agency approved at every
8507 sampling point the supplier monitors under Section 611.358. The supplier
8508 does not comply with this subsection (b) if the level of lead or copper at
8509 any sampling point is greater than the MPC the Agency approved under
8510 subsection (b)(4)(B).
8511
- 8512 6) Modifying Agency Treatment Decisions
8513
- 8514 A) On its own initiative, or in response to a request by the supplier,
8515 the Agency may issue a SEP modifying its determination of the
8516 source water treatment under subsection (b)(2) or the lead and
8517 copper MPCs under subsection (b)(4).
8518
- 8519 B) A supplier must make a request to modify in writing, explaining
8520 the propriety of the modification, and providing supporting
8521 documentation.
8522
- 8523 C) The Agency may issue a SEP modifying its determination if it
8524 concludes that the change is necessary to ensure that the supplier
8525 continues minimizing lead and copper concentrations in source
8526 water.
8527
- 8528 D) A revised determination under subsection (b)(6)(C) must state the
8529 new treatment requirements, explain the basis for the Agency's
8530 decision, and provide a schedule for completing the treatment
8531 modifications.
8532
- 8533 E) Any interested person may submit information to the Agency in

8534 writing bearing on whether the Agency should exercise its
8535 discretion and issue a SEP modifying its determination under
8536 subsection (b)(2). An Agency determination not to act on
8537 information an interested person submits is not an Agency
8538 determination for the purposes of Sections 39 and 40 of the Act.
8539

- 8540 7) USEPA Treatment Decisions. Under 40 CFR 142.19, USEPA reserves
8541 the prerogative to review Agency treatment determinations under
8542 subsections (b)(2), (b)(4), or (b)(6) and issue federal treatment
8543 determinations consistent with 40 CFR 141.83(b)(2), (b)(4), and (b)(6) if
8544 USEPA finds that certain conditions exist:
8545
- 8546 A) the Agency fails to issue a treatment determination by the
8547 applicable deadline in subsection (a);
8548
 - 8549 B) the Agency abuses its discretion in a substantial number of
8550 instances or in instances affecting a substantial population; or
8551
 - 8552 C) the technical aspects of the Agency's determination would be
8553 indefensible in a federal enforcement action taken against the
8554 supplier.
8555

8556 BOARD NOTE: This Section derives from 40 CFR 141.83.

8557
8558 (Source: Amended at 50 Ill. Reg. _____, effective _____)
8559

8560 Section 611.354 ~~Lead~~ Service Line Inventory and Replacing ~~Lead~~ Service Lines

- 8561
- 8562 a) ~~Lead~~ Service line and connector inventory development ~~Line Inventory~~. All
8563 suppliers ~~A supplier~~ must develop a service line inventory that identifies the
8564 material and location of each service line connected to the public water
8565 distribution system. The supplier's inventory must include all service lines
8566 connected to the public water distribution system regardless of ownership status
8567 (e.g., where service line ownership is shared, the inventory includes both the
8568 portion of the service line owned by the supplier and the portion of the service
8569 line owned by the customer). ~~an inventory identifying the materials composition~~
8570 ~~for all service lines connected to its distribution system.~~ The inventory must meet
8571 the following ~~specific~~ requirements:
8572
- 8573 1) All suppliers were required to ~~The supplier must~~ develop an initial
8574 inventory and submit it to the Agency before October 16, 2024 ~~and submit~~
8575 the inventory to the Agency as required in Subpart AH Section
8576 611.350(a)(1)(A) ~~Section 611.360(e) requires.~~

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2) All suppliers must develop an updated initial inventory, known as the "baseline inventory". Suppliers must submit the baseline inventory to the Agency by the compliance date in Section 611.350(a)(2). Newly regulated public water systems, as defined in Section 611.101, must develop a baseline inventory on a schedule established by the Agency that does not exceed three years from the date the system becomes subject to Part 611 Primary Drinking Water Standards. The baseline inventory must include each service line and identified connector that is connected to the public water distribution system regardless of ownership status (e.g., where service line ownership is shared, the inventory includes both the portion of the service line owned by the supplier and the portion of the service line owned by the customer)~~The inventory must include all service lines connected to the supplier's distribution system regardless of ownership status (e.g., where the supplier shares service line ownership, the inventory would include both the supplier owned and customer owned portions of the service line).~~

A) For the baseline inventory, suppliers must conduct a review of any information listed in subsections (b)(2)(A) through (b)(2)(C) that describes connector materials and locations. Suppliers must also conduct a review of any information on lead and galvanized iron or steel materials that they have identified in compliance with § 40 C.F.R. 141.42(d) to identify connector materials and locations. The supplier may use other sources of information not listed in subsections (b)(2)(A) through (b)(2)(C) if approved or required by the Agency.

B) Suppliers must include each connector identified in subsection (a)(2)(A) in their baseline inventory. Connector materials must be categorized in the following manner:

- i) "Lead" where the connector is made of lead.
- ii) "Non-Lead" where the connector is determined through an evidence-based record, method, or technique not to be made of lead. Suppliers are not required to identify the specific material of a non-lead connector; however, they may use the material (e.g., copper or galvanized) as an alternative to categorizing it as "Non-Lead".
- iii) "Unknown" where the material of the connector is not known.

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- iv) "No connector present" where there is no connector at the location (e.g., where a service line directly connects a water main to a building inlet).
 - C) All suppliers must include any new information on service line materials from all applicable sources described in subsection (b)(2) in the baseline inventory.
- 3) Each service line, or portion of the service line where ownership is shared, must be categorized in the following manner:~~When conducting the inventory of service lines in its distribution system for the initial inventory under subsection (a)(1), the supplier must use any information on lead and galvanized iron or steel system components the supplier identified complying with 40 CFR 141.42(d). The supplier must also review the sources of information in subsections (a)(3)(A) through (a)(3)(D) to identify service line materials for the initial inventory. The supplier may use other sources of information the Agency approves in a SEP.~~
 - A) "Lead" where the service line is a lead service line as defined in Section 611.350(b).~~All construction and plumbing codes, permits, and existing records or other documents indicating the service line materials connecting structures to its distribution system.~~
 - B) "Galvanized Requiring Replacement" where the service line is a galvanized requiring replacement service line as defined in Section 611.350(b).~~All supplier records, including distribution system maps and drawings, historical records on each service connection, meter installation records, historical capital improvement or master plans, and standard operating procedures.~~
 - C) "Non-Lead" where the service line is determined through an evidence-based record, method, or technique not to be a lead or galvanized requiring replacement service line. Suppliers are not required to identify the specific material of a non-lead service line; however, they may use the material (e.g., plastic or copper) as an alternative to categorizing it as "Non-Lead".~~All inspections and distribution system records indicating the materials composing the service connections connecting structures to its distribution system.~~
 - D) "Lead Status Unknown" or "Unknown" where the service line material is not known to be lead, galvanized requiring replacement, or non-lead, such as where there is no documented evidence or

8663 evidence reliably supporting material categorization. Suppliers
 8664 may elect to provide more information regarding their unknown
 8665 service lines as long as the inventory clearly distinguishes
 8666 unknown service lines from those where the categorization of the
 8667 material is based on the categorization methods approved under
 8668 subsection (b)(2).~~Any resource, information, or method for~~
 8669 ~~identifying and assessing service line materials the Agency~~
 8670 ~~provides or requires in a SEP.~~

8671
 8672 4) The inventory must include a street address associated with each service
 8673 line and connector. Where a street address is not available for an
 8674 individual service line or connector, a unique locational identifier (e.g.,
 8675 block, Global Positioning System or GPS coordinates, intersection, or
 8676 landmark) may be used.~~The supplier must categorize every service line~~
 8677 ~~and supplier-owned portion of a service line under split ownership:~~

8678
 8679 A) ~~"Lead" for a lead service line.~~

8680
 8681 B) ~~"Galvanized Requiring Replacement" for a galvanized service line~~
 8682 ~~at any time downstream of a lead service line or currently~~
 8683 ~~downstream of a lead status unknown service line. If the supplier~~
 8684 ~~cannot demonstrate that a galvanized service line was never~~
 8685 ~~downstream of a lead service line, the supplier must presume a~~
 8686 ~~lead service line was upstream.~~

8687
 8688 C) ~~"Non-Lead" for a service line the supplier determines through an~~
 8689 ~~evidence-based record, method, or technique is not lead or~~
 8690 ~~galvanized requiring replacement under subsection (a)(4)(A) or~~
 8691 ~~(a)(4)(B). The supplier may classify the service line using its~~
 8692 ~~actual material of construction (e.g., "plastic" or "copper") as an~~
 8693 ~~alternative to non-lead.~~

8694
 8695 D) ~~"Lead Status Unknown" for a service line of material the supplier~~
 8696 ~~does not know is lead, galvanized requiring replacement, or non-~~
 8697 ~~lead service line under subsection (a)(4)(A), (a)(4)(B), or (a)(4)(C),~~
 8698 ~~e.g., if the supplier has no documented evidence supporting~~
 8699 ~~material classification. The supplier may classify the line as~~
 8700 ~~"unknown", as an alternative to classifying it as lead status~~
 8701 ~~unknown, however, all requirements applying to lead status~~
 8702 ~~unknown service lines will apply to those the supplier classifies as~~
 8703 ~~Unknown. A supplier may provide more information regarding its~~
 8704 ~~lead status unknown lines, as long as the inventory clearly~~
 8705 ~~distinguishes unknown service lines from those for which the~~

8706 supplier verified the material of construction through records or
8707 inspection.

8708 BOARD NOTE: See the definition of “lead status unknown
8709 service line” in Section 611.350(b).

8710

8711 5) The inventory must be publicly accessible.~~The supplier must identify and~~
8712 ~~track service line materials in its inventory as the supplier encounters them~~
8713 ~~in the course of its normal operations (e.g., checking service line materials~~
8714 ~~when reading water meters or performing maintenance activities).~~

8715

8716 A) The publicly accessible inventory must include the information
8717 described in subsections (a)(2) through (4) and be updated in
8718 compliance with subsection (b).

8719

8720 B) Suppliers serving greater than 50,000 persons must make the
8721 publicly accessible inventory available online.

8722

8723 6) When a supplier's system has no lead, galvanized requiring replacement,
8724 or lead status unknown service lines, no known lead connectors, and no
8725 connectors of unknown material, it may comply with the requirements in
8726 subsection (a)(5) using a written statement in lieu of the publicly
8727 accessible inventory, declaring that the supplier's distribution system has
8728 no lead, galvanized requiring replacement, or lead status unknown service
8729 lines, no known lead connectors, and no connectors of unknown material.
8730 The statement must include a general description of all applicable sources
8731 used in the inventory as described in subsection (a)(1) and (2) and (b)(2)
8732 to make this determination.~~The supplier must update its inventory based~~
8733 ~~on all applicable sources in subsections (a)(3) and (a)(5) and any lead~~
8734 ~~service line replacements or service line material inspections the supplier~~
8735 ~~conducted. The supplier may use other sources of information the Agency~~
8736 ~~approves in a SEP and must use other sources of information the Agency~~
8737 ~~requires in a SEP. The supplier must submit the updated inventory to the~~
8738 ~~Agency as Section 611.360(e) requires. The publicly accessible inventory~~
8739 ~~must reflect inventory updates no less frequently than when the supplier~~
8740 ~~must submit them to the Agency.~~

8741

8742 A) ~~A supplier whose inventory contains only non lead service lines~~
8743 ~~needs not provide inventory updates to the Agency or public. If~~
8744 ~~the supplier subsequently finds a lead service line within its~~
8745 ~~system, the supplier must prepare an updated inventory under~~
8746 ~~subsection (a) on a schedule the Agency establishes in a SEP.~~

8747

8748 B) ~~This subsection (a)(6)(B) corresponds with 40 CFR~~
8749 ~~141.84(a)(6)(ii), which USEPA marked "Reserved". This~~
8750 ~~statement maintains structural consistency with USEPA's rule.~~
8751

8752 7) Instructions to access the publicly accessible inventory (including
8753 inventories consisting only of a statement in compliance with subsection
8754 (a)(6) must be included in the Consumer Confidence Report in
8755 compliance with Section 611.883(h)(8)(B). ~~To calculate the number of~~
8756 ~~service line replacements under subsections (f) or (g), the supplier must~~
8757 ~~apply the replacement rate to the sum of known lead and galvanized~~
8758 ~~requiring replacement service lines when the supplier first exceeds the~~
8759 ~~lead trigger level or lead action level plus the number of lead status~~
8760 ~~unknown service lines in the beginning of each year of the supplier's~~
8761 ~~annual goal-based or mandatory full lead service line replacement~~
8762 ~~program.~~
8763

8764 A) ~~A supplier must count each service line only once when calculating~~
8765 ~~the required number of service lines it must replace, even if the~~
8766 ~~supplier shares service line ownership, and the supplier must~~
8767 ~~replace both the customer-owned and system-owned portions.~~
8768

8769 B) ~~The supplier must annually update the number of service lines it~~
8770 ~~needs to replace by subtracting the number of lead status unknown~~
8771 ~~service lines the supplier discovered are non-lead and adding the~~
8772 ~~number of non-lead service lines the supplier discovered are lead~~
8773 ~~or galvanized requiring replacement service lines.~~
8774

8775 C) ~~Verifying a lead status unknown service line as non-lead in its~~
8776 ~~inventory does not count as replacing a service line.~~
8777

8778 ~~BOARD NOTE: Using the number of lead and galvanized requiring~~
8779 ~~replacement service lines at the time of first exceeding the lead trigger~~
8780 ~~level applies for subsection (f). The number at the time of first exceeding~~
8781 ~~the lead action level applies for subsection (g). The number of lead status~~
8782 ~~unknown service lines remaining at the beginning of each year applies to~~
8783 ~~both.~~
8784

8785 8) ~~The supplier must keep its service line materials inventory publicly~~
8786 ~~accessible.~~
8787

8788 A) ~~The inventory must include a locational identifier, such as a street~~
8789 ~~address, block, intersection, or landmark, for each lead or~~
8790 ~~galvanized requiring replacement service line. A supplier may~~

8791 include a locational identifier for lead status unknown service lines
8792 or list the exact address of each service line.

8793
8794 B) A supplier serving more than 50,000 persons must make the
8795 publicly accessible inventory available online.

8796
8797 9) If a supplier has no lead, galvanized requiring replacement, or lead status
8798 unknown service lines (regardless of ownership) in its inventory, the
8799 supplier may comply with subsection (a)(8) using a written statement, in
8800 lieu of the inventory, declaring that its distribution system has no lead or
8801 galvanized requiring replacement service lines. The statement must
8802 include a general description of all applicable sources the supplier used
8803 under subsections (a)(3), (a)(5), and (a)(6) to determine these service lines
8804 are absent.

8805
8806 10) The supplier must include instructions for accessing the service line
8807 inventory (including inventories consisting only of a statement under
8808 subsection (a)(9)) in its Consumer Confidence Report under Section
8809 141.153(d)(4)(K).

8810
8811 b) Additional requirements for service line and connector inventory
8812 maintenance. ~~Lead Service Line Replacement Plan. A supplier with one or more~~
8813 ~~lead, galvanized requiring replacement, or lead status unknown service lines in its~~
8814 ~~distribution system must submit a lead service line replacement plan to the~~
8815 ~~Agency under Section 611.360(e) before October 16, 2024. The lead service line~~
8816 ~~replacement plan must have sufficient detail to ensure the supplier can comply~~
8817 ~~with lead service line replacement requirements under this Section. The plan~~
8818 ~~must include specific descriptions:~~

8819
8820 1) All suppliers must update the baseline inventory of service lines and
8821 connectors developed in subsection (a)(2) and submit the updates to the
8822 Agency on an annual basis in compliance with Section 611.360(e)(4).
8823 These updates begin one year after the compliance date in Section 611.350
8824 (a)(1)(A). The publicly accessible inventory must reflect any updates no
8825 later than the deadline to submit the updated inventory to the Agency. ~~A~~
8826 ~~strategy for determining the composition of lead status unknown service~~
8827 ~~lines in its inventory;~~

8828
8829 A) All suppliers must identify the material of all lead status unknown
8830 service lines by the applicable mandatory service line replacement
8831 deadline in subsection (d)(4).

8832

- 8833 B) Suppliers whose inventories contain only non-lead service lines
8834 and non-lead connectors or no connectors present are not required
8835 to provide updated inventories to the Agency or updates to the
8836 publicly accessible inventory. If, in the future, such a supplier
8837 discovers a lead service line, galvanized requiring replacement
8838 service line, or lead connector within its system, the supplier must
8839 notify the Agency no later than 60 days after the discovery, prepare
8840 an updated inventory in compliance with this section on a schedule
8841 established by the Agency, replace the lead or galvanized requiring
8842 replacement service line in compliance with subsection (d)(4)(B),
8843 and replace any lead connector along the service line in
8844 compliance with subsection (e).
8845
- 8846 2) Suppliers must update the inventory annually with any new information
8847 acquired from all applicable sources described in subsection (b)(2)
8848 through (4) and follow all applicable requirements for the inventory in
8849 subsection (a) and (b). The supplier may update the inventory using other
8850 sources of information not listed in subsections (b)(2)(A) through (C) if
8851 the use of those sources is approved or required by the Agency.~~A~~
8852 ~~procedure for conducting full lead service line replacement;~~
8853
- 8854 A) All construction and plumbing codes, permits, and records or other
8855 documentation that indicate the service line and connector
8856 materials used to connect structures to the distribution system.
8857
- 8858 B) All supplier records on service lines and connectors, including
8859 distribution system maps and drawings, recent or historical records
8860 on each service connection and connector, meter installation
8861 records, historical capital improvement or master plans, and
8862 standard operating procedures.
8863
- 8864 C) All records of inspections in the distribution system that indicate
8865 the material composition of the service connections and connectors
8866 that connect a structure to the distribution system.
8867
- 8868 D) Suppliers must update their inventory annually based on any lead
8869 or galvanized requiring replacement service line replacements,
8870 service line material inspections, or lead connector replacements
8871 that have been conducted. Each updated inventory and subsequent
8872 update to the publicly accessible inventory must include the
8873 following information regarding service line material identification
8874 and replacement:
8875

- 8876 i) The total number of lead service lines in the inventory;
8877
8878 ii) The total number of galvanized requiring replacement
8879 service lines in the inventory;
8880
8881 iii) The total number of lead status unknown service lines in
8882 the inventory;
8883
8884 iv) The total number of non-lead service lines in the inventory;
8885
8886 v) The total number of lead connectors in the inventory;
8887
8888 vi) The total number of connectors of unknown material in the
8889 inventory;
8890
8891 vii) The total number of full lead service line replacements and
8892 full galvanized requiring replacement service line
8893 replacements that have been conducted in each preceding
8894 program year as defined in subsection (d)(5)(C); and
8895
8896 viii) The total number of partial lead service line replacements
8897 and partial galvanized requiring replacement service line
8898 replacements that have been conducted in each preceding
8899 program year as defined in subsection (d)(5)(C).
8900
8901 E) Suppliers must identify service line material in compliance with
8902 subsection (a)(3), connector material in compliance with
8903 subsection (a)(2), and addresses in compliance with subsection
8904 (a)(4) as they are encountered in the course of normal operations
8905 (e.g., checking service line materials when reading water meters or
8906 performing maintenance activities). Suppliers must update the
8907 inventory annually based on the identified service line materials,
8908 connector materials and addresses.
8909
8910 3) Suppliers that discover a lead or galvanized requiring replacement service
8911 line previously inventoried as non-lead must update their inventory in
8912 compliance with subsection (b)(2) and, if applicable, subsection (b)(1)(B).
8913 Suppliers must notify the Agency in compliance with Section 611.360(e)
8914 and comply with any additional actions required by the Agency to address
8915 the inventory inaccuracy.
8916
8917 4) If a consumer or customer (if different from the person served at that
8918 service connection) notifies the supplier of a suspected incorrect

8919 categorization of their service line material in the inventory, the supplier
 8920 must respond to the consumer or customer within 30 days of receiving the
 8921 notification to make an offer to inspect the service line.

8922
 8923 5) All suppliers must validate the accuracy of the non-lead service line
 8924 category in the inventory as follows:~~A procedure for customers to flush~~
 8925 ~~particulate lead from service lines and premises plumbing;~~

8926
 8927 A) The supplier must identify a validation pool consisting of all
 8928 service lines categorized as "non-lead," but excluding non-lead
 8929 service lines identified by the following: records showing the
 8930 service line was installed after June 19, 1988, or after the
 8931 compliance date of the Agency or local law prohibiting the use of
 8932 service lines that do not meet the 1986 definition of lead free in
 8933 compliance with section 1417 of the Safe Drinking Water Act, as
 8934 amended in 1986 (Pub. L. 99-339, title I, sec. 109(a), 100 Stat.
 8935 651) and 40 CFR 141.43(d)(1) and (2), as codified on July 1, 1991,
 8936 whichever is earlier; visual inspection of the pipe exterior at a
 8937 minimum of two points (e.g., excavation, visual inspection in the
 8938 meter pit or stop box, or visual inspection inside the home); or
 8939 previously replaced lead or galvanized requiring replacement
 8940 service lines.

8941
 8942 B) The supplier must confirm the service line material of a random
 8943 sample (e.g., a sample selected by use of a random number
 8944 generator or lottery method) of non-lead service lines from the
 8945 validation pool. Confirmation of service line material must be
 8946 done by visual inspection of the pipe exterior at a minimum of two
 8947 points. Where ownership is shared, the supplier must conduct at
 8948 least one visual inspection on each portion of the service line.
 8949 Where ownership is shared and only one portion of the service line
 8950 is included in the validation pool, suppliers must conduct at least
 8951 one point of visual inspection on the unconfirmed portion of the
 8952 service line. Suppliers must validate at least as many service lines
 8953 as are required in table 1 to this subsection (b)(5)(B).
 8954

<u>Table 1 to Subsection (b)(5)(B)</u>	
<u>Size of validation pool</u>	<u>Number of validations required</u>
<u><1,500</u>	<u>20 percent of validation pool.</u>
<u>1,500 to 2,000</u>	<u>322.</u>
<u>2,001 to 3,000</u>	<u>341.</u>
<u>3,001 to 4,000</u>	<u>351.</u>
<u>4,001 to 6,000</u>	<u>361.</u>

<u>6,001 to 10,000</u>	<u>371.</u>
<u>10,001 to 50,000</u>	<u>381.</u>
<u>>50,000</u>	<u>384.</u>

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- C) If physical access to private property is necessary to complete the validation and the supplier is unable to gain access, the supplier is not required to conduct a validation at that site. The supplier must replace the site by randomly selecting a new service line that meets the requirements of subsection (b)(5)(A) to conduct the validation.

- D) The deadlines for inventory validation are:
 - i) No later than December 31 following seven years after the compliance date in Section 611.350(a)(3) for suppliers subject to the mandatory service line replacement deadline in subsection (d)(4) or suppliers who have reported only non-lead service lines in their baseline inventory, submitted to the Agency in compliance with Section 611.360 (e)(9);
 - ii) A deadline established by the Agency for suppliers conducting mandatory service line replacement on a shortened deadline for service line replacement as established by the Agency in compliance with subsection (d)(5)(E); or
 - iii) A deadline established by the Agency to be no later than three years prior to the deadline for completing mandatory service line replacement if the supplier is eligible for and plans to use a deferred deadline under subsection (d)(5)(F) or an extended schedule for mandatory service line replacement pursuant to an exemption or a variance.

- E) Suppliers conducting inventory validation in compliance with this subsection (b)(5) must complete the validation by the applicable deadline described in subsection (b)(5)(D), submit the results of the validation in compliance with Section 611.360(e)(9), and comply with any additional actions required by the Agency to address inventory inaccuracies. The supplier must submit to the Agency the specific version (including the date) of the service line inventory used to determine the number of non-lead service lines included in the validation pool in compliance with Section 611.360(e)(9).

- 8995 F) Suppliers may make a written request to the Agency to approve a
8996 waiver of the inventory validation requirements in this subsection
8997 (b). To obtain a waiver, the supplier must submit documentation
8998 to the Agency to demonstrate the supplier conducted an inventory
8999 validation that is at least as stringent as the inventory validation
9000 requirements specified in subsections (b)(5)(A) through (C) by the
9001 compliance date in Section 611.350(a)(3) and obtain written
9002 approval of the waiver from the Agency.
9003
9004 ~~6) A prioritization strategy for lead service line replacement based on factors,~~
9005 ~~including targeting known lead service lines, replacing lead service lines~~
9006 ~~for disadvantaged consumers and populations most sensitive to the effects~~
9007 ~~of lead; and~~
9008
9009 ~~7) A strategy for funding lead service line replacements considering ways to~~
9010 ~~replace the customer owned portion for those unable to pay.~~
9011
9012 c) Service line replacement plan. All suppliers with one or more lead, galvanized
9013 requiring replacement, or lead status unknown service lines in their distribution
9014 system must create a service line replacement plan by the compliance date in
9015 Section 611.350(a)(3) and submit a service line replacement plan to the Agency in
9016 compliance with Section 611.360(e). The service line replacement plan must be
9017 sufficiently detailed to ensure a supplier is able to comply with the service line
9018 inventory and replacement requirements in this section. ~~Operating Procedures for~~
9019 ~~Replacing Lead Goosenecks, Pigtails, or Connectors~~
9020
9021 1) The service line replacement plan must include a description of: ~~The~~
9022 ~~supplier must replace any lead gooseneck, pigtail, or connector it owns~~
9023 ~~when the supplier encounters it during planned or unplanned water system~~
9024 ~~infrastructure work.~~
9025
9026 A) A strategy for determining the material composition of lead status
9027 unknown service lines in the service line inventory under
9028 subsection (a);
9029
9030 B) A standard operating procedure for conducting full service line
9031 replacement (e.g., techniques to replace service lines);
9032
9033 C) A communication strategy to inform consumers (i.e., persons
9034 served at the service connection) and customers before a full or
9035 partial lead or galvanized requiring replacement service line
9036 replacement consistent with the requirements for notification and
9037 mitigation in subsection (h);

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- D) A procedure for consumers and customers to flush service lines and premise plumbing of particulate lead following disturbance of a lead, galvanized requiring replacement, or lead status unknown service line in compliance with Section 611.385(f) and following full or partial replacement of a lead or galvanized requiring replacement service line consistent with the requirements for notification and mitigation in subsection (h);
 - E) A strategy to prioritize service line replacement based on factors including, but not limited to, known lead and galvanized requiring replacement service lines and community-specific factors, such as populations disproportionately impacted by lead and populations most sensitive to the effects of lead;
 - F) A funding strategy for conducting service line replacement. Where the supplier intends to charge customers for the cost to replace all or a portion of the service line because it is authorized or required to do so under local law or water tariff agreement, the funding strategy must include a description of whether and how the supplier intends to assist customers who are unable to pay to replace the portion of the service line they own;
 - G) A communication strategy to inform residential and non-residential customers and consumers (e.g., property owners, renters, and tenants) served by the supplier about the service line replacement plan and program; and
 - H) Identification of any laws, regulations, and/or water tariff agreements that affect the supplier's ability to gain access to conduct full lead and galvanized requiring replacement service line replacement, including the citation to the specific laws, regulations, or water tariff agreement provisions. This includes identification of any laws, regulations, and/or water tariff agreements that require customer consent and/or require or authorize customer cost-sharing.
 - D) For any supplier that identifies any lead-lined galvanized service lines in the service line inventory as described in subsections (a) and (b), a strategy to determine the extent of the use of lead-lined galvanized service lines in the distribution system and categorize any lead-lined galvanized service lines as lead pursuant to table 1 to subsection (d)(6)(C)(i).

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- J) For any supplier that is eligible for and plans to use a deferred deadline under subsection (d)(5)(F):
 - i) Documentation to support the supplier's determination that it is eligible for a deferred deadline, showing that 10 percent of the total number of known lead and galvanized requiring replacement service lines in the replacement pool exceeds 39 annual replacements per 1,000 service connections as calculated in subsection (d)(5)(F)(i);
 - ii) Identification of the deferred deadline and the associated cumulative average replacement rate the supplier considers to be the fastest feasible but no slower than a deadline and replacement rate corresponding to 39 annual replacements per 1,000 service connections as calculated in subsection (d)(5)(F)(i), as well as the annual number of replacements required, the length of time (in years and months), and the date of completion for this deadline and rate; and
 - iii) Information supporting the supplier's determination that replacing lead and galvanized requiring replacement service lines by an earlier date and faster rate than provided under the deferred deadline provision in subsection (d)(5)(F) is not feasible.
 - 2) The service line replacement plan must be made accessible to the public. Suppliers serving greater than 50,000 persons must make the plan available to the public online.~~The supplier must offer to replace a customer-owned lead gooseneck, pigtail, or connector; however, the supplier needs not bear the cost of replacing the customer-owned parts.~~
 - 3) Suppliers must update the service line replacement plan annually to include any new or updated information and submit the updates to the Agency on an annual basis in compliance with Section 611.360(e). The supplier must make the updated plan publicly accessible no later than the deadline to submit the updated plan to the Agency.~~The supplier needs not replace a customer-owned lead gooseneck, pigtail, or connector if the customer objects to replacing it.~~
 - A) If there is no new or updated information to include in the service line replacement plan since the previous iteration, the supplier may certify to the Agency that the plan has no updates in lieu of

9124 resubmitting the plan unless the supplier is replacing service lines
9125 in compliance with a deferred deadline and subsection (c)(3)(B)
9126 applies.

9127
9128 B) If there is no new or updated information to include in the service
9129 line replacement plan and the supplier is replacing service lines in
9130 compliance with a deferred deadline under subsection (d)(5)(F),
9131 every three years after the initial submission of the plan, the
9132 supplier must update the information specified in subsection
9133 (c)(1)(J) to support why the supplier continues to need the deferred
9134 deadline and resubmit the plan to the Agency.

9135
9136 C) If there are no longer lead, galvanized requiring replacement, and
9137 unknown service lines in the inventory as described in subsections
9138 (a) and (b), suppliers are not required to resubmit the service line
9139 replacement plan or certify to the Agency that the plan has no
9140 updates.

9141
9142 ~~4) Replacing a lead gooseneck, pigtail, or connector does not count towards~~
9143 ~~goal-based or mandatory lead service line replacements under subsections~~
9144 ~~(f) or (g).~~

9145
9146 ~~5) When replacing any gooseneck, pigtail, or connector attached to a lead~~
9147 ~~service line, the supplier must follow the risk mitigation procedures 40~~
9148 ~~CFR Section 141.85(f)(2) specifies.~~

9149
9150 ~~d) Mandatory full-service line replacement. Conducting Lead Service Line~~
9151 ~~Replacement That May Result in Partial Replacements~~

9152
9153 ~~1) All suppliers must replace all lead and galvanized requiring replacement~~
9154 ~~service lines under the control of the supplier unless the replacement~~
9155 ~~would leave in place a partial lead service line. A supplier planning to~~
9156 ~~partially replace a lead service line (e.g., replace only the supplier-owned~~
9157 ~~portion) in the course of planned infrastructure work must notify the~~
9158 ~~service line's owner, or the owner's authorized agent, and any non-owner~~
9159 ~~residents the service line serves at least 45 days before the replacement.~~
9160 ~~The notice must explain that the supplier will replace the supplier-owned~~
9161 ~~portion of the service line and offer to replace the customer-owned portion~~
9162 ~~(not supplier-owned). The supplier needs not bear the cost of replacing~~
9163 ~~the customer-owned portion of the lead service line.~~

9164
9165 ~~A) Before returning a service line to service, the supplier must provide~~
9166 ~~notice complying with Section 611.355(a) and explaining that~~

9167 consumers may experience a temporary increase of lead levels in
9168 their drinking water due to the replacement, providing information
9169 about the health effects of lead, and describing actions consumers
9170 can take to minimize their exposure to lead in drinking water. If
9171 the lead service line undergoing partial replacement serves multi-
9172 family dwellings, the supplier may post the information at a
9173 conspicuous location instead of providing individual notice to each
9174 resident.

9175
9176 B) ~~The supplier must inform consumers about service line flushing~~
9177 ~~using the procedure in subsection (b)(5) requires before returning~~
9178 ~~the affected service line to service.~~

9179
9180 C) ~~The supplier must provide the consumer with a pitcher filter or~~
9181 ~~point-of-use treatment device to reduce lead, six months of~~
9182 ~~replacement cartridges, and use instructions before returning the~~
9183 ~~affected service line to service. If the affected service line serves~~
9184 ~~more than one residence or non-residential unit (e.g., a multi-unit~~
9185 ~~building), the supplier must provide a filter, six months of~~
9186 ~~replacement cartridges and use instructions to every unit in the~~
9187 ~~building.~~

9188
9189 D) ~~The supplier must offer to collect a follow up tap sample between~~
9190 ~~three and six months after partially replacing a lead service line.~~
9191 ~~The supplier must provide the results from the follow up sample~~
9192 ~~under Section 611.355(d).~~

9193
9194 2) Where a supplier has access (e.g., legal access, physical access) to conduct
9195 full-service line replacement, the service line is under its control, and the
9196 supplier must replace the service line. Where a supplier does not have
9197 access to conduct full service line replacement, the supplier is not required
9198 by this subpart to replace the line, but the supplier must document the
9199 reasons that the supplier does not have access and include any specific
9200 laws, regulations, and/or water tariff agreements that affect the supplier's
9201 ability to gain access to conduct full replacement of lead and galvanized
9202 requiring replacement service lines. The supplier must provide this
9203 documentation to the Agency as required in Section 611.360(e)(10).~~Any~~
9204 ~~supplier replacing the supplier-owned portion of a lead service line in the~~
9205 ~~course of an emergency repair must notify and provide risk mitigation~~
9206 ~~measures to the persons the affected service line serves as subsections~~
9207 ~~(d)(1)(A) through (d)(1)(C) require before returning the line to service.~~
9208

9209 A) This subpart does not establish the criteria for determining whether
9210 a supplier has access to conduct full-service line replacement. Any
9211 applicable State or local laws or water tariff agreement
9212 requirements to gain access to conduct full-service line
9213 replacement must be identified in the service line replacement plan
9214 as described in subsection (c).

9215
9216 B) This subsection (d)(2)(B) corresponds with 40 CFR
9217 141.84(d)(2)(ii), which USEPA marked "[reserved]". This
9218 statement maintains structural consistency with USEPA's rule.
9219

9220 3) Where a supplier has legal access to conduct full-service line replacement
9221 only if property owner consent is obtained, the supplier must make a
9222 "reasonable effort" to obtain property owner consent. If such a supplier
9223 does not obtain consent after making a "reasonable effort" to obtain it
9224 from any property owner, then the supplier is not required by this subpart
9225 to replace any portion of the service line at that address unless there is a
9226 change in ownership of the property as described in subsection (d)(3)(B).
9227 The supplier must provide documentation of the reasonable effort to the
9228 Agency under Section 611.360(e)(10).~~If a customer notifies a supplier that~~
9229 ~~the customer plans to replace the customer's portion of the lead service~~
9230 ~~line, the supplier must make a good faith effort to coordinate~~
9231 ~~simultaneously replacing the supplier's portion. If simultaneously~~
9232 ~~replacing the supplier- and customer-owned portions cannot be conducted,~~
9233 ~~the supplier must replace the supplier-owned portion as soon as~~
9234 ~~practicable but no later than 45 days after the customer replaces the~~
9235 ~~customer-owned portion of the lead service line. The supplier must notify~~
9236 ~~and provide risk mitigation measures as subsections (d)(1)(A) through~~
9237 ~~(d)(1)(C) require. If the supplier fails to replace its portion of the lead~~
9238 ~~service line within 45 days after the customer replaces the customer's~~
9239 ~~portion of the lead service line, the supplier must notify the Agency under~~
9240 ~~Section 611.360(e) within 30 days after failing to meet the deadline. The~~
9241 ~~supplier must complete replacing the supplier-owned portion of the~~
9242 ~~service line no later than 180 days after the customer replaces the~~
9243 ~~customer-owned portion.~~

9244
9245 A) A "reasonable effort" must include at least four attempts to engage
9246 the property owner using at least two different methods of
9247 communication (e.g., in-person conversation, phone call, text
9248 message, email, written letter, postcard, or information left at the
9249 door such as a door hanger) before the applicable deadline of
9250 mandatory service line replacement as described in subsection

- 9251 (d)(4). The Agency may require suppliers to conduct additional
9252 attempts and may require specific outreach methods to be used.
9253
- 9254 B) Within six months of any change in ownership of the property, the
9255 supplier must offer full-service line replacement to any new
9256 property owner. Suppliers may use new service initiation or
9257 service transfer to a new customer to identify when there is a
9258 change in ownership. Within one year of any change in ownership
9259 of the property, the supplier must make a "reasonable effort" to
9260 obtain the property owner's consent as described in subsection
9261 (d)(3)(A). If the supplier is unable to obtain consent from the
9262 current property owner after making a "reasonable effort" to obtain
9263 it, the supplier is not required under this subpart to replace the line.
9264 This subsection (d)(3)(B) continues to apply until all lead and
9265 galvanized requiring replacement service lines are replaced.
9266
- 9267 4) The deadline for suppliers to replace all lead and galvanized requiring
9268 replacement service lines under the control of the supplier is no later than
9269 10 program years after the compliance date specified in Section
9270 611.350(a)(3) unless the supplier is subject to a different deadline under
9271 subsections (d)(5)(E) and (F). ~~If a supplier receives notice or otherwise~~
9272 ~~learns that a customer replaced the customer-owned portion of a lead~~
9273 ~~service line within the previous six months leaving the system-owned~~
9274 ~~portion in place, the supplier must replace its portion within 45 days after~~
9275 ~~the supplier becomes aware the customer replaced the customer-owned~~
9276 ~~portion. The supplier must notify and provide risk mitigation measures as~~
9277 ~~subsections (d)(1)(A) through (d)(1)(C) require within 24 hours after the~~
9278 ~~supplier becomes aware of the customer replacing the customer-owned~~
9279 ~~portion. If the supplier fails to replace the supplier-owned portion of the~~
9280 ~~service line within 45 days after becoming aware of the customer~~
9281 ~~replacing the customer-owned portion, the supplier must notify the~~
9282 ~~Agency under Section 611.360(e) within 30 days after failing to meet the~~
9283 ~~deadline. The supplier must complete replacing the supplier-owned~~
9284 ~~portion of the service line no later than 180 days after the customer~~
9285 ~~replaces the customer-owned portion.~~
9286
- 9287 A) Suppliers must start mandatory service line replacement programs
9288 no later than the compliance date specified in Section
9289 611.350(a)(3).
9290
- 9291 B) If a lead or galvanized requiring replacement service line is
9292 discovered when the supplier's inventory is comprised of only non-

9293 lead service lines, the supplier must complete the following
9294 requirements:

9295
9296 i) Update the replacement pool calculated under subsection
9297 (d)(6)(A).

9298
9299 ii) Conduct a full-service line replacement of the affected
9300 service line as soon as practicable but no later than 180
9301 days after the date the service line is discovered. Where a
9302 supplier determines that it is not practical to conduct full-
9303 service line replacement within 180 days after the date of
9304 discovery (e.g., due to freezing ground conditions), the
9305 supplier may request Agency approval for an extension of
9306 no later than one year after the date the service line was
9307 discovered to replace the affected service line. The request
9308 for an extension must be made no later than 90 days after
9309 the date of discovery of the affected service line.

9310
9311 5) Suppliers must meet a minimum cumulative average annual replacement
9312 rate for completing mandatory service line replacement in compliance
9313 with this subsection (d)(5):~~If a supplier receives notice or otherwise learns~~
9314 ~~that a customer replaced the customer-owned portion of a lead service line~~
9315 ~~more than six months in the past, the supplier needs not replace the~~
9316 ~~supplier-owned portion of the lead service line under this subsection~~
9317 ~~(d)(5). However, the supplier must still include the system-owned portion~~
9318 ~~when calculating a lead service line replacement rate under subsection~~
9319 ~~(a)(7).~~

9320
9321 A) Annual replacement rate. A supplier must replace lead and
9322 galvanized requiring replacement service lines as described in
9323 subsection (d)(6) at an average annual replacement rate of at least
9324 10 percent calculated across a cumulative period unless the
9325 supplier is subject to a shortened replacement rate or eligible for a
9326 deferred replacement rate in compliance with subsections (d)(5)(E)
9327 and (F).

9328
9329 B) Cumulative percent of service lines replaced. To calculate the
9330 cumulative percent of service lines replaced, at the end of each
9331 mandatory service line replacement "program year" as described in
9332 subsection (d)(5)(C), suppliers must divide the total number of lead
9333 and galvanized requiring replacement service lines replaced thus
9334 far in the program in compliance with subsection (d)(6)(C) by the

9335 number of service lines within the replacement pool in compliance
9336 with subsection (d)(6)(A).

9337
9338 C) Program year. The first mandatory service line replacement
9339 "program year" is from the compliance date specified in Section
9340 611.350(a)(3) to the end of the next calendar year. Every program
9341 year thereafter is on a calendar year basis. This subsection
9342 (d)(5)(C) applies for the purposes of this section.

9343
9344 D) Cumulative average replacement rate. The annual replacement
9345 rate in subsection (d)(5)(A) is assessed annually as a cumulative
9346 average. The first cumulative average replacement rate must be
9347 assessed at the end of the third program year and is calculated by
9348 dividing the cumulative percent of service lines replaced in
9349 compliance with subsection (d)(5)(B) by the number of completed
9350 program years (or three in this case). Annually thereafter, at the
9351 end of each program year, suppliers must assess the cumulative
9352 average replacement rate by dividing the most recent cumulative
9353 percent of service lines replaced in compliance with subsection
9354 (d)(5)(B) by the number of completed program years. Except as
9355 provided in subsection (d)(5)(D)(i), the cumulative average
9356 replacement rate must be 10 percent or greater each program year,
9357 and the supplier must replace all lead and galvanized requiring
9358 replacement service lines under its control by the applicable
9359 deadline for completing mandatory service line replacement in
9360 compliance with subsection (d)(4).

9361
9362 i) A supplier is not required by this section to meet the
9363 cumulative average replacement rate described in
9364 subsection (d)(5) where, after the compliance date specified
9365 in Section 611.350(a)(3), the supplier has replaced all lead
9366 and galvanized requiring replacement service lines in the
9367 replacement pool as described in subsection (d)(6)(A) that
9368 are under the control of the supplier, identified all unknown
9369 service lines in the inventory, and documented and
9370 submitted to the Agency the reasons the system currently
9371 does not have access to conduct full replacement of the
9372 remaining lead and galvanized requiring replacement
9373 service lines in the replacement pool in compliance with
9374 subsections (d)(2) and (3). When lead and galvanized
9375 requiring replacement service lines come under the control
9376 of the supplier, the supplier is required to replace the
9377 service lines as described in subsection (d). This

subsection (d)(5)(D)(i) continues to apply until all lead and galvanized requiring replacement service lines are replaced.

ii) This subsection (d)(5)(D)(ii) corresponds with 40 CFR 141.84(d)(5)(iv)(B), which USEPA marked "[reserved]". This statement maintains structural consistency with USEPA's rule.

E) Shortened deadline and associated replacement rate. Where the Agency determines that a shortened replacement deadline is feasible for a supplier's system (e.g., by considering the number of lead and galvanized requiring replacement service lines in a supplier's inventory), the supplier must replace service lines by the Agency-determined deadline and by a faster minimum replacement rate in compliance with subsection (d)(5)(E)(i). The Agency must make this determination in writing and notify the supplier of its finding. The Agency must set a shortened deadline at any time throughout a supplier's replacement program if the Agency determines a shorter deadline is feasible. This subsection (d)(5)(E) also applies to suppliers eligible for a deferred deadline as specified in subsection (d)(5)(F).

i) Suppliers must replace lead and galvanized requiring replacement service lines at an average annual replacement rate calculated by dividing 100 by the number of years needed to meet the shortened deadline determined by the Agency, expressed as a percentage. Suppliers must comply with the cumulative average replacement rate in compliance with subsection (d)(5)(D), where the first cumulative average replacement rate is assessed at the end of the program year that is at least one year after the shortened deadline determination, as determined by the Agency, unless the shortened replacement deadline is less than three years. If the supplier's shortened replacement deadline is less than three years, the cumulative average replacement rate must be assessed on a schedule determined by the Agency.

ii) This subsection (d)(5)(E)(ii) corresponds with 40 CFR 141.84(d)(5)(v)(B), which USEPA marked "[reserved]". This statement maintains structural consistency with USEPA's rule.

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- F) Deferred deadlines and associated replacement rates. A supplier may defer service line replacement past the deadline in subsection (d)(4) if the supplier's system meets the following criteria:
- i) If a supplier replacing 10 percent of the total number of known lead and galvanized requiring replacement service lines in a supplier's replacement pool results in an annual number of service line replacements by the supplier that exceeds 39 per 1,000 service connections, the supplier may complete replacement of all lead and galvanized requiring replacement service lines by a deadline that corresponds to the supplier conducting 39 annual replacements per 1,000 service connections at a cumulative average replacement rate assessed in compliance with subsection (d)(5)(D). This subsection (d)(5)(F)(i) is also applicable if a supplier with service lines newly under their control, after previously not having control as described in subsection (d)(5)(D)(i), is required to conduct more than 39 annual replacements per 1,000 service connections. The number of annual replacements corresponding to 39 annual replacements per 1,000 service connections can be calculated by multiplying the number of service connections in a system by 0.039. The number of years needed to complete replacement is the total number of known lead and galvanized requiring replacement service lines in a supplier's replacement pool divided by the calculated number of annual replacements. To calculate the minimum cumulative average replacement rate, the supplier must divide 100 by the number of years needed to achieve replacing 39 annual replacements per 1,000 service connections, expressed as a percentage.

 - ii) Any supplier that is eligible for and plans to use a deferred deadline must include information, in compliance with subsection (c)(1)(J), to support the use of a deferred deadline including identifying the deadline and associated cumulative average rate of replacement to meet this deferred deadline in the supplier's initial service line replacement plan and subsequent updates to the plan in compliance with subsection (c). The supplier must identify an annual replacement rate that is no less than 39 annual replacements per 1,000 service connections.

- 9464 iii) As soon as practicable, but no later than the end of the
9465 second program year as defined in subsection (d)(5)(C),
9466 and every three years thereafter, the Agency must
9467 determine in writing whether the deferred deadline and
9468 associated cumulative average replacement rate the supplier
9469 documented in subsection (c)(1)(J)(ii) are the fastest
9470 feasible to conduct mandatory service line replacement and
9471 either approve the continued use of this deferred deadline
9472 and replacement rate as the fastest feasible for the supplier,
9473 or set a shorter deferred deadline and identify an associated
9474 replacement rate to ensure the supplier is replacing service
9475 lines at the fastest feasible rate for the supplier. The
9476 Agency must consider information that includes, but is not
9477 limited to, the supplier's submissions of the service line
9478 inventory and replacement plan in compliance with
9479 subsections (a) through (c) and information collected from
9480 other suppliers conducting mandatory service line
9481 replacement. The Agency may require the supplier to
9482 provide additional information for the Agency to consider
9483 in its assessment of the continued use of a deferred deadline
9484 and the fastest feasible replacement rate.
- 9485
- 9486 iv) In the first two program years, the supplier must comply
9487 with the annual replacement rate identified in its initial
9488 replacement plan (unless the Agency determines a faster
9489 rate is feasible sooner). In subsequent program years, the
9490 supplier must comply with the applicable deferred deadline
9491 and associated replacement rate identified in the Agency's
9492 written determination of the deadline and replacement rate
9493 in subsection (d)(5)(F)(iii).
- 9494
- 9495 6) Calculation of the replacement pool, the annual number of replacements
9496 required, and the number of service lines replaced each year to calculate a
9497 supplier's cumulative average replacement rate described in subsection
9498 (d)(5) are as follows:
- 9499
- 9500 A) Replacement pool. To calculate the replacement pool, suppliers
9501 must add the total number of lead, galvanized requiring
9502 replacement, and lead status unknown service lines in the baseline
9503 inventory submitted by the compliance date specified in Section
9504 611.350(a)(3). The supplier must not subtract lead or galvanized
9505 requiring replacement service lines from the replacement pool
9506 when they are replaced. The supplier must not subtract service

9507 lines that are not under the control of the supplier from the
9508 replacement pool. At the beginning of each program year,
9509 suppliers must update the replacement pool according to the counts
9510 of specific types of recategorized service lines in the inventory
9511 annually thereafter as described in this subsection (d)(6)(A):

9512
9513 i) Unknown service lines that are identified as non-lead
9514 service lines must be subtracted from the replacement pool.
9515 Unknown service lines that are identified as lead or
9516 galvanized requiring replacement service lines must be
9517 recategorized appropriately in the inventory and
9518 replacement pool, but they do not change the number of
9519 service lines in the replacement pool because
9520 recategorization does not remove these service lines from
9521 the replacement pool.

9522
9523 ii) Non-lead service lines discovered to be lead or galvanized
9524 requiring replacement service lines must be added to the
9525 replacement pool.

9526
9527 iii) Lead or galvanized requiring replacement service lines
9528 discovered to be non-lead service lines must be subtracted
9529 from the replacement pool.

9530
9531 iv) Each entire service line must count only once for purposes
9532 of calculating the replacement pool.

9533
9534 B) Annual number of replacements required. To calculate the number
9535 of lead and galvanized requiring replacement service lines a
9536 supplier is required to replace in a given program year, divide the
9537 number of service lines in the most up-to-date replacement pool,
9538 calculated at the beginning of each program year, by the total
9539 number of years remaining under subsection (d)(4) to complete
9540 mandatory service line replacement (e.g., 10 years).

9541
9542 C) Number of service lines replaced. When calculating the
9543 cumulative average replacement rate, the supplier may only
9544 include full-service line replacements of lead or galvanized
9545 requiring replacement service lines when counting the number of
9546 service lines replaced. Wherever the supplier conducts a
9547 replacement of a lead or galvanized requiring replacement service
9548 line (either a portion of a service line or the entire service line), the
9549 replacement counts as a full service line replacement only if, after

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the replacement, the entire service line can be categorized in the inventory as non-lead under subsection (a)(3)(C).

i) For purposes of mandatory service line replacement, suppliers must count each entire service line once, including where ownership of the service line is shared, with a single material categorization in compliance with table 1 to this subsection (d)(6)(C)(i).

<u>Table 1 to Subsection (d)(6)(C)(i)</u>		
<u>System-owned portion</u>	<u>Customer-owned portion</u>	<u>Categorization for entire service line</u>
<u>Lead</u>	<u>Lead</u>	<u>Lead</u>
<u>Lead</u>	<u>Galvanized Requiring Replacement</u>	<u>Lead</u>
<u>Lead</u>	<u>Non-lead</u>	<u>Lead</u>
<u>Lead</u>	<u>Lead Status Unknown</u>	<u>Lead</u>
<u>Non-lead</u>	<u>Lead</u>	<u>Lead</u>
<u>Non-lead and never previously lead</u>	<u>Non-lead, specifically galvanized pipe material</u>	<u>Non-lead</u>
<u>Non-lead</u>	<u>Non-lead, material other than galvanized pipe material</u>	<u>Non-lead</u>
<u>Non-lead</u>	<u>Lead Status Unknown</u>	<u>Lead Status Unknown</u>
<u>Non-lead, but system is unable to demonstrate it was not previously Lead</u>	<u>Galvanized Requiring Replacement</u>	<u>Galvanized Requiring Replacement</u>
<u>Lead Status Unknown</u>	<u>Lead</u>	<u>Lead</u>
<u>Lead Status Unknown</u>	<u>Galvanized Requiring Replacement</u>	<u>Galvanized Requiring Replacement</u>
<u>Lead Status Unknown</u>	<u>Non-lead</u>	<u>Lead Status Unknown</u>
<u>Lead Status Unknown</u>	<u>Lead Status Unknown</u>	<u>Lead Status Unknown</u>

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ii) A full-service line replacement is counted where a non-lead service line is installed for use and the lead or galvanized requiring replacement service line is disconnected from the

water main or other service line. If the lead or galvanized requiring replacement service line is disconnected from the water main or supplier-owned portion of the service line but not removed, the supplier must be subject to State or local law or have a written policy to preclude the supplier from reconnecting the lead or galvanized requiring replacement service line to the water main or other service line.

iii) A full-service line replacement may be counted where a supplier physically disconnects a service line that is not in use and the supplier does not install a new non-lead service line because there is no service line in use (e.g., at an abandoned property). If the disconnected lead or galvanized requiring replacement service line is not removed, the supplier must be subject to State or local law or have a written policy to preclude the supplier from reconnecting the disconnected service line (i.e., a new non-lead service line must be installed if active use is to resume).

iv) Suppliers must not count the following as full service line replacement for purposes of this subpart: partially replaced service lines as defined in Section 611.350(b), lead, galvanized requiring replacement, or unknown service lines determined to be non-lead service lines, lead connector replacements, pipe lining or coating technologies used while the lead or galvanized requiring replacement service line remains in use, or unreplaced lead or galvanized requiring replacement service lines not under the control of the supplier as described in subsection (d)(2).

e) ~~Replacement of lead connectors when encountered by a supplier. Conducting Full Lead Service Line Replacements. A supplier conducting a full lead service line replacement must notify the service line's owner, or the owner's authorized agent, and any non-owner residents the service line serves within 24 hours after completing the replacement. The supplier needs not bear the cost of replacing the customer-owned portion of the lead service line.~~

1) The supplier must replace any lead connector when encountered during planned or unplanned water system infrastructure work unless the connector is not under the control of the supplier (e.g., where the supplier does not have and cannot obtain access to conduct the connector

9606 ~~replacement). The notice must comply with Section 611.355(a), explain~~
9607 ~~that consumers may experience a temporary increase of lead levels in their~~
9608 ~~drinking water due to the replacement, inform about the health effects of~~
9609 ~~lead, and explain actions a consumer can take to minimize exposure to~~
9610 ~~lead in drinking water. If the lead service line the supplier will replace~~
9611 ~~serves a multi-family dwelling, the supplier may post the information at a~~
9612 ~~conspicuous location instead of providing individual notice to all~~
9613 ~~residents.~~

9614
9615 A) Upon replacement of any connector that is attached to a lead or
9616 galvanized requiring replacement service line, the supplier must
9617 follow risk mitigation measures for disturbances as specified in
9618 Section 611.355(f)(2).

9619
9620 B) Following replacement of a lead connector, the supplier must
9621 update the information on the connector material and location in its
9622 inventory in compliance with subsections (a)(2)(B) and (b)(2).

9623
9624 2) The supplier must comply with any State or local laws that require
9625 additional connectors to be replaced. ~~The supplier must inform about~~
9626 ~~flushing the service line using the procedure the supplier developed under~~
9627 ~~subsection (b)(5) before returning the replaced service line to service.~~

9628
9629 3) ~~The supplier must provide the consumer with a pitcher filter or point-of-~~
9630 ~~use treatment device to reduce lead, six months of replacement cartridges,~~
9631 ~~and use instructions before returning the replaced service line to service.~~
9632 ~~If the lead service line serves more than one residence or non-residential~~
9633 ~~unit (e.g., a multi-unit building), the supplier must provide a filter and six~~
9634 ~~months of replacement cartridges and use instructions to every unit in the~~
9635 ~~building.~~

9636
9637 4) ~~The supplier must offer to the consumer to collect a follow-up tap sample~~
9638 ~~between three and six months after replacing a lead service line. The~~
9639 ~~supplier must provide the results from the follow-up sample to the~~
9640 ~~consumer under Section 611.355(d).~~

9641
9642 f) Replacement of a service line prompted by the customer. If State or local laws or
9643 water tariff agreements do not prevent customers from conducting partial lead or
9644 galvanized requiring replacement service line replacements ("customer-initiated
9645 replacements"), the supplier must meet the following requirements: ~~Goal-Based~~
9646 ~~Full Lead Service Line Replacement for Suppliers Having a 90th Percentile Lead~~
9647 ~~Concentration Exceeding the Lead Trigger Level But Not the Lead Action Level.~~
9648 ~~A supplier serving more than 10,000 persons having a 90th percentile lead~~

9649 ~~concentration under Section 611.356 that exceeds the lead trigger level but not the~~
9650 ~~lead action level must conduct goal-based full lead service line replacement at a~~
9651 ~~rate approved in an Agency-issued SEP.~~
9652

9653 1) If the supplier is notified by the customer that the customer intends to
9654 conduct a partial lead or galvanized requiring replacement service line
9655 replacement, the supplier must:~~The supplier must annually calculate the~~
9656 ~~number of full lead service line replacements it must conduct under~~
9657 ~~subsection (a)(7).~~
9658

9659 A) Replace the remaining portion of the lead or galvanized requiring
9660 replacement service line at the same time as, or as soon as
9661 practicable after, the customer-initiated replacement, but no later
9662 than 45 days from the date the customer conducted the partial
9663 replacement;
9664

9665 B) Provide notification and risk mitigation measures in compliance
9666 with subsection (h), as applicable, before the affected service line
9667 is returned to service; and
9668

9669 C) Notify the Agency within 30 days if it cannot meet the deadline in
9670 subsection (f)(1)(A) and complete the replacement no later than 180 days
9671 from the date the customer conducted the partial replacement.
9672

9673 2) If the supplier is notified or otherwise learns that a customer-initiated
9674 replacement occurred within the previous six months and left in place the
9675 supplier-owned portion of a lead or galvanized requiring replacement
9676 service line, the supplier must:~~The supplier must replace lead service lines~~
9677 ~~complying with subsection (d) or (e).~~
9678

9679 A) Replace any remaining portion of the affected service line within
9680 45 days from the day of becoming aware of the customer-initiated
9681 replacement; and
9682

9683 B) Provide notification and risk mitigation measures in compliance
9684 with subsection (h) within 24 hours of becoming aware of the
9685 customer replacement.
9686

9687 C) Notify the Agency within 30 days if it cannot meet the deadline in
9688 subsection (f)(2)(A) and complete the replacement no later than
9689 180 days of the date the supplier learns of the customer-initiated
9690 replacement.
9691

- 9692 3) When a supplier is notified or otherwise learns of a customer-initiated
9693 replacement of a lead or galvanized requiring replacement service line that
9694 occurred more than six months in the past, this section does not require the
9695 supplier to complete the lead or galvanized requiring replacement service
9696 line replacement of the supplier owned portion under this subsection (f).
9697 However, the remaining portion of the lead or galvanized requiring
9698 replacement service line must be identified in the inventory in compliance
9699 with subsection (b) and replaced in compliance with subsection (d). ~~Only a~~
9700 ~~full lead service line replacement counts towards a supplier's annual~~
9701 ~~replacement goal. A partial lead service line replacement does not count~~
9702 ~~towards the goal.~~
- 9703
- 9704 4) ~~The supplier must inform customers having a lead, galvanized requiring~~
9705 ~~replacement, or lead status unknown service line as Section 611.355(g)~~
9706 ~~requires.~~
- 9707
- 9708 5) ~~A supplier failing to meet its lead service line replacement goal must take~~
9709 ~~certain actions:~~
- 9710
- 9711 A) ~~Conduct public outreach activities under Section 611.355(h) until~~
9712 ~~either the supplier meets its replacement goal, or tap sampling~~
9713 ~~shows the 90th percentile concentration does not exceed the lead~~
9714 ~~trigger level for two continuous years of monitoring.~~
- 9715
- 9716 B) ~~Resume its goal-based lead service line replacement program~~
9717 ~~under this subsection (f) if its 90th percentile lead concentration~~
9718 ~~anytime later exceeds the lead trigger level but not the lead action~~
9719 ~~level.~~
- 9720
- 9721 6) ~~The first year of a supplier's lead service line replacement program begins~~
9722 ~~on the first day after the end of the tap sampling period during which the~~
9723 ~~supplier exceeded the lead trigger level. If the supplier samples annually~~
9724 ~~or less frequently, the end of the tap monitoring cycle is September 30 of~~
9725 ~~the calendar year during which the sampling occurs. If the Agency issues~~
9726 ~~a SEP establishing an alternative tap monitoring cycle, the end of the~~
9727 ~~supplier's tap monitoring cycle is the last day of that cycle.~~
- 9728
- 9729 g) Requirements for conducting partial service line replacements. This subsection
9730 (g) prohibits suppliers from conducting a partial lead service line replacement or a
9731 partial galvanized requiring replacement service line replacement as defined
9732 under Section 611.350(b) unless it is conducted as part of an emergency repair or
9733 in coordination with planned infrastructure work that impacts service lines,
9734 excluding planned infrastructure work solely for the purposes of lead or

galvanized requiring replacement service line replacement. Where a supplier has access to conduct full service line replacement as specified in subsection (d)(2), the supplier must fully replace the service line. Where a supplier conducts partial service line replacement, the supplier must comply with the notification and mitigation requirements specified in subsections (h)(1) and (2).~~Mandatory Full Lead Service Line Replacement for Suppliers Whose 90th Percentile Lead Concentration Exceeds the Lead Action Level. A supplier serving more than 10,000 persons that exceeds the lead action level in tap sampling monitoring under Section 611.356 must replace full lead service lines on its distribution system at an annual rate of at least three percent on a two-year rolling average basis.~~

- 1) Whenever a supplier conducts a partial replacement of a lead or galvanized requiring replacement service line, the supplier's system must include a dielectric coupling separating the remaining service line and the replaced service line (i.e., newly installed service line) to prevent galvanic corrosion unless the replaced service line is made of plastic.~~The supplier must calculate its average annual number of full lead service line replacements under subsection (a)(7).~~
- 2) This subsection (g)(2) corresponds with 40 CFR 141.84(g)(2), which USEPA marked "[reserved]". This statement maintains structural consistency with USEPA's rule.~~The supplier must replace lead service lines under subsections (d) and (e).~~
- 3) ~~Only a full lead service line replacement counts towards a supplier's mandatory annual replacement rate of at least three percent. A partial lead service line replacement does not count towards the supplier's mandatory replacement rate.~~
- 4) ~~A supplier must inform its customers having a lead, galvanized requiring replacement, or lead status unknown service line as Section 611.355(g) requires.~~
- 5) ~~A CWS supplier serving 10,000 or fewer persons or a NTNCWS supplier for which the Agency issues a SEP approving or designating replacing lead service lines as a compliance option must replace lead service lines as Section 611.363(a)(1) describes. The supplier must replace lead service lines complying with subsections (d) and (e).~~
- 6) ~~A supplier may stop replacing lead service lines after cumulatively replacing the required number. Unless the Agency issues a SEP under subsection (g)(9) requiring another percentage, the required number is at~~

9778 ~~least three percent of the service lines subsection (a)(7) determines times~~
 9779 ~~the number of years between when the supplier most recently began~~
 9780 ~~mandatorily replacing lead service lines and when the supplier calculates~~
 9781 ~~its lead 90th percentile concentration under Section 611.360(e)(4) to be at~~
 9782 ~~or below the lead action level during each of four consecutive six-month~~
 9783 ~~tap monitoring cycles. If the supplier later exceeds the lead action level, it~~
 9784 ~~must restart mandatorily replacing lead service lines at the same rate on a~~
 9785 ~~two-year rolling average basis, unless the Agency issues a SEP under~~
 9786 ~~subsection (g)(9) requiring an alternative replacement rate.~~

9787
 9788 7) ~~A supplier may also cease mandatorily replacing lead service lines if the~~
 9789 ~~supplier has no remaining lead status unknown service lines in its~~
 9790 ~~inventory, and the supplier obtains refusals or non-responses to its offer to~~
 9791 ~~replace the customer-owned portion of the lead service line from every~~
 9792 ~~customer on its distribution system still served by a lead service line or a~~
 9793 ~~galvanized requiring replacement service line. For this subsection (g)(7)~~
 9794 ~~and under Section 611.360(e), a supplier must document customer refusals~~
 9795 ~~to the Agency, including any written refusals signed by the customers, any~~
 9796 ~~documents memorializing customers verbally refusing, and any documents~~
 9797 ~~memorializing no response from customers after the supplier made at least~~
 9798 ~~two good faith attempts to reach the customer, each attempt offering to~~
 9799 ~~replace the full lead service line. If the supplier's lead 90th percentile~~
 9800 ~~concentration later exceeds the lead action level, the supplier must offer to~~
 9801 ~~replace the customer-owned portion for every customer served through a~~
 9802 ~~full or partial lead service line or galvanized requiring replacement service~~
 9803 ~~line. The supplier need not bear the cost of replacing the customer-owned~~
 9804 ~~portion of any lead service line.~~

9805
 9806 8) ~~The first year of lead service line replacement begins the first day after the~~
 9807 ~~end of the tap sampling period during which the supplier exceeded the~~
 9808 ~~lead action level.~~

9809
 9810 9) ~~If the Agency determines a shorter schedule is feasible, the Agency must~~
 9811 ~~issue a SEP requiring a supplier to replace lead service lines on a shorter~~
 9812 ~~schedule than this Section otherwise requires, taking into account the~~
 9813 ~~number of lead service lines in the supplier's system. The Agency must~~
 9814 ~~issue this SEP within six months after the supplier must begin replacing~~
 9815 ~~lead service lines under subsection (g).~~

9816
 9817 h) [Protocols for notification and mitigation for partial and full-service line](#)
 9818 [replacements](#). ~~Reporting to Demonstrate Compliance to the Agency. To~~
 9819 ~~demonstrate that it complies with subsections (a) through (g), a supplier must~~
 9820 ~~report the information Section 611.360(e) specifies to the Agency.~~

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- 1) Notification and mitigation requirements for planned partial service line replacement. Whenever a supplier plans to partially replace a lead or galvanized requiring replacement service line in coordination with planned infrastructure work that impacts service lines, the supplier must provide written notice to the property owner, or the owner's authorized agent, as well as non-owner occupant(s) served by the affected service line at least 45 days prior to the replacement. Where a supplier has access to conduct full service line replacement only if property owner consent is obtained, the supplier must make a reasonable effort to obtain property owner consent to replace the remaining portion of the service line in compliance with subsection (d)(3)(A). The reasonable effort must be completed before the partial lead service line replacement.
 - A) Before the affected service line is returned to service, the supplier must provide written notification that explains that consumers may experience a temporary increase of lead levels in their drinking water due to the replacement and that meets the content requirements of Sections 611.355(a)(1)(B) through 611.355(a)(1)(D) and contact information for the supplier. In instances where multi-family dwellings or multiple non-residential occupants are served by the affected service line to be partially replaced, the supplier may elect to post the information at a conspicuous location instead of providing individual written notification to all residents or non-residential occupants.
 - B) Before the affected service line is returned to service, the supplier must provide written information about a procedure for consumers to flush service lines and premise plumbing of particulate lead following partial replacement of a lead or galvanized requiring replacement service line.
 - C) Before the affected service line is returned to service, the supplier must provide the consumer with a pitcher filter or point-of-use device certified by an American National Standards Institute accredited certifier to reduce lead, six months of replacement cartridges, and instructions for use. If the affected service line serves more than one residence or non-residential unit (e.g., a multi-unit building), the supplier must provide a pitcher filter or point-of-use device, six months of replacement cartridges and use instructions to every residential and non-residential unit in the building.

- 9864 D) The supplier must offer to the consumer to collect a follow up tap
9865 sample between three months and six months after the completion
9866 of any partial replacement of a lead service line. The tap sample
9867 must be a first-and fifth-liter paired sample after at least six hours
9868 of stagnation, following the tap sampling protocol under Section
9869 611.356(b). The supplier must provide the results of the sample to
9870 the persons served by the service line in compliance with Section
9871 611.355(d).
- 9872
- 9873 2) Notification and mitigation requirements for emergency partial service
9874 line replacement. Any supplier that creates a partial replacement of a lead
9875 or galvanized requiring replacement service line due to an emergency
9876 repair must provide notice and risk mitigation measures to the persons
9877 served by the affected service line in compliance with subsections
9878 (h)(1)(A) through (D) before the affected service line is returned to
9879 service. The supplier must offer to the property owner, or the owner's
9880 authorized agent, to replace the partial service line created by the
9881 emergency repair within 45 days.
- 9882
- 9883 3) Notification and mitigation requirements for full-service line replacement.
9884 Any supplier that conducts a full lead or galvanized requiring replacement
9885 service line replacement must provide written notice to the persons served
9886 by the affected service line before the affected service line is returned to
9887 service; written notice must be provided to the owner or the owner's
9888 authorized agent, no later than 30 days following completion of the
9889 replacement.
- 9890
- 9891 A) The written notification must explain that consumers may
9892 experience a temporary increase of lead levels in their drinking
9893 water due to the replacement and must meet the content
9894 requirements of Section 611.355(a)(1)(B) through (D) as well as
9895 contact information for the supplier. In instances where multi-
9896 family dwellings or multiple non-residential occupants are served
9897 by the lead or galvanized requiring replacement service line to be
9898 replaced, the supplier may elect to post the information at a
9899 conspicuous location instead of providing individual written
9900 notification to all persons served in residential and non-residential
9901 units.
- 9902
- 9903 B) Before the replaced service line is returned to service, the supplier
9904 must provide written information about a procedure for consumers
9905 to flush service lines and premise plumbing of particulate lead

9906 following full replacement of a lead or galvanized requiring
9907 replacement service line.

9908
9909 C) Before the replaced service line is returned to service, the supplier
9910 must provide the consumer with a pitcher filter or point-of-use
9911 device certified by an American National Standards Institute
9912 accredited certifier to reduce lead, six months of replacement
9913 cartridges, and instructions for use. If the lead service line serves
9914 more than one residence or non-residential unit (e.g., a multi-unit
9915 building), the supplier must provide a pitcher filter or point-of-use
9916 device, six months of replacement cartridges and instructions for
9917 use to every residential and non-residential unit in the building.

9918
9919 D) The supplier must offer to the consumer to collect a follow up tap
9920 sample between three months and six months after completion of
9921 any full replacement of a lead or galvanized requiring replacement
9922 service line. The tap sample must be a first-liter sample after at
9923 least six hours of stagnation, following the tap sampling protocol
9924 under Section 611.356(b). The supplier must provide the results of
9925 the sample to the consumer in compliance with Section
9926 611.355(d).

9927
9928 i) Reporting to demonstrate compliance to the Agency. To demonstrate compliance
9929 with subsections (a) through (h), a supplier must report to the Agency the
9930 information specified in Section 611.360(e).

9931
9932 BOARD NOTE: This Section derives from 40 CFR 141.84.

9933
9934 (Source: Amended at 50 Ill. Reg. _____, effective _____)

9935
9936 **Section 611.355 Public Education and Supplemental Monitoring and Mitigation**

9937
9938 A supplier ~~that exceeds~~exceeding the lead action level based on tap water samples collected in
9939 compliance with~~under~~ Section 611.356 must ~~distribute~~deliver the public education materials
9940 contained in subsection (a) in compliance with the delivery requirements in~~requires under~~
9941 subsection (b). Suppliers that exceed~~A supplier exceeding~~ the lead action level must offer to
9942 sample the tap water of any person served by the water system who request it in compliance
9943 with~~customer requesting sampling under~~ subsection (c). Suppliers must offer to sample for lead
9944 in the tap water of any person served by a lead, galvanized requiring replacement, or lead status
9945 unknown service line who requests it in compliance with subsection (c). All suppliers must
9946 deliver a consumer notice of lead tap water monitoring results and copper tap water monitoring
9947 results to persons served by the supplier at sites that are sampled, as specified in subsection (d).
9948 A supplier with lead, galvanized requiring replacement, or lead status unknown, service lines

9949 must deliver public education materials to persons with a lead, galvanized requiring replacement,
 9950 or lead status unknown service line as specified in subsections (e) and (f). All CWSs that do not
 9951 meet the minimum replacement rate for mandatory service line replacement as required under
 9952 Section 611.354(d) must conduct outreach activities as specified in subsection (h). All CWSs
 9953 must conduct annual outreach to local and State health agencies as outlined in subsection (i).
 9954 Suppliers with multiple lead action level exceedances, as specified in subsection (j)(1), must
 9955 conduct public outreach and make filters certified to reduce lead available as specified in
 9956 subsection (j)(2) through (j)(6). For suppliers serving a large proportion of consumers with
 9957 limited English proficiency, as determined by the Agency, all public education materials required
 9958 under this section must comply with the language requirements in subsection (b)(1).~~A small~~
 9959 ~~CWS or NTNCWS supplier electing to implement POU devices as a small supplier compliance~~
 9960 ~~flexibility option under Section 611.363 must provide public education materials as subsection~~
 9961 ~~(j) requires to inform users how to properly use POU devices. A supplier must deliver a~~
 9962 ~~consumer notice of lead tap water monitoring results to persons the supplier serves at each site~~
 9963 ~~that the supplier samples, as subsection (d) specifies. A supplier with lead, galvanized requiring~~
 9964 ~~replacement, or lead status unknown service lines, as defined in Section 611.354(a)(4), must~~
 9965 ~~deliver public education materials to persons served through these service lines as subsections (e)~~
 9966 ~~through (g) specify. A CWS supplier must conduct annual outreach to the Illinois Department of~~
 9967 ~~Public Health and local health agencies as subsection (i) provides. A CWS supplier serving~~
 9968 ~~more than 10,000 persons failing to meet its annual lead service line replacement goal under~~
 9969 ~~Section 611.354(f) must conduct outreach activities as subsection (h) specifies.~~

- 9970
- 9971 a) Content of written public education materials.~~Written Public Education Materials~~
- 9972
- 9973 1) Community water systems and non-transient non community water
 9974 systems.~~Water Systems and Non-Transient Non-Community Water~~
 9975 ~~Systems.~~ Suppliers~~A CWS or NTNCWS supplier~~ must include the
 9976 following elements in written~~printed~~ materials (e.g., printed or digital
 9977 brochures and pamphlets) in the same order as listed in subsections
 9978 (a)(1)(A) through (a)(1)(G). In addition, ~~the supplier must use the~~
 9979 ~~verbatim~~ language in subsections (a)(1)(A), (a)(1)(B), and (a)(1)(~~GF~~) must
 9980 be included in the materials, exactly as written, except for ~~replacing~~ the
 9981 text in brackets for which the supplier must include supplier-specific~~with~~
 9982 ~~the system-specific~~ information. The Agency may approve changes to the
 9983 content requirements if the Agency determines the changes are more
 9984 protective of human health. Any additional information presented by a
 9985 supplier~~presents~~ must be consistent with the information in subsections
 9986 (a)(1)(A), through (a)(1)(G), and be~~the supplier must present the~~
 9987 ~~additional information~~ in plain language that the general public can
 9988 understand. Suppliers~~The supplier~~ must submit a copy of all written
 9989 public education materials to the Agency prior to delivery. The Agency
 9990 may require the supplier to obtain approval of the content of written public
 9991 education materials prior to delivery. The Agency may require the

9992 supplier to obtain approval of the content of written public education
9993 materials prior to delivery. ~~A supplier may change the mandatory language~~
9994 ~~in subsections (a)(1)(A) and (a)(1)(B) only as the Agency approves in a~~
9995 ~~SEP.~~

9996
9997 A) IMPORTANT INFORMATION ABOUT LEAD IN YOUR
9998 DRINKING WATER. [INSERT NAME OF SUPPLIER] found
9999 elevated levels of lead in drinking water in some homes/buildings.
10000 Lead can cause serious health problems, especially for pregnant
10001 people~~women~~ and young children. Please read this information
10002 closely to see what you can do to reduce lead in your drinking
10003 water.

10004
10005 B) Health effects of lead~~Effects of Lead~~. There is no safe level of
10006 lead in drinking water. Exposure to lead in drinking water can
10007 cause serious health effects in all age groups, especially pregnant
10008 people, infants (both formula-fed and breastfed), and young
10009 children. Some of the health effects to infants and children
10010 include. ~~Infants and children can have~~ decreases in IQ and
10011 attention span. Lead exposure can also result in new or
10012 worsened~~lead to new learning and behavior problems or exacerbate~~
10013 ~~existing~~ learning and behavior problems. The children of
10014 persons~~women~~ who are exposed to lead before or during
10015 pregnancy may be at~~can have~~ increased risk of these
10016 harmful~~adverse~~ health effects. Adults ~~can~~ have increased risks of
10017 heart disease, high blood pressure, kidney or nervous system
10018 problems. Contact your health care provider for more information
10019 about your risks.

10020
10021 C) Sources of lead~~Lead~~

10022
10023 i) Explain what lead is.

10024
10025 ii) Explain possible sources of lead in drinking water and how
10026 lead enters drinking water. Include information on home
10027 /and building plumbing materials, ~~and~~ service lines, and
10028 connectors that may contain lead and include information
10029 about the definition of lead free as provided in Safe
10030 Drinking Water Act section 1417 of 1986 and as
10031 subsequently revised in 2011. Explain that lead levels may
10032 vary and therefore lead exposure is possible even when tap
10033 sampling results do not detect lead at one point in time.
10034

- iii) Discuss other important sources of lead exposure in addition to drinking water (e.g., paint).

BOARD NOTE: The supplier must use text providing the information this subsection (a)(1)(C) describes.

- D) Consumer steps to reduce lead exposure. Discuss the steps the consumer can take to reduce exposure to lead in drinking water.

- i) Explain that using a filter certified by an American National Standards Institute accredited certifier to reduce lead is effective in reducing lead exposures. If the supplier makes filters available in compliance with subsection (j)(2), also include information on how the consumer can obtain a filter.~~Encourage running the water to flush out the lead.~~

- ii) Encourage running the water to flush out the lead. Explain that lead levels increase over time as water sits in lead-containing plumbing materials and regular water usage in the building can reduce lead levels in drinking water. Advise consumers served by lead and galvanized requiring replacement service lines that they may need to flush the water for longer periods~~concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.~~

- iii) Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula~~Explain that boiling water does not reduce lead levels.~~

- iv) Explain that boiling water does not reduce lead levels.~~Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or water treatment.~~

- v) Encourage regular cleaning of faucet aerators.~~Suggest that parents have their child's blood tested for lead.~~

- vi) Discuss other steps consumers can take to reduce exposure to lead in drinking water, especially for pregnant persons, infants, and young children, such as using alternative sources of water.

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vii) Suggest that parents have their child's blood tested for lead. Provide contact information for the Agency and/or local health department.

viii) Tell consumers how to get their water tested, including information in compliance with subsection (c).

BOARD NOTE: The supplier must use text providing the information this (a)(1)(D) describes.

E) Levels of lead in drinking water. Explain why there are elevated levels of lead in the supplier's drinking water (if known) and what the supplier is doing to reduce the lead levels in homes ~~and~~ buildings in this area.

BOARD NOTE: The supplier must use text providing the information this (a)(1)(E) describes.

F) Information on lead, galvanized requiring replacement, and unknown service lines. For suppliers with lead, galvanized requiring replacement, or lead status unknown service lines in the supplier's inventory in compliance with Section 611.384(a) and (b), public education materials must meet the requirements of subsection (a)(1)(D)(i) through (vii). For suppliers with lead connectors or connectors of unknown material in the supplier's inventory in compliance with Section 611.384(a) and (b), public education materials must meet the requirements of subsection (a)(1)(F)(iii). ~~For more information, call us at [INSERT THE SUPPLIER'S NUMBER] [(IF APPLICABLE)], or visit our Web site at [INSERT THE SUPPLIER'S WEB SITE HERE]]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit USEPA's Web site at www.epa.gov/lead or contact your health care provider.~~

i) Discuss opportunities to replace lead and galvanized requiring replacement service lines;

ii) Discuss opportunities to have the material of a lead status unknown service line identified;

iii) Include information on how to obtain a copy of the service line inventory or view the inventory on the internet if the

- 10121 supplier is required to make the inventory available online
10122 so the consumer can find out if they are served by a lead,
10123 galvanized requiring replacement, or lead status unknown
10124 service line, or known lead connector or connector of
10125 unknown material;
10126
10127 iv) Include information on how to obtain a copy of the service
10128 line replacement plan or view the plan on the internet if the
10129 supplier is required to make the service line replacement
10130 plan available online;
10131
10132 v) Include information about opportunities to replace lead and
10133 galvanized requiring replacement service lines. Where the
10134 supplier intends for customer payment for a portion of the
10135 replacement where it is required or authorized by State or
10136 local law or a water tariff agreement, the notice must
10137 include information about programs that provide financing
10138 solutions to assist property owners with replacement of
10139 their portion of a lead or galvanized requiring replacement
10140 service line;
10141
10142 vi) Include a statement that the supplier is required to replace
10143 its portion of a lead or galvanized requiring replacement
10144 service line when the property owner notifies the supplier
10145 that they are replacing their portion of the lead or
10146 galvanized requiring replacement service line; and
10147
10148 vii) Include a statement that provides instructions for the
10149 customer or consumer to notify the supplier if they disagree
10150 with the service line material categorization in the
10151 inventory.
10152
10153 G) More information about lead. For more information, contact
10154 [INSERT NAME OF SUPPLIER] at [INSERT THE SUPPLIER'S
10155 NUMBER or EMAIL ADDRESS] (IF APPLICABLE), or visit our
10156 Web site at [INSERT THE SUPPLIER'S WEBSITE HERE]. For
10157 more information on reducing lead exposure around your
10158 home/building and the health effects of lead, visit USEPA's
10159 Website at <https://www.epa.gov/lead> or contact your health care
10160 provider.~~Information on Lead Service Lines. A supplier having~~
10161 ~~lead service lines must discuss opportunities to replace lead service~~
10162 ~~lines and explain how a consumer may access the supplier's lead~~
10163 ~~service line inventory to determine whether the consumer has a~~

10164 ~~lead service line. The supplier must include information on~~
10165 ~~programs providing financing solutions to assist property owners~~
10166 ~~in replacing their portion of a lead service line, with a statement~~
10167 ~~that the water system must replace the supplier-owned portion of a~~
10168 ~~lead service line when the property owner notifies the supplier that~~
10169 ~~the consumer will replace the property owners portion of the lead~~
10170 ~~service line.~~

10171
10172 2) This subsection (a)(2) corresponds with 40 CFR 141.85(a)(2), which
10173 USEPA marked "[reserved]". This statement maintains structural
10174 consistency with USEPA's rule, Community Water Systems. In addition to
10175 ~~including the elements subsection (a)(1) specifies, a CWS supplier must~~
10176 ~~include two information items:~~

- 10177
- 10178 A) ~~The supplier must tell consumers how to get their water tested; and~~
- 10179
- 10180 B) ~~The supplier must discuss lead in plumbing components and the~~
10181 ~~difference between low lead and lead free components.~~
- 10182

10183 BOARD NOTE: At corresponding 40 CFR 141.85(a)(1), USEPA allowed the
10184 State to require prior approval of written public information materials. Rather
10185 than require prior Agency approval, the Board chooses to allow the Agency to
10186 raise any deficiencies that it may perceive using its existing procedure for review
10187 of public education materials. The Agency outlines its standard practice for
10188 review of public information materials: The Agency provides a comprehensive
10189 public education packet to the supplier together with the notice that the supplier
10190 exceeds the lead action level. That packet includes guidance and templates for the
10191 supplier to use in preparing and distributing its public education materials. The
10192 supplier must send a copy of the public education materials that it distributes to
10193 the Agency, and the Agency reviews the copy of the materials after their
10194 distribution to the public. The Agency directly communicates to the supplier any
10195 perceived defects in the materials. When the Agency perceives minor defects, it
10196 will request correction in future distributions of the public education materials.
10197 When the Agency perceives major defects in the materials, it will request a
10198 redistribution of corrected public education materials the supplier already
10199 distributed.

10200

10201 b) Timing, format, and delivery method of public education materials.~~Delivering~~
10202 ~~Public Education Materials~~

10203

10204 1) For suppliers~~The public education materials of a supplier~~ serving a large
10205 proportion of consumers with limited English proficiency, as determined
10206 by the Agency, all public education materials required under this section

10207 ~~non-English speaking consumers~~ must contain information in the
 10208 appropriate language(s)~~languages~~ regarding the importance of the
 10209 materials and either contain information on where such consumers
 10210 may notice, or the materials must contain a telephone number or address
 10211 ~~where a water consumer may contact the supplier to~~ obtain a translated
 10212 copy of the public education materials, ~~or to request~~ assistance in the
 10213 appropriate language(s) or the materials must be in the appropriate
 10214 language(s)~~language~~.

2) Each time a~~A~~ CWS supplier exceeds~~exceeding~~ the lead action level based
 10217 on~~the basis of~~ tap water samples collected in compliance with~~under~~
 10218 Section 611.356, the supplier~~not already conducting public education~~
 10219 tasks under this Section must conduct the~~complete~~ public education tasks
 10220 under this subsection (b)(2) within 60 days after the end of the tap
 10221 sampling period in which the exceedance occurred: For CWS suppliers
 10222 that are on standard monitoring, the end of the tap sampling period is June
 10223 30 or December 31. For CWS suppliers that are required to conduct
 10224 monitoring annually or less frequently, the end of the tap sampling period
 10225 is September 30 of the calendar year in which the sampling occurs, or, if
 10226 the Agency has established an alternate four-month tap sampling period,
 10227 the last day of that period.

A) The CWS supplier must deliver written~~printed~~ materials
 10230 complying with subsection (a) to each customer receiving a bill
 10231 and to other service connections to which water is delivered by the
 10232 CWS supplier. In the case of multi-family dwellings, the CWS
 10233 supplier must deliver the written materials to each unit or post the
 10234 information at a conspicuous location~~all of its bill paying~~
 10235 ~~customers.~~

B) Methods of delivery~~Delivery~~ for a CWS supplier~~Supplier~~

i) The CWS supplier must contact consumers~~customers~~ who
 10240 are most at risk by delivering education materials
 10241 complying with subsection (a) to local public health
 10242 agencies, even if those agencies are not located within the
 10243 supplier's service area, along with an informational notice
 10244 encouraging distribution to all of the agencies~~agencies'~~
 10245 potentially affected customers or the supplier's
 10246 users~~consumers~~. The supplier must contact the local public
 10247 health agencies directly by phone, email or in person.
 10248 If~~The~~ local public health agencies may provide a specific
 10249 list of additional community-based organizations serving

10250 ~~the target~~ populations at greatest risk from lead exposure
10251 (e.g. pregnant people, children), including, ~~which may~~
10252 ~~include~~ organizations outside the service area of the
10253 supplier. ~~– If local health agencies provide lists, then~~ the
10254 supplier must deliver education materials that comply with
10255 subsection (a) to ~~all~~ each of the organizations on the
10256 provided lists.

10257
10258 ii) The CWS supplier must contact consumers ~~customers~~ who
10259 are most at risk by delivering materials complying with
10260 subsection (a) to the following organizations listed in
10261 subsections (b)(2)(H)(i) through (b)(2)(H)(~~vii~~vi) that are
10262 located within the supplier's service area, along with an
10263 informational notice encouraging distribution to all the
10264 organization's potentially affected customers or CWS
10265 supplier's users.

10266
10267 BOARD NOTE: The Board moved the text of 40 CFR
10268 141.85(b)(2)(ii)(B)(*I*) through (b)(2)(ii)(B)(~~7~~6) to appear as
10269 subsections (b)(2)(H)(i) through (b)(2)(H)(~~vii~~vi) to comport
10270 with allowed indent levels.

10271
10272 C) No less often than quarterly, the CWS supplier must provide
10273 information ~~with~~ on or in each water bill as long as the system
10274 exceeds the action level for lead. The message on the water bill
10275 must include the verbatim text of the paragraph below, except
10276 replacing the text in brackets with supplier-specific ~~system-specific~~
10277 information. ~~;~~

10278
10279 [INSERT NAME OF SUPPLIER] found elevated ~~high~~
10280 levels of lead in drinking water in some homes/buildings.
10281 Lead can cause serious health problems. For more
10282 information please contact ~~call~~ [INSERT NAME OF
10283 SUPPLIER] [or visit (INSERT SUPPLIER'S WEB-SITE
10284 HERE)].

10285
10286 The message or delivery mechanism can be modified in
10287 consultation with the Illinois Environmental Protection Agency,
10288 Division of Public Water Supply; specifically, the Agency may
10289 allow a separate mailing of public education materials to customers
10290 if the supplier ~~water system~~ cannot place the information on water
10291 bills.
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- D) The CWS supplier must post material complying with subsection (a) on the supplier's ~~Website~~Web site if the CWS supplier serves a population greater than ~~50,000~~100,000. The supplier must retain material on the website for as long as the supplier exceeds the action level.
- E) The CWS supplier must submit a press release to media outlets including newspaper, television, and radio stations. The submitted press release must state the supplier found elevated levels of lead in drinking water in some homes/buildings and meet the content requirements of subsection (a).
- F) ~~The~~In addition to subsections (b)(2)(A) through (b)(2)(E), the CWS supplier must implement at least three activities from one or more of the categories listed in subsections (b)(2)(F)(i) through (b)(2)(F)(x) below. The supplier must consult with the Agency to determine the educational content and selection of these activities.
- i) Public service announcements.
 - ii) Paid advertisements.
 - iii) Public area information displays.
 - iv) E-mails to customers.
 - v) Public meetings.
 - vi) Household deliveries.
 - vii) Targeted individual customer contact.
 - viii) Direct material distribution to all multi-family homes and institutions.
 - ix) Contact organizations representing plumbers and contractors to provide information about lead in drinking water, sources of lead, and the importance of using lead free plumbing materials.
 - x) Other Agency-approved methods.

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G) This subsection (b)(2)(G) corresponds with 40 CFR 141.85(b)(2)(vii), which USEPA marked "[reserved]". This statement maintains structural consistency with USEPA's rule. ~~For a CWS supplier that must monitor annually or less frequently, the end of the tap sampling period is September 30 of the calendar year in which the sampling occurs, or on the last day of an alternative tap sampling period the Agency sets in a SEP.~~

H) Organizations That the CWS Supplier Must Contact When Required to Do So under Subsection (b)(2)(B)(ii)

- i) Schools, childcare~~child care~~ facilities, and school boards.
- ii) Women, Infants and Children (WIC) and Head Start programs.
- iii) Public and private hospitals and medical clinics.
- vi) Pediatricians.
- v) Family planning clinics.
- vi) Local welfare agencies.
- vii) Obstetricians-gynecologists and midwives.

BOARD NOTE: This subsection (b)(2)(H) derives from 40 CFR 141.85(b)(2)(ii)(B)(1) through (b)(2)(ii)(B)(7), moved here to comport with allowed indent levels.

3) ~~A~~As long as a CWS supplier that exceeds the lead action level, ~~it~~ must repeat the activities in subsection (b)(2), until the supplier's system is at or below the lead action level based on tap water samples collected in compliance with Section 611.356. These repeated activities must be completed within 60 days of the end of each tap sampling period. A calculated 90th percentile level at or below the lead action level based on fewer than the minimum number of required samples under Section 611.356 cannot be used to meet the requirements of this subsection (b)(3). ~~as subsections (b)(3)(A) through (b)(3)(D) require.~~

~~A) The CWS supplier must repeat the tasks in subsections (b)(2)(A), (b)(2)(B), and (b)(2)(F) every 12 months.~~

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- B) ~~The CWS supplier must repeat tasks in subsection (b)(2)(C) with each billing cycle.~~
 - C) ~~The CWS supplier serving a population greater than 100,000 must post and retain material on a publicly accessible website under subsection (b)(2)(D).~~
 - D) ~~The CWS supplier must repeat the task in subsection (b)(2)(E) twice every 12 months on a schedule agreed by the Agency in a SEP. The Agency must, on a case-by-case basis, issue a SEP extending the time for the supplier to complete the public education tasks in subsection (b)(2) beyond the 60-day limit if the Agency determines that the supplier needs the extended time to implement the tasks; however, the Agency must issue the SEP granting any extension before the 60-day deadline expires.~~
- 4) Within 60 days after the end of each ~~the~~ tap sampling period in which a lead action level exceedance occurs ~~a NTNCWS supplier exceeds the lead action level (unless it already is repeating public education tasks under subsection (b)(5))~~, a NTNCWS ~~the~~ supplier must deliver the public education materials specified in subsection (a) ~~specifies~~.
- A) The NTNCWS supplier must post informational posters on lead in drinking water in a public place or common area in each of the buildings served by the supplier until the system is at or below the lead action level based on tap water samples collected in compliance with Section 611.356; and the ~~The~~ supplier must deliver the public education materials by certain means:
 - i) ~~The NTNCWS supplier must post informational posters on lead in drinking water in a public place or common area in each of the buildings the supplier serves; and~~
 - ii) ~~The NTNCWS supplier must distribute informational pamphlets or brochures on lead in drinking water to each person the NTNCWS supplier serves. The Agency may issue a SEP allowing the system to use electronic transmission in lieu of or combined with printed materials as long as the electronic transmission achieves the same or better coverage.~~
 - B) The NTNCWS supplier must distribute informational pamphlets and/or brochures on lead in drinking water to each person served

10421 by the NTNCWS supplier. The Agency may allow the supplier to
 10422 use electronic transmission in lieu of or combined with printed
 10423 materials as long as the electronic transmission achieves the same
 10424 coverage.~~For a NTNCWS supplier that must monitor annually or~~
 10425 ~~less frequently, the end of the tap sampling period is September 30~~
 10426 ~~of the calendar year in which the sampling occurs, or on the last~~
 10427 ~~day of an alternative tap sampling period the Agency sets in a SEP.~~

10428
 10429 C) For a NTNCWS suppliers on standard monitoring, the end of the
 10430 tap sampling period is June 30 or December 31. For suppliers that
 10431 must monitor annually or less frequently, the end of the tap
 10432 sampling period is September 30 of the calendar year in which the
 10433 sampling occurs, or if the Agency has established an alternate tap
 10434 sampling period, the last day of that period.

10435
 10436 5) A NTNCWS supplier must repeat the tasks in subsection (b)(4) until at
 10437 ~~least once during each calendar year in which~~ the supplier's system is at or
 10438 ~~below~~supplier exceeds the lead action level based on tap water samples
 10439 collected in compliance with Section 611.356. These repeated activities
 10440 must be completed within 60 days of the end of each tap sampling period.
 10441 A calculated 90th percentile level at or below the lead action level based on
 10442 fewer than the minimum number of required samples under Section
 10443 611.356 cannot be used to meet the requirements of this provision.~~The~~
 10444 ~~Agency must, on a case by case basis, issue a SEP extending the time for~~
 10445 ~~the supplier to complete the public education tasks in subsection (b)(2)~~
 10446 ~~beyond the 60-day limit if the Agency determines that the extended time is~~
 10447 ~~needed for implementation purposes; however, the Agency must issue any~~
 10448 ~~SEP granting any extension before the 60-day deadline expires.~~

10449
 10450 6) A supplier may discontinue delivery of~~stop delivering~~ public education
 10451 materials if after the supplier's system is at or below~~supplier does not~~
 10452 ~~exceed~~ the lead action level during the most recent six-month tap sampling
 10453 period conducted~~monitoring cycle~~ under Section 611.356. Such a~~The~~
 10454 supplier must recommend~~begin~~ public education in compliance with~~anew~~
 10455 ~~under~~ this Section if the supplier subsequently exceeds the lead action
 10456 level during any tap sampling period.

10457
 10458 7) A ~~CWS~~ supplier may request an extension from~~apply to~~ the Agency, in
 10459 writing, to complete the activities in subsection (b)(2)(B) through (F) for
 10460 CWS suppliers or subsections (b)(4)(A) and (B) for NTNCWS suppliers
 10461 as follows:~~to use only the text in subsection (a)(1) in lieu of the text in~~
 10462 ~~subsections (a)(1) and (a)(2) and to perform the tasks in subsections (b)(4)~~
 10463 ~~and (b)(5) in lieu of the tasks in subsections (b)(2) and (b)(3) under~~

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~~specific circumstances:~~

- A) The extension must be approved in writing by the Agency before the 60 day deadline~~The supplier is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices; and~~
 - B) The Agency may only grant the extension on a case-by-case basis if the system has demonstrated that it is not feasible to complete the activities in subsections (b)(2)(B) through (F) for CWS suppliers or subsections (b)(4)(A) and (B) for NTNCWS suppliers;~~The supplier provides water as part of the cost of services provided, not separately charging for water consumption.~~
 - C) The activities in subsections (b)(2) or (4) must be completed no later than six months after the end of the tap sampling period in which the exceedance occurred.
- 8) A CWS supplier meeting the criteria of subsections (b)(8)(A) and (b)(8)(B) may apply to the Agency, in writing (unless the Agency has waived the requirement for prior Agency approval), to perform the tasks listed in subsections (b)(4) and (b)(5) in lieu of the tasks in subsections (b)(2) and (b)(3) if:~~serving 3,300 or fewer people may limit certain aspects of its public education programs:~~
- A) The supplier is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point-of-use treatment devices; and~~For notice under subsection (b)(2)(F), a supplier serving 3,300 or fewer people must implement at least one of the activities in that subsection.~~
 - B) The supplier provides water as part of the cost of services provided and does not separately charge for water consumption.~~For notice under subsection (b)(2)(B), a supplier serving 3,300 or fewer people may limit the distribution of the public education materials to facilities and organizations that pregnant women and children are most likely to visit.~~
 - C) ~~For notice under subsection (b)(2)(E), the Agency may issue a SEP waiving this requirement for a supplier serving 3,300 or fewer~~

~~persons, as long as the supplier distributes notices to every household the supplier serves.~~

9) A CWS supplier serving 3,300 or fewer persons may limit certain aspects of their public education programs as follows:

A) With respect to the requirements of subsection (b)(2)(B), a supplier serving 3,300 or fewer persons may limit the distribution of the public education materials required under subsection (b)(2)(B) to facilities and organizations served by the supplier that are most likely to be visited regularly by pregnant people and children.

B) With respect to the requirements of subsection (b)(2)(E), the Agency may waive this requirement for suppliers serving 3,300 or fewer persons as long as the supplier distributes notices to every household served by the system.

C) With respect to the requirements of subsection (b)(2)(F), a supplier serving 3,300 or fewer persons must implement at least one of the activities listed in subsection (b)(2)(F).

c) ~~Supplemental monitoring and notification results.—A supplier failing to meet the lead action level in tap samples under Section 611.356 must offer to sample the tap water of any customer requesting it. The supplier needs not pay for collecting or analyzing the sample, nor must the supplier itself collect and analyze the sample.~~

1) A supplier that exceeds the lead action level based on tap samples collected in compliance with Section 611.356 must offer to sample for lead in the tap water of any person served by the supplier who requests it. At sites served by a lead, galvanized requiring replacement, or lead status unknown service line, the samples must capture both water in contact with premise plumbing and water in contact with the service line (e.g., first- and fifth-liter samples).

2) Suppliers must offer to sample for lead in the tap water of any person served by a lead, galvanized requiring replacement, or lead status unknown service line who requests it, regardless of whether the supplier's water system exceeds the lead action level. The samples must capture both water in contact with premise plumbing and water in contact with the service line (e.g., first- and fifth-liter samples).

10548 3) All suppliers must provide a consumer notice of the individual tap results
10549 from supplemental tap water monitoring carried out under the
10550 requirements of this subsection (c) to the persons served by the supplier at
10551 the specific sampling site from which the sample was taken (e.g., the
10552 occupants of the building where the tap was sampled). Suppliers must
10553 provide the consumer notice in compliance with the requirements of
10554 subsections (d)(2) through (d)(4).
10555

10556 d) Notification of results.~~Requirement for Consumer Notice of Tap Water~~
10557 ~~Monitoring Results~~
10558

10559 1) ~~Consumer~~ Notice requirement~~Requirement.~~ All suppliers~~A supplier~~ must
10560 provide a consumer notice of the individual tap results from any lead and
10561 copper tap water monitoring under Section 611.356 to the persons served
10562 by the supplier~~water system serves~~ at the specific sampling site from
10563 which the ~~supplier took the~~ sample was taken (e.g., the occupants of the
10564 building where the supplier sampled the tap).
10565

10566 2) Timing of ~~Consumer~~ Notice. The supplier must provide the consumer
10567 notice as soon as practicable but no later than three business days after the
10568 supplier learns of the tap monitoring results. Notification by mail must be
10569 postmarked within three business days of the supplier learning the tap
10570 monitoring results.~~the specified timeframe:~~
10571

10572 A ~~For individual samples not exceeding 15 µg/L of lead, no later than~~
10573 ~~30 days after the supplier learns of the tap monitoring results.~~

10574 B) ~~For individual samples exceeding 15 µg/L of lead, as soon as~~
10575 ~~practicable but no later than three calendar days after the supplier~~
10576 ~~learns of the tap monitoring results. A supplier choosing to mail~~
10577 ~~the notification must post those letters so they receive postmarks~~
10578 ~~within the three days.~~
10579

10580 3) Content of notice~~Consumer Notice.~~ ~~The consumer notice must include the~~
10581 ~~results of lead tap water monitoring for the tap the supplier tested, an~~
10582 ~~explanation of the health effects of lead, a list of steps consumers can take~~
10583 ~~to reduce exposure to lead in drinking water, and contact information for~~
10584 ~~the water utility. The notice must also provide the maximum contaminant~~
10585 ~~level goal and the action level for lead and the definitions for these two~~
10586 ~~terms from Section 611.883(c).~~
10587

10588 A) The consumer notice for lead must include the results of lead tap
10589 water monitoring for the tap that was tested, an explanation of the
10590

10591 health effects of lead that meets the requirements of subsection
10592 (a)(1)(B), information on possible sources of lead in drinking water
10593 that meets the requirements of subsection (a)(1)(C)(ii), a list of
10594 steps consumers can take to reduce exposure to lead in drinking
10595 water that meets the requirements of subsection (a)(1)(D), and
10596 contact information for the supplier. The notice must also provide
10597 the maximum contaminant level goal and the action level for lead
10598 and the definitions for these two terms from Section 611.883(c).

10599
10600 B) The consumer notice for copper must include the results of copper
10601 tap water monitoring for the tap that was tested, an explanation of
10602 the health effects of copper as provided in 611.APPENDIX H, a list
10603 of steps consumers can take to reduce exposure to copper in
10604 drinking water, and contact information for the supplier. The
10605 notice must also provide the maximum contaminant level goal and
10606 the action level for copper and the definitions for these two terms
10607 from Section 611.883(c).
10608

10609 4) Delivery of ~~Notice.~~Consumer Notice Suppliers must provide consumer
10610 notice to persons served at the tap that was sampled. The notice must be
10611 provided electronically (e.g., email or text message), by phone call or
10612 voice message, hand delivery, by mail, or another method approved by the
10613 Agency. For example, upon approval by the Agency, a NTNCWS
10614 supplier can post the results in a conspicuous area, such as on a bulletin
10615 board, in the facility to allow users to review the information. Suppliers
10616 that choose to deliver the notice to consumers by phone call or voice
10617 message must follow up with a written notice to consumers hand delivered
10618 or postmarked within 30 days of the supplier learning of the tap
10619 monitoring results. The notices of lead and copper tap sampling results
10620 may be combined in one notice.

10621
10622 ~~A) For tap sampling lead results not exceeding 15 µg/L, the supplier~~
10623 ~~must provide the consumer notice to persons it serves at the tap the~~
10624 ~~supplier sampled, by mail or by another method the Agency~~
10625 ~~approves in a SEP. For example, upon Agency approval, a~~
10626 ~~NTNCWS supplier could post the results on a bulletin board in the~~
10627 ~~facility enabling users to review the information.~~

10628
10629 ~~B) For tap sampling lead results exceeding 15 µg/L, the supplier must~~
10630 ~~provide consumer notice to persons it serves at the tap the supplier~~
10631 ~~sampled; the supplier must provide this notice electronically or by~~
10632 ~~phone, hand delivery, mail, or another method the Agency~~
10633 ~~approves in a SEP.~~

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- e) Notification~~Notice~~ of service line that is known to or may potentially contain lead.~~Known or Potential Service Line Containing Lead~~
- 1) Notification~~Notice~~ requirements. ~~All suppliers with~~A supplier having lead, galvanized requiring replacement, or lead status unknown service lines in their inventory under Section 611.354(a) and 611.354(b) must provide notification of a service line that is known to or may potentially contain lead to customers and~~inform~~ all persons served by the supplier at the service connection with~~the supplier serves through~~ a lead, galvanized requiring replacement, or lead status unknown service line.
 - 2) Timing of notification~~notice~~. A supplier must provide notification no later than~~the initial notice within~~ 30 days after completing the baseline~~lead service line~~ inventory required under Section 611.354(a)(2) and repeat the notice no later than 30 days after the deadline for each annual update to the service line inventory under Section 611.360(e)(4)~~Section 611.354~~ requires ~~and annually repeat the notice to each person the supplier serves~~ until the supplier's entire service connection is no longer a lead, galvanized requiring replacement, or lead status unknown service line. For notice to~~each~~ new customers~~customer~~, suppliers~~the supplier~~ must also provide the notice at the time-of-service initiation.~~when the supplier initiates service.~~
 - 3) Notice content.~~Content~~
 - A) Persons served by a supplier with confirmed lead service line or galvanized requiring replacement service lines. The notice must include: the Supplier Serves Through a Confirmed Lead Service Line. ~~The notice must state that the supplier serves the person through a lead service line; explain the health effects of lead in a way complying with subsection (a)(1)(B); give steps persons at the service connection can take to reduce exposure to lead in drinking water; inform about opportunities to replace lead service lines, including programs providing financing solutions to assist property owners to replace the customer-owned portion of a lead service line; and explain that the supplier must replace the supplier-owned portion of a lead service line when the property owner notifies the supplier that the owner will replace the customer-owned portion of the lead service line.~~
 - i) A statement that the person's service line is lead or galvanized requiring replacement as applicable.

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- ii) An explanation of the health effects of lead that meets the requirements of subsection (a)(1)(B).
 - iii) Steps persons at the service connection can take to reduce exposure to lead in drinking water that meet the requirements of subsection (a)(1)(D).
 - iv) A statement that the consumer can request to have their tap water sampled in compliance with subsection (c).
 - v) Include information on how to obtain a copy of the service line replacement plan or view the plan on the internet if the system is required to make the service line replacement plan available online.
 - vi) Information about opportunities to replace lead and galvanized requiring replacement service lines. Where the supplier intends for customer payment for a portion of the replacement where it is required or authorized by the Agency or local law or a water tariff agreement, the notice must include information about programs that provide financing solutions to assist property owners with replacement of their portion of a lead or galvanized requiring replacement service line.
 - vii) A statement that the supplier is required to replace its portion of a lead or galvanized requiring replacement service line when the property owner notifies the supplier that they are replacing their portion of the lead or galvanized requiring replacement service line.
 - viii) A statement that provides instructions for the customer to notify the supplier if they disagree with the service line material categorization in the inventory.
- B) Persons served by a lead status unknown service line. The notice must include a statement that the person's service line material is unknown but may be lead, the information in subsections (e)(3)(A)(ii) through (v), and information about opportunities to verify the material of the service line.~~Persons the Supplier Serves Through a Galvanized Requiring Replacement Service Line. The notice must state that the supplier serves the person through a~~

10720 galvanized requiring replacement service line, explain the health
10721 effects of lead in a way complying with subsection (a)(1)(B), give
10722 steps persons at the service connection can take to reduce exposure
10723 to lead in drinking water, and inform about opportunities to replace
10724 the service line.

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10726 ~~C~~ ~~Persons the Supplier Serves Through a Lead Status Unknown~~
10727 ~~Service Line. The notice must state that the supplier serves the~~
10728 ~~person through a lead status unknown service line (a service line~~
10729 ~~whose material is unknown but may be lead), explain the health~~
10730 ~~effects of lead in a way complying with subsection (a)(1)(B), give~~
10731 ~~steps persons at the service connection can take to reduce exposure~~
10732 ~~to lead in drinking water, and inform about opportunities to verify~~
10733 ~~the material of the service line.~~

10734
10735 4) Delivery. The supplier must provide notice to customers and persons the
10736 supplier serves at the service connection with a lead, galvanized requiring
10737 replacement, or lead status unknown service line, by mail or using another
10738 method approved by the Agency ~~approves in a SEP~~.

10739
10740 f) Notification due~~Notice Due~~ to a disturbance to~~Disturbing~~ a service line that is
10741 known~~Service Line Known~~ to or may potentially contain lead.~~or Potentially~~
10742 Containing Lead

10743
10744 1) Suppliers that cause a disturbance to~~A supplier disturbing~~ a lead,
10745 galvanized requiring replacement, or lead status unknown service line ~~by a~~
10746 ~~water shutoff or bypass to the service line, such as operating a valve on the~~
10747 ~~service line or meter setter, without partially or fully replacing the lead~~
10748 ~~service line~~ must provide customers and the~~inform the~~ persons served by
10749 the supplier ~~at~~~~serves through~~ the service connection with information
10750 about the potential for ~~an~~ elevated lead levels~~concentration in their~~
10751 drinking water as a result of the disturbance. Actions taken by a supplier
10752 that cause a disturbance include actions that result in a shut off or bypass
10753 of water to an individual service line or a group of service lines (e.g.,
10754 operating a valve on a service line or meter setter, or reconnecting a
10755 service line to the main) or other actions that cause a disturbance to a
10756 service line or group of service lines, such as undergoing physical action
10757 or vibration, that could result in pipe scale dislodging and associated
10758 release of particulate lead. The provided information must include:~~due to~~
10759 ~~the supplier disturbing the service line, including instructions for flushing~~
10760 ~~to remove particulate lead. The supplier must comply with this subsection~~
10761 ~~(f)(1) before returning the affected service line to service.~~

10762

- 10763 A) Public education materials that meet the content requirements in
 10764 subsections (a)(1)(B) through (D) and (F) and contact information
 10765 for the supplier; and
 10766
- 10767 B) Instructions for a flushing procedure to remove particulate lead.
 10768
- 10769 2) If ~~the disturbance of a supplier disturbs~~ a lead, galvanized requiring
 10770 replacement, or lead status unknown service line results from the
 10771 supplier's replacement of~~while replacing~~ an inline water meter, a water
 10772 meter setter, or connector or from the replacement of a water main where
 10773 the service line pipe is physically cut,~~gooseneck, pigtail, or connector,~~ the
 10774 supplier must provide~~inform~~ the persons served by~~the supplier serves~~
 10775 ~~through~~ the supplier at the service connection with the information in
 10776 subsections (f)(1)(A) and (B) and~~about the potential for an elevated lead~~
 10777 ~~concentration in their drinking water due to the supplier disturbing the~~
 10778 ~~service line, provide public education materials complying with subsection~~
 10779 ~~(a), a pitcher filter or point-of-use treatment device certified by an~~
 10780 American National Standards Institute accredited certifier to reduce lead,
 10781 ~~use instructions to use the filter, and six months of replacement~~ filter
 10782 replacement cartridges.~~The supplier must comply with this subsection~~
 10783 ~~(f)(2) before returning the affected service line to service.~~
 10784
- 10785 3) Notice.~~A supplier partially or fully replacing a lead service line must~~
 10786 ~~follow applicable procedures in Section 611.354(d)(1)(A) through~~
 10787 ~~(d)(1)(D) or (e)(1)(A) through (e)(1)(D).~~
 10788
- 10789 A) Persons at the service connection. The supplier must comply with
 10790 the requirements in this subsection (f) for persons served by the
 10791 supplier's water system at the service connection before any
 10792 service line that has been shut off or bypassed is returned to
 10793 service. Where there was a disturbance, but service was not shut
 10794 off or bypassed, the supplier must comply with the requirements in
 10795 this subsection (f) as soon as possible, but not to exceed 24 hours
 10796 following the disturbance.
 10797
- 10798 B) Customers. The supplier must comply with subsection (f)(1) for
 10799 customers associated with the service connection who are not
 10800 persons served by the suppliers at the service connection (e.g., a
 10801 customer who is a property owner and renting their property) no
 10802 later than 30 days following the disturbance.
 10803
- 10804 4) A supplier that conducts a partial or full replacement of a lead or
 10805 galvanized requiring replacement service line must follow procedures in

10806 compliance with Section 611.354(h). Partial or full replacement of a lead
10807 or galvanized requiring replacement service line is not considered a
10808 "disturbance" for purposes of this subsection (f).
10809

10810 g) This subsection (g) corresponds with 40 CFR 141.85(g), which USEPA marked
10811 "[reserved]". This statement maintains structural consistency with USEPA's
10812 rule.~~Information for Persons the Supplier Serves Through a Service Line Known~~
10813 ~~to or Potentially Containing Lead When the Supplier Exceeds the Lead Trigger~~
10814 ~~Level~~

10815
10816 1) ~~Content.—A supplier having lead service lines and exceeding the lead~~
10817 ~~trigger level of 10 µg/L must inform persons the supplier serves through a~~
10818 ~~lead, galvanized requiring replacement, or lead status unknown service~~
10819 ~~line about the supplier's lead service line replacement program and~~
10820 ~~opportunities for replacing the customer's lead service line.~~

10821
10822 2) ~~Timing.—The supplier must inform persons it serves within 30 days after~~
10823 ~~the end of the tap sampling period during which the supplier exceeded the~~
10824 ~~lead trigger level. The supplier must continue to annually inform the~~
10825 ~~persons it serves until the results of sampling under Section 611.356 do~~
10826 ~~not exceed the lead trigger level.~~

10827
10828 3) ~~Delivery.—The supplier must inform the persons it serves through a lead,~~
10829 ~~galvanized requiring replacement, or lead status unknown service line by~~
10830 ~~mail or another method the Agency approves in a SEP.~~

10831
10832 h) Outreach activities to encourage participation in full service line
10833 replacement.~~Activities for Failing to Fulfill the Lead Service Line Replacement~~
10834 ~~Goal~~

10835
10836 1) CWS suppliers that do not meet the service line replacement rate
10837 calculated across a cumulative period as required under 611.354(d)(5)
10838 must conduct at least one outreach activity listed in subsection (h)(2) to
10839 discuss their mandatory service line replacement program and
10840 opportunities for replacement and to distribute public education materials
10841 that meet the content requirements in subsection (a) except subsections
10842 (a)(1)(A) and (E). The supplier must conduct the activity in the year
10843 following the program year for which the supplier does not meet their
10844 cumulative average replacement rate and annually thereafter until the
10845 supplier meets the cumulative average replacement rate or until there are
10846 no lead, galvanized requiring replacement, or lead status unknown service
10847 lines remaining in the inventory, whichever occurs first.~~In the first year~~
10848 ~~after a CWS supplier serving more than 10,000 persons does not fulfill its~~

10849 required annual lead service line replacement goal under Section
10850 611.354(f), the supplier must conduct one outreach activity from among
10851 those in subsections (h)(1)(A) through (h)(1)(B). The supplier must
10852 annually conduct an outreach activity under this subsection (h)(1) until the
10853 supplier fulfills its replacement goal or until tap sampling shows that its
10854 90th percentile lead concentration does not exceed the trigger level of 10
10855 µg/L for two consecutive tap monitoring cycles:

- 10856
- 10857 A) ~~Send certified mail to customers the supplier serves through a lead~~
10858 ~~or galvanized requiring replacement service line to inform them~~
10859 ~~about the supplier's goal-based program for replacing lead service~~
10860 ~~lines and opportunities for replacing the customer's service line.~~
- 10861
- 10862 B) ~~Conduct a townhall meeting.~~
- 10863
- 10864 C) ~~Participate in a community event providing information about the~~
10865 ~~supplier's program for replacing lead service lines and distribute~~
10866 ~~public education materials whose content complies with subsection~~
10867 ~~(a).~~
- 10868
- 10869 D) ~~Contact customers by phone, text message, email, or door hanger.~~
- 10870
- 10871 E) ~~Use another method the Agency approves in a SEP to discuss the~~
10872 ~~supplier's program for replacing lead service lines and~~
10873 ~~opportunities for replacing the customer's lead service line.~~

10874

10875 2) For CWS suppliers serving more than 3,300 persons, the outreach activity
10876 must be one of the activities identified in subsections (h)(2)(A) through
10877 (D) or the supplier must conduct two activities listed in subsections
10878 (h)(2)(E) through (H). For CWS suppliers serving 3,300 persons or fewer,
10879 the outreach activity must be one of the activities identified in subsections
10880 (h)(2)(A) through (H).~~Following the first year after the supplier exceeds~~
10881 ~~the lead trigger level, a supplier still failing to fulfill its goal for replacing~~
10882 ~~lead service lines must conduct one activity from subsection (h)(1) and~~
10883 ~~two additional outreach activities each year from among those in~~
10884 ~~subsections (h)(2)(A) through (h)(2)(D):~~

- 10885
- 10886 A) ~~Conduct a public meeting.~~ Conduct a public meeting. ~~social media campaign.~~
- 10887
- 10888 B) Participate in a community event to provide information about its
10889 service line replacement program. ~~Conduct outreach via newspaper,~~
10890 ~~television, or radio.~~

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- C) Contact customers by phone call or voice message, text message, email, or door hanger.~~Contact organizations representing plumbers and contractors by mail providing information about lead in drinking water, including health effects, sources of lead, and the importance of using lead-free plumbing materials.~~
 - D) Use another method approved by the Agency to discuss the service line replacement program and opportunities for lead and galvanized requiring replacement service line replacement.~~Visit targeted customers to discuss the supplier's program for replacing lead service lines and opportunities for replacing the customers' lead service lines.~~
 - E) Send certified mail to customers and all persons served by the supplier at the service connection with a lead or galvanized requiring replacement service line to inform them about the supplier's service line replacement program and opportunities for replacement of the service line.
 - F) Conduct a social media campaign.
 - G) Conduct outreach via the media including newspaper, television, or radio.
 - H) Visit targeted customers (e.g., customers in areas with lower service line replacement participation rates) to discuss the service line replacement program and opportunities for replacement of the service line.
- 3) ~~The supplier may stop outreach activities when tap sampling shows that its 90th percentile lead concentration no longer exceeds the trigger level of 10 µg/L for two consecutive tap monitoring cycles or when all customers the supplier serves through lead or galvanized requiring replacement service lines refuse to participate in replacing the customer-owned portion under the supplier's program for replacing lead service lines. Under this subsection (h)(3), a refusal includes a customer-signed statement refusing to participate in replacing the customer-owned portion of the lead service line or supplier-generated documents memorializing the customer's verbal refusal or non-response after two good faith attempts by the supplier to reach the customer.~~
- i) Public education to local and state health agencies.~~Education to Local and State Health Agencies~~

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- 1) Supplier distribution system and site assessment results~~Find and Fix Results.~~ All~~A~~ CWS suppliers~~supplier~~ must inform the Department of Public Health and local health agencies about its Distribution System and Site Assessment~~find and fix~~ activities conducted in compliance with~~under~~ Section 611.352(j), including the location of the tap sample sites that exceeded .010 mg/L~~exceeding 15 µg/L~~, the results of the~~from~~ initial tap samples, the results of the~~from~~ follow-up tap samples, the results of~~from~~ water quality parameter monitoring, and any distribution system management actions or corrosion control treatment adjustments the supplier made.

 - 2) Timing and Content. A CWS supplier must annually send Distribution System and Site Assessment information and copies of the public education materials the supplier provided under subsections (a) and (h)~~(+)~~ for actions conducted in the previous~~during a~~ calendar year no later than July 1 of the following year.

 - 3) Delivery. The CWS suppliers~~supplier~~ must send the public education materials and Distribution System and Site Assessment~~find and fix~~ information to the Department of Public Health and local health agencies by mail, email, or by any other~~another~~ method approved by the Agency ~~approves in a SEP.~~
- j) Additional requirements for suppliers with multiple lead action level exceedances.~~Public Education for Small Supplier Compliance Flexibility POU Devices~~
- 1) A supplier that exceeds the lead action level at least three times in a rolling five-year period, based on tap water samples collected in compliance with Section 611.356 must conduct the activities in this section. The first rolling five-year period begins on the compliance date in Section 611.350(a)(3). If a supplier exceeds the lead action level at least three times within a five-year period, the supplier must conduct these actions upon the third action level exceedance even if the rolling five-year period has not elapsed.~~Content. A small CWS or NTNCWS supplier implementing the POU device option under Section 611.363 must provide public education materials to inform users how to properly use POU devices to maximize the units' effectiveness in reducing the lead concentration in drinking water.~~

 - 2) No later than 60 days after the tap sampling period in which a supplier meets the criteria of subsection (j)(1), a supplier must make available to all

10978 consumers pitcher filters or point-of-use devices certified by an American
10979 National Standards Institute accredited certifier to reduce lead, six months
10980 of replacement cartridges, and instructions to use. A supplier must
10981 continue to make replacement cartridges available until the supplier may
10982 discontinue actions in compliance with subsection (j)(6).~~Timing. The~~
10983 ~~supplier must provide its public education materials when the supplier~~
10984 ~~delivers the POU device.~~
10985

10986 3) No later than 60 days after a supplier exceeds the lead action level for the
10987 second time in a rolling five-year period, the supplier must submit a filter
10988 plan to the Agency. The Agency must review and approve the filter plan
10989 within 60 days. If the supplier subsequently meets the criteria of
10990 subsection (j)(1) again, the supplier is not required to re-submit the filter
10991 plan, unless the supplier has made updates to the plan or otherwise
10992 requested by the Agency. The plan must include:~~Delivery. The supplier~~
10993 ~~must provide its public education materials in person, by mail, or another~~
10994 ~~method the Agency approves in a SEP, to persons at the locations where~~
10995 ~~the supplier delivers the POU devices.~~
10996

10997 A) A description of which methods the supplier will use to make
10998 filters and replacement cartridges available in compliance with
10999 subsection (j)(2) (e.g., operating distribution facilities, delivering
11000 filters when requested by the consumer); and
11001

11002 B) A description of how the supplier will address any barriers to
11003 consumers obtaining filters.
11004

11005 4) A supplier that meets the criteria of subsection (j)(1) must conduct a
11006 community outreach activity to discuss the multiple lead action level
11007 exceedances, steps the supplier is taking to reduce lead in drinking water,
11008 measures consumers can take to reduce their risk consistent with the
11009 content requirements of subsection (a)(1)(D), and how to obtain a filter
11010 certified to reduce lead as required in subsection (j)(2). This activity is in
11011 addition to the public education activities required under subsection (b)(2)
11012 for CWS suppliers, and under subsection (b)(4) for NTNCWS suppliers,
11013 that exceed the lead action level. The supplier must conduct at least one
11014 activity from subsections (j)(4)(A) through (E) within six months of the
11015 start of the tap sampling period after the most recent lead action level
11016 exceedance. The supplier must conduct at least one of the activities in
11017 subsections (j)(4)(A) through (E) every six months until the supplier no
11018 longer meets the criteria of subsection (j)(1).
11019

11020 A) Conduct a public meeting.

- 11021
- 11022 B) Participate in a community event where the supplier can make
- 11023 information about ongoing lead exceedances available to the
- 11024 public.
- 11025
- 11026 C) Contact customers by phone call or voice message, text message,
- 11027 email, or door hanger.
- 11028
- 11029 D) Conduct a social media campaign.
- 11030
- 11031 E) Use another method approved by the Agency.
- 11032
- 11033 5) A supplier that is already conducting an outreach activity listed in
- 11034 subsection (j)(4) in order to meet the requirements of subsection (h) may
- 11035 conduct one activity that meets the requirements of subsections (j)(4) and
- 11036 (h), unless otherwise directed by the Agency.
- 11037
- 11038 6) A supplier may discontinue the requirements of this subsection (j) when
- 11039 the supplier no longer has at least three lead action level exceedances in a
- 11040 rolling five-year period, based on tap water samples collected in
- 11041 compliance with Section 611.356. A calculated 90th percentile level at or
- 11042 below the lead action level based on fewer than the minimum number of
- 11043 required samples under Section 611.356 cannot be used to meet the
- 11044 requirements of this subsection (j)(6). The Agency has the discretion to
- 11045 allow a supplier to discontinue the requirements of this subsection (j)
- 11046 earlier if the supplier has taken actions to reduce lead levels (e.g., re-
- 11047 optimized optimal corrosion control treatment or completed the service
- 11048 line replacement program) and the supplier is at or below the lead action
- 11049 level for two consecutive tap monitoring periods.

11050
11051 BOARD NOTE: This Section derives from 40 CFR 141.85.

11052
11053 (Source: Amended at 50 Ill. Reg. _____, effective _____)

11054
11055 **Section 611.356 Tap Water Monitoring for Lead and Copper**

11056
11057 All suppliers must sample for lead and copper at taps used to provide water for human

11058 consumption in compliance with the requirements of this section.

11059
11060 a) Sampling ~~site location~~ **Site Location**

- 11061
- 11062 1) By the start of the first tap monitoring period in which sampling for lead
- 11063 and copper is required under subsections (c) and (d), each supplier must

11064 identify potential tap sampling sites and submit a site sample plan to the
 11065 Agency as required in Section 611.360(a)(1)(A). The Agency may require
 11066 modifications to submitted site sample plans. Each supplier must identify
 11067 a pool of tap sampling sites that will allow the supplier to collect the
 11068 number of lead and copper tap samples required in subsections (c)(1) and
 11069 (d)(1).~~Selecting a Pool of Targeted Sampling Sites~~

11070
 11071 A) To select sampling sites, a supplier must use information regarding
 11072 the material of service lines and connectors, including lead, copper,
 11073 and galvanized iron or steel, required to be collected under Section
 11074 611.354.~~Before the applicable date for beginning monitoring under~~
 11075 ~~subsection (d)(1), a supplier must identify a pool of targeted~~
 11076 ~~sampling sites complying with this Section based on the service~~
 11077 ~~line inventory the supplier developed under Section 611.354(a).~~

11078
 11079 B) Suppliers must identify locations in the site sample plan by
 11080 selecting from sites in the highest tier, unless the site has been
 11081 found to be unavailable, in compliance with subsection (a)(4).~~The~~
 11082 ~~pool of targeted sampling sites must be large enough to ensure that~~
 11083 ~~the supplier can collect the number of lead and copper tap samples~~
 11084 ~~subsection (c) requires.~~

11085
 11086 C) Sampling sites cannot include sites with installed point-of-entry
 11087 (POE) treatment devices or taps with point-of-use devices designed
 11088 to remove inorganic contaminants, except in supplier's water
 11089 systems using these devices at all service connections for primary
 11090 drinking water taps to meet other primary and secondary drinking
 11091 water standards under Section 611.363(c)(1).~~The supplier may not~~
 11092 ~~include among its sampling sites any with installed POE treatment~~
 11093 ~~devices, and the tap the supplier uses at a sampling site may not~~
 11094 ~~have a POU device designed to remove inorganic contaminants.~~
 11095 ~~The exceptions are that a supplier monitoring under Section~~
 11096 ~~611.363(a)(3)(D) and a supplier using a POE or POU device for~~
 11097 ~~the primary drinking water tap to meet other primary and~~
 11098 ~~secondary drinking water standards may sample the connected tap~~
 11099 ~~if all service connections on the supplier's system have a POE or~~
 11100 ~~POU device to provide localized treatment to comply with those~~
 11101 ~~other drinking water standards.~~

11102
 11103 ~~D) A supplier monitoring under Section 611.363(a)(3)(D) may not use~~
 11104 ~~lead and copper sampling results to fulfill the criteria for reduced~~
 11105 ~~monitoring under subsection (d)(4).~~

11106

11107 2) A supplier that has fewer than five sites with drinking water taps that can
11108 be used for human consumption meeting the sample site criteria of this
11109 subsection (a) to reach the required number of sample sites listed in
11110 subsections (c)(1) and (d)(1), must collect at least one sample from each
11111 tap and collect additional samples from those taps on different days during
11112 the tap sampling period to meet the required number of sites.
11113 Alternatively, the Agency may allow these suppliers to collect a number of
11114 samples fewer than the number of sites specified in subsections (c)(1) and
11115 (d)(1), provided that 100 percent of all taps that can be used for human
11116 consumption are sampled. The Agency must approve this reduction of the
11117 minimum number of samples in writing based on a request from the
11118 supplier or onsite verification by the Agency.~~Materials Evaluation. A~~
11119 ~~supplier must use the information on lead, copper, and galvanized iron or~~
11120 ~~steel it identified under 40 CFR 141.42(d) when conducting a materials~~
11121 ~~evaluation and the information on lead service lines that Section~~
11122 ~~611.354(a) requires the supplier to collect to identify potential lead service~~
11123 ~~line sampling sites.~~

11124
11125 ~~BOARD NOTE: Suppliers completed identifying and reporting~~
11126 ~~construction materials in their distribution systems under 40 CFR~~
11127 ~~141.42(d), so the Board omitted this requirement from the Illinois rules.~~
11128

11129 3) A supplier serving sites with premise plumbing made of lead and/or that
11130 are served by a lead service line must collect all samples for monitoring
11131 under this section from sites with premise plumbing made of lead and/or
11132 served by a lead service line. A supplier that cannot identify enough
11133 sampling sites with premise plumbing made of lead and/or served by lead
11134 service lines to meet the minimum number of sites required in subsections
11135 (c)(1) and (d)(1) must still collect samples from every available site, in
11136 compliance with subsection (a)(4), containing premise plumbing made of
11137 lead and/or served by a lead service line and collect the remaining samples
11138 in compliance with the tiering requirements under subsection
11139 (a)(4).~~Sampling Site Tiers. A supplier must categorize the sampling sites~~
11140 ~~within its pool according to tiers:~~

11141
11142 ~~A) CWS Tier 1 Sampling Sites. "CWS Tier 1 sampling sites" include~~
11143 ~~single family structures the supplier serves through a lead service~~
11144 ~~line. The supplier must not use sites with lead status unknown~~
11145 ~~service lines as Tier 4 sampling sites.~~

11146
11147 ~~BOARD NOTE: This subsection (a)(3)(A) derives from segments~~
11148 ~~of 40 CFR 141.86(a)(3).~~
11149

11150 B) ~~CWS Tier 2 Sampling Sites. "CWS Tier 2 sampling sites" include~~
11151 ~~buildings, including multiple family structures, the supplier serves~~
11152 ~~through a lead service line. The supplier must not use sites with~~
11153 ~~lead status unknown service lines as Tier 2 sampling sites.~~

11154
11155 BOARD NOTE: ~~This subsection (a)(3)(B) derives from segments~~
11156 ~~of 40 CFR 141.86(a)(4).~~

11157
11158 C) ~~CWS Tier 3 Sampling Sites. "CWS Tier 3 sampling sites" include~~
11159 ~~single family structures containing galvanized service lines the~~
11160 ~~supplier identified as currently or formerly downstream of a lead~~
11161 ~~service line or known to be downstream of a lead gooseneck,~~
11162 ~~pigtail, or connector. The supplier must not use sites with lead~~
11163 ~~status unknown service lines as Tier 3 sampling sites.~~

11164
11165 BOARD NOTE: ~~This subsection (a)(3)(C) derives from segments~~
11166 ~~of 40 CFR 141.86(a)(5).~~

11167
11168 D) ~~CWS Tier 4 Sampling Sites. "CWS Tier 4 sampling sites" include~~
11169 ~~single family structures or buildings containing copper pipes with~~
11170 ~~lead solder installed before June 19, 1986. The supplier must not~~
11171 ~~use sites with lead status unknown service lines as Tier 4 sampling~~
11172 ~~sites.~~

11173
11174 BOARD NOTE: ~~This subsection (a)(3)(D) derives from segments~~
11175 ~~of 40 CFR 141.86(a)(6).~~

11176
11177 E) ~~CWS Tier 5 Sampling Sites. "CWS Tier 5 sampling sites" include~~
11178 ~~single family structures, including multiple family residences,~~
11179 ~~representing sites throughout the supplier's distribution system.~~
11180 ~~The supplier must not use sites with lead status unknown service~~
11181 ~~lines as Tier 5 sampling sites.~~

11182
11183 BOARD NOTE: ~~This subsection (a)(3)(E) derives from segments~~
11184 ~~of 40 CFR 141.86(a)(7).~~

11185
11186 F) ~~NTNCWS Tier 1 Sampling Sites. "NTNCWS Tier 1 sampling~~
11187 ~~sites" include sites that the supplier serves through a lead service~~
11188 ~~line. The supplier must not use sites with lead status unknown~~
11189 ~~service lines as Tier 1 sampling sites.~~

11190
11191 BOARD NOTE: ~~This subsection (a)(3)(F) derives from segments~~
11192 ~~of 40 CFR 141.86(a)(8).~~

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~~G) NTNCWS Tier 3 Sampling Sites. "NTNCWS Tier 3 sampling sites" include sites having galvanized lines the supplier identified as currently or formerly downstream of a lead service line or known to be downstream of a lead gooseneck, pigtail, or connector. The supplier must not use sites with lead status unknown service lines as Tier 3 sampling sites.~~

~~BOARD NOTE: This subsection (a)(3)(G) derives from segments of 40 CFR 141.86(a)(9).~~

~~H) NTNCWS Tier 5 Sampling Sites. "NTNCWS Tier 5 sampling sites" include sites representing sites throughout the supplier's distribution system. Under this subsection (a)(3)(H), a site representing sites throughout the distribution system has plumbing materials commonly found at the other sites the supplier serves.~~

~~BOARD NOTE: This subsection (a)(3)(H) derives from segments of 40 CFR 141.86(a)(10).~~

4) Sampling sites must be selected from the highest tier available (Tier 1 is the highest tier and Tier 5 is the lowest tier). Sites are available unless a customer refuses to participate in sampling, or a supplier has made at least two outreach attempts at a site and has not received a response. The number of customer refusals and non-responses for compliance sampling during each tap sampling period must be submitted to the Agency in compliance with the requirements at 611.360(a)(2)(H). Suppliers may continue conducting outreach at sites considered unavailable and may subsequently add such sites to the site sample plan for any reason, such as receiving a service initiation request from a new property owner or occupant or receiving a new consumer request for sampling. A supplier without a large enough number of sites from a higher tier to meet the number of sites required in subsections (c)(1) and (d)(1) may sample sites from the next highest tier. For suppliers where Tier 2 sites comprise at least 20 percent of the residential structures served by the CWS supplier, Tier 2 sites may be sampled even when Tier 1 sites are available. ~~Selecting Sampling Sites. A supplier must select sampling sites for its sampling pool using specific criteria:~~

A) Tier 1 sampling sites are single-family structures with premise plumbing made of lead and/or served by a lead service line. ~~CWS Suppliers. A CWS supplier must use CWS Tier 1 sampling sites, except that the supplier may include CWS Tier 2 or CWS Tier 3~~

sampling sites in its sampling pool under certain circumstances:

- i) ~~If multiple family residences comprise at least 20 percent of the structures the supplier serves, the supplier may use CWS Tier 2 sampling sites in its Tier 1 sampling pool, if the supplier serves the sampling site through a lead service line.~~

~~BOARD NOTE: This subsection (a)(4)(A)(i) derives from a segment of 40 CFR 141.86(a)(3).~~

- ii) ~~If the CWS supplier does not have a sufficient number of CWS Tier 1 sampling sites on its distribution system, the supplier may use CWS Tier 2 sampling sites the supplier serves through a lead service line in its sampling pool; or~~

~~BOARD NOTE: This subsection (a)(4)(A)(ii) derives from a segment of 40 CFR 141.86(a)(4).~~

- iii) ~~If the CWS supplier does not have a sufficient number of CWS Tier 1 and CWS Tier 2 sampling sites on its distribution system, the supplier may complete its sampling pool with CWS Tier 3 sampling sites.~~

~~BOARD NOTE: This subsection (a)(4)(A)(iii) derives from a segment of 40 CFR 141.86(a)(5).~~

- iv) ~~If the CWS supplier does not have a sufficient number of CWS Tier 1 sampling sites, CWS Tier 2 sampling sites, and CWS Tier 3 sampling sites, the supplier must complete its sampling pool with CWS Tier 4 sampling sites.~~

~~BOARD NOTE: This subsection (a)(4)(A)(iv) derives from segments of 40 CFR 141.86(a)(6).~~

- v) ~~If a CWS supplier does not have a sufficient number of CWS Tier 1, CWS Tier 2, CWS Tier 3, and CWS Tier 4 sampling sites, the CWS supplier must complete its sampling pool with CWS Tier 5 sampling sites.~~

~~BOARD NOTE: This subsection (a)(4)(A)(v) derives from a segment of 40 CFR 141.86(a)(7).~~

11279 ~~vi) A supplier may use non-residential buildings representing~~
11280 ~~sites throughout its distribution system only if there are an~~
11281 ~~insufficient number of single-family or multiple-family~~
11282 ~~residential Tier 5 sampling sites available.~~

11283
11284 ~~BOARD NOTE: This subsection (a)(4)(A)(vi) derives~~
11285 ~~from a segment of 40 CFR 141.86(a)(7).~~

11286
11287 B) Tier 2 sampling sites are buildings, including multiple-family
11288 residences, with premise plumbing made of lead and/or served by a
11289 lead service line. ~~NTNCWS Suppliers~~

11290
11291 ~~i) An NTNCWS supplier must select NTNCWS Tier 1~~
11292 ~~sampling sites for its sampling pool.~~

11293
11294 ~~BOARD NOTE: This subsection (a)(4)(B)(i) derives from~~
11295 ~~segments of 40 CFR 141.86(a)(8).~~

11296
11297 ~~ii) If the NTNCWS supplier has an insufficient number of~~
11298 ~~NTNCWS Tier 1 sampling sites, the supplier must~~
11299 ~~complete its sampling pool with NTNCWS Tier 3 sampling~~
11300 ~~sites.~~

11301
11302 ~~BOARD NOTE: This subsection (a)(4)(B)(ii) derives from~~
11303 ~~segments of 40 CFR 141.86(a)(9).~~

11304
11305 ~~iii) If the NTNCWS supplier has an insufficient number of~~
11306 ~~NTNCWS Tier 1 and Tier 3 sampling sites, the supplier~~
11307 ~~must complete its sampling pool with Tier 5 NTNCWS~~
11308 ~~sampling sites. For the purpose of this subsection~~
11309 ~~(a)(4)(B)(iii), a representative site is a site where the~~
11310 ~~plumbing materials are commonly found at other sites the~~
11311 ~~water system serves.~~

11312
11313 ~~BOARD NOTE: This subsection (a)(4)(B)(iii) derives~~
11314 ~~from segments of 40 CFR 141.86(a)(10).~~

11315
11316 C) Tier 3 sampling sites are sites that are served by a lead connector.
11317 Tier 3 sites are also sites served by a galvanized service line or
11318 containing galvanized premise plumbing identified as ever having
11319 been downstream of a lead service line. Tier 3 for CWSs only
11320 includes single-family structures. Suppliers with Lead Service
11321 Lines. Any supplier whose distribution system contains lead

~~service lines must collect all samples for monitoring under this Section from sites the supplier serves through a lead service line. A supplier that cannot identify a sufficient number of sampling sites that it serves through lead service lines must still collect samples from every site the supplier serves through a lead service line and collect the remaining samples under subsections (a)(4)(A)(iii) through (a)(4)(A)(vi) or subsections (a)(4)(B)(ii) and (a)(4)(B)(iii).~~

~~BOARD NOTE: This subsection (a)(4)(C) derives from segments of 40 CFR 141.86(a)(11).~~

D) Tier 4 sampling sites are sites that contain copper premise plumbing with lead solder installed before the effective date of the Agency's applicable lead ban. Tier 4 for CWSs only includes single-family structures.

E) Tier 5 sampling sites are sites that are representative of sites throughout the supplier's distribution system. For purpose of this subsection (a), 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 supplier.

b) Sample-collection protocol. ~~Collecting Methods~~

- 1) Except for All tap samples a supplier collects for lead and copper under this Subpart G, with the exception of fifth liter tap samples the supplier collects under subsection (b)(3) and samples the supplier collects under subsections (b)(1)(C) and (D), all tap samples collected for analysis of lead and copper subsections (b)(5) and (h) must be one liter in volume and have stood motionless in the plumbing system and/or service line of each sampling site for at least six hours. Bottles used to collect samples for analysis must be wide-mouth, one-liter sample bottles, as defined in Section 611.350 (b). Samples from residential housing must be collected from an interior kitchen or bathroom sink cold-water tap. Samples from a nonresidential building must be collected at an interior cold-water tap from which water is typically drawn for human consumption. Samples may be collected by the supplier, or the supplier may allow members of the public to collect samples after providing instructions for collecting samples in compliance with this subsection (b)(1). Sample collection instructions cannot direct the sample collector to remove or clean the aerator or flush taps prior to the start of the minimum six-hour stagnation period. To protect members of the public from injury due to handling

11365 nitric acid, samples may be acidified up to 14 days after the sample is
 11366 collected. After acidification to resolubilize the metals, the sample must
 11367 stand in the original container for a period of time, as specified by the
 11368 approved EPA method in § 40 C.F.R. 141.23 selected for sample analysis.
 11369 If a supplier allows members of the public to sample, the supplier cannot
 11370 challenge the accuracy of the sampling results based on alleged sample
 11371 collection errors.~~first draw tap samples. The supplier must analyze the~~
 11372 ~~first draw tap sample for lead and copper during tap sampling periods~~
 11373 ~~when the supplier must monitor both contaminants. In tap sampling~~
 11374 ~~periods during which the supplier must monitor only lead, the supplier~~
 11375 ~~may analyze the first draw tap sample for lead only.~~
 11376

11377 A) The first-liter sample must be analyzed for lead and copper at
 11378 sample sites where both contaminants are required to be
 11379 monitored. At sample sites where only lead is required to be
 11380 monitored, the first-liter sample may be analyzed for only lead.
 11381

11382 B) For sites served by a lead service line, which fall under Tier 1 and
 11383 Tier 2, an additional fifth-liter sample must be collected at the
 11384 same time as the first-liter sample and must be analyzed for lead.
 11385 To collect a first-liter-and-fifth-liter-paired sample, suppliers must
 11386 collect tap water in five consecutively numbered, wide-mouth,
 11387 one-liter sample bottles after the water has stood motionless in the
 11388 plumbing of each sampling site, including the lead service line, for
 11389 at least six hours without flushing the tap prior to sample
 11390 collection. Suppliers must collect samples starting with the first
 11391 sample bottle and then fill each subsequently numbered bottle in
 11392 consecutive order until the final bottle is filled, with the water
 11393 running constantly while the samples are being collected. In this
 11394 sequence, the first-liter sample is the first sample collected and the
 11395 fifth-liter sample is the final sample collected.
 11396

11397 C) Agency-approved samples collected under subsection (b)(3) may
 11398 include samples with stagnation periods less than six hours, but
 11399 must meet all the other sample collection criteria in this subsection
 11400 (b)(1), including being one-liter in volume using a wide-mouth
 11401 bottle and collected at an interior tap from which water is typically
 11402 drawn for human consumption.
 11403

11404 D) Suppliers may use different sample volumes and/or different
 11405 sample collection procedures when they collect follow-up samples
 11406 for Distribution System and Site Assessment under Section
 11407 611.355(j)(2) and consumer-requested samples under Section

11408 611.355(c) to assess the source of lead. Consumer-requested
11409 samples must be collected in compliance with Section 611.355(c).
11410 Suppliers must submit these sample results to the Agency in
11411 compliance with Section 611.360 (a)(2)(A) and (g).
11412

11413 2) Suppliers must sample at sites listed in the site sample plan. Additionally,
11414 suppliers must prioritize sampling at the same sites that were sampled in
11415 the previous tap sampling period. If such a site no longer qualifies under
11416 the tiering criteria or if, for reasons beyond the control of the supplier, the
11417 supplier cannot gain access to a sampling site in order to collect a tap
11418 sample, the supplier must collect the tap sample from another site in its
11419 site sample plan that meets the original tiering criteria, where such a site
11420 exists. Suppliers must report any change in sites from the previous tap
11421 sampling period and include an explanation of why sampling sites have
11422 changed, as required in Section 611.360(a)(2)(E). If changes are needed
11423 to the site sample plan, suppliers must submit their updated site sample
11424 plan, as required under Section 611.360(a)(1)(A), before the start of the
11425 next tap sampling period conducted by the supplier.~~First Draw Tap~~
11426 ~~Samples~~

- 11427
- 11428 ~~A) A first draw tap sample for lead and copper must be one liter in~~
11429 ~~volume and have stood motionless at least six hours in the~~
11430 ~~plumbing system of the sampling site.~~
 - 11431
 - 11432 ~~B) The supplier must use wide-mouthed bottles to collect first draw~~
11433 ~~tap samples.~~
 - 11434
 - 11435 ~~C) For residential housing, the supplier must collect first draw tap~~
11436 ~~samples from the cold water kitchen or bathroom sink tap.~~
 - 11437
 - 11438 ~~D) For non-residential buildings, the supplier must collect first draw~~
11439 ~~tap samples one liter in volume from a tap occupants typically use~~
11440 ~~for consuming water.~~
 - 11441
 - 11442 ~~E) The Agency approved substitute non first draw tap samples the~~
11443 ~~supplier collects in lieu of first draw tap samples under subsection~~
11444 ~~(b)(5) must be one liter in volume from an interior tap occupants~~
11445 ~~typically use for consuming water.~~
 - 11446
 - 11447 ~~F) The supplier may collect first draw tap samples or allow residents~~
11448 ~~to collect first draw tap samples after instructing the residents in~~
11449 ~~the sampling procedures this subsection (b) (2) specifies.~~
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- i) ~~Sampling instructions the supplier provides to residents must not include instructions for removing the aerator and cleaning or flushing taps before the minimum six-hour stagnation period begins.~~
 - ii) ~~To avoid problems of residents handling nitric acid, the supplier may acidify first draw tap samples up to 14 days after the supplier or a resident collects the sample.~~
 - iii) ~~After adding acid to resolubilize the metals, a sample must stand in its original container for the time the USEPA-approved method specifies before the laboratory analyzes the sample.~~
- G) ~~If a supplier allows residents to perform sampling under subsection (b)(2)(F), the supplier may not challenge the accuracy of sampling results based on alleged errors in sample collection.~~
- 3) A NTNCWS supplier, or a CWS supplier that meets the criteria of Section 611.355(b)(8) that does not have enough sites with taps from which first-liter samples or first-liter-and-fifth-liter-paired samples meeting the six-hour minimum stagnation time can be collected, as provided in subsection (b)(1), may apply to the Agency in writing to request approval to substitute first-liter or first-liter-and-fifth-liter-paired samples that do not meet the six-hour minimum stagnation time. Such suppliers must collect as many first-liter or first-liter-and-fifth-liter-paired samples from interior taps used for human consumption as possible towards meeting the minimum number of sites required in subsections (c)(1) and (d)(1). For the remaining samples to meet the minimum number required, suppliers must identify sampling times and locations that would likely result in the longest standing times. The Agency has the discretion to waive the requirement for prior Agency approval of sites not meeting the six-hour stagnation time either through State regulation or written notification to the supplier. ~~Service Line Samples~~
- A) ~~A supplier must collect all tap samples for copper at sites it serves through a lead service line as a first draw tap sample using the procedure in this subsection (b)(3). The supplier must collect and analyze tap samples for copper only during tap monitoring cycles when the supplier must monitor copper.~~
 - B) ~~First Draw and Fifth Liter Tap Water Samples~~

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- i) ~~A supplier must collect tap water samples in five consecutively numbered wide mouthed bottles after the water has stood motionless in the sampling site's plumbing for at least six hours without flushing the tap prior to collecting the sample.~~
 - ii) ~~The supplier must analyze first draw tap samples for copper, when applicable, and fifth liter tap samples for lead.~~
 - iii) ~~The supplier must use wide mouthed bottles to collect these samples. The supplier must collect the first draw tap sample in the first numbered bottle, then sequentially fill each numbered bottle until the final bottle is full with the fifth liter tap sample, constantly running the water while collecting the samples. The fifth liter tap sample is the final sample collected in this sequence.~~
 - iv) ~~The supplier must collect first draw and fifth liter tap samples from residential housing from the cold water kitchen or bathroom sink tap. The supplier must collect first draw and fifth liter tap samples from a nonresidential building at an interior cold water tap typically used for consuming water.~~
 - v) ~~The supplier may itself collect first draw and fifth liter tap samples or allow residents to collect the samples after instructing the residents on the sampling procedures in this subsection (b)(3)(B). The sampling instructions the supplier provides to customers must not direct the customer to remove the aerator or clean or flush the taps before the minimum six hour stagnation period begins. To avoid problems from residents handling nitric acid, the supplier may acidify first draw tap samples up to 14 days after the resident collects the sample. After the supplier acidifies the sample to resolubilize the metals, the sample must stand in its original container for the time a USEPA approved method provides before analysis. If the supplier allows residents to sample, the supplier may not challenge the accuracy of sampling results based on alleged errors collecting samples.~~
- 4) Follow Up First Draw Tap Samples

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- A) ~~A supplier must collect each follow-up first draw tap sample from the same sampling site where the previous sample originated. A supplier must collect each follow-up fifth-liter tap sample from the same sampling site where the previous sample originated.~~
 - B) ~~If the supplier cannot access a sampling site to collect a follow-up tap sample for reasons beyond the control of the supplier, the supplier 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 and is within reasonable proximity of the original site.~~
- 5) ~~Substitute Non-First-Draw Tap Samples~~
- A) ~~A NTNCWS supplier or a CWS supplier meeting the criteria in Sections 611.355(b)(7)(A) and (b)(7)(B) not having enough taps for first draw tap samples or fifth-liter tap samples meeting the six-hour minimum stagnation time may apply to the Agency in writing for a SEP allowing the supplier to substitute non-first draw, first draw, or fifth-liter tap samples that do not meet the six-hour minimum stagnation time.~~
 - B) ~~A supplier approved to substitute non-first draw tap samples must collect as many first draw or fifth-liter tap samples from interior taps typically used for consuming water, as possible and must identify sampling times and locations that likely give the longest standing time for the remaining sites.~~
 - C) ~~The Agency may grant a SEP waiving the requirement for prior Agency approval of sites not meeting the six-hour stagnation time.~~

- c) Standard monitoring. Standard monitoring consists of six-month tap monitoring periods that begin on January 1 and July 1. ~~Number of Samples~~
- 1) Standard monitoring sites. During a standard tap monitoring period, a supplier must collect at least one sample from the number of sites in the following table 1 to this subsection (c)(1). Standard monitoring sites must be selected in compliance with the sampling tiers identified in subsection (a). ~~A supplier must collect at least one sample each from the number of sites in the first column of Table D (labelled "standard monitoring") during each six-month tap monitoring cycle subsection (d) specifies.~~

<u>Table 1 to Subsection (c)(1)</u>	
<u>System size (number of people served)</u>	<u>Standard number of sites for lead and copper sampling</u>
<u>>100,000</u>	<u>100</u>
<u>10,001 to 100,000</u>	<u>60</u>
<u>3,301 to 10,000</u>	<u>40</u>
<u>501 to 3,300</u>	<u>20</u>
<u>101 to 500</u>	<u>10</u>
<u>≤100</u>	<u>5</u>

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2) Criteria for standard monitoring. The following suppliers must conduct standard monitoring for at least two consecutive tap monitoring periods beginning January 1 or July 1, whichever is sooner, following the tap sampling period in which the criterion is met. Suppliers may then reduce monitoring in compliance with subsection (d). ~~A supplier conducting reduced monitoring under subsection (d)(4) must collect at least one sample each from the number of sites in the second column of Table D (labelled "reduced monitoring") during each reduced tap monitoring cycle subsection (d)(4) specifies. The reduced monitoring sites must represent the sites standard monitoring requires. A supplier whose system has fewer than five drinking water taps capable of use for human consumption that meet the sampling site criteria of subsection (a) must collect multiple samples from individual taps to reach the required number of sampling sites Table D requires. To accomplish this, the supplier must collect at least one sample from each tap, then additional samples from those taps on different days during the tap sampling period, to collect a total number of samples meeting the required number of sampling sites. Alternatively, the Agency may issue a SEP allowing the supplier whose system has fewer than five drinking water taps to collect a number of samples that is fewer than the number of sites this subsection (c) specifies if the Agency determines that the supplier samples 100 percent of all taps capable of use for human consumption and that the reduced number of samples will produce the same results as collecting multiple samples from some taps. The Agency must base any SEP approving a reduced minimum number of samples on a request from the supplier or Agency on on-site verification. The Agency may specify sampling locations in a SEP when a system conducts reduced monitoring.~~

A) All suppliers with lead or galvanized requiring replacement service lines in their inventories as of November 1, 2027, including those deemed optimized under Section 611.351(b)(3) must conduct standard monitoring in the first six-month tap monitoring period

following November 1, 2027, unless the supplier has, before or by that date, met all the following criteria:

i) The supplier conducts compliance monitoring of sites that meet the correct priority tiering targeting sites served by lead and galvanized requiring replacement service lines in compliance with subsection (a)(4);

ii) The supplier collects samples in compliance with all sample collection requirements in subsections (b)(1) and (3); and

iii) The supplier collects either first-liter samples or first-liter-and-fifth-liter- paired samples in compliance with subsection (b)(1).

B) Any supplier whose most recent 90th percentile lead and/or copper results as of November 1, 2027, exceeds the lead and/or copper action level must conduct standard monitoring in the first six-month tap monitoring period following November 1, 2027.

C) Suppliers meeting any of the following criteria:

i) Any supplier that exceeds a lead or copper action level.

ii) Any supplier that fails to operate at or above the minimum value or within the range of values for the optimal water quality parameters designated by the Agency under Section 611.352(f) for more than nine days in any tap monitoring period as specified in Section 611.357.

iii) Any supplier 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 limit of 0.005 mg/L.

iv) Any supplier that installs OCCT or re-optimizes OCCT as a result of exceeding the lead or copper action level, or any supplier that adjusts OCCT following a Distribution System and Site Assessment. Suppliers conducting standard monitoring under this criterion must continue standard monitoring until the Agency designates new

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11656 optimal water quality parameters, at which point suppliers
11657 must comply with subsection (c)(2)(C)(v).

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11659 v) Any supplier the Agency has designated new values for
11660 optimal water quality parameters under Section 611.352.

11661
11662 vi) Any supplier that installs source water treatment pursuant
11663 to Section 611.353(a)(3).

11664
11665 vii) Any supplier that has notified the Agency in writing in
11666 compliance with Section 611.360(a)(4) of an upcoming
11667 addition of a new source or long-term change in treatment,
11668 unless the Agency determines that the addition of the new
11669 source or long-term change in treatment is not significant
11670 and, therefore, does not warrant more frequent monitoring.

11671
11672 viii) Any supplier without lead or galvanized requiring
11673 replacement service lines in its inventory that notifies the
11674 Agency under Section 611.360(e)(4)(B) of any
11675 subsequently discovered lead or galvanized requiring
11676 replacement service lines in its distribution system, unless
11677 the supplier replaces all the discovered service lines before
11678 the start of the next tap monitoring period.

11679
11680 d) Reduced monitoring based on 90th percentile levels. Reduced monitoring refers
11681 to an annual or triennial tap monitoring period. Each annual or triennial tap
11682 monitoring period includes one tap sampling period. The reduced monitoring
11683 frequency is based on the 90th percentile value for the water system.~~Timing of~~
11684 ~~Monitoring~~

11685
11686 1) Reduced monitoring sites. During a reduced tap monitoring period, a
11687 supplier must collect at least one sample from the number of sites
11688 specified in table 1 to this subsection (d)(1), unless otherwise specified.
11689 Reduced monitoring sites must be selected in compliance with the
11690 sampling tiers identified in subsection (a). Lead and copper sampling
11691 results collected from point-of-use sites under Section 611.363(c)(1)
11692 cannot be used to meet the criteria for reduced monitoring under this
11693 section. The Agency may specify the locations of sample sites when a
11694 supplier is conducting reduced monitoring. ~~Standard Monitoring.~~
11695 ~~Standard monitoring is a six-month tap monitoring cycle beginning on~~
11696 ~~January 1 or July 1 of a year during which the supplier monitors at the~~
11697 ~~standard number of sites under subsection (c).~~

11698

<u>Table 1 to Subsection (d)(1)</u>	
<u>System size (number of people served)</u>	<u>Reduced minimum number of sites for lead and copper sampling</u>
<u>>100,000</u>	<u>50</u>
<u>10,001 to 100,000</u>	<u>30</u>
<u>3,301 to 10,000</u>	<u>20</u>
<u>501 to 3,300</u>	<u>10</u>
<u>101 to 500</u>	<u>5</u>
<u>≤100</u>	<u>5</u>

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- A) ~~A supplier having lead service lines, including a supplier Section 611.351(b)(3) deems to have optimized or re-optimized OCCT or a supplier that did not monitor complying with this Section (i.e., selecting sites under subsection (a), collecting samples under subsection (b), etc.) before January 16, 2024, must begin its first standard tap monitoring cycle on January 1, 2025. After completing the first standard monitoring cycle, the supplier must monitor under subsection (d)(1)(B).~~

- B) ~~A supplier that completed monitoring complying with this Section (i.e., selecting sites under subsection (a), collecting samples under subsection (b), etc.) before January 16, 2024 or a supplier that completed monitoring under subsection (d)(1)(A), must continue monitoring:~~
 - i) ~~A supplier not meeting the criteria in subsection (d)(4) must conduct standard monitoring.~~

 - ii) ~~A supplier meeting the criteria in subsection (d)(4) must continue to monitor under subsection (d)(4).~~

 - iii) ~~A supplier monitoring at a reduced frequency under subsection (d)(4) and exceeding the lead or copper action level must resume standard monitoring on January 1 immediately after the tap monitoring cycle during which the supplier exceeded the action level. The supplier must also monitor water quality parameters as Section 611.357(b), (c), or (d) require.~~

 - iv) ~~A supplier monitoring at a reduced frequency and exceeding the lead trigger level but not the copper action level must monitor no less frequently than annually and must collect samples from the standard number of sites that~~

11733 subsection (c) establishes. The supplier must begin this
11734 monitoring in the calendar year after the tap monitoring
11735 cycle during which the supplier exceeded the lead trigger
11736 level. The supplier must also monitor water quality
11737 parameters as Section 611.357(b), (c), or (d) require.
11738

11739 v) A supplier failing to operate at or above the minimum value
11740 or within the range of values for the water quality
11741 parameters the Agency specifies under Section 611.352(f)
11742 for more than nine days in any water quality monitoring
11743 period Section 611.357 specifies must conduct standard tap
11744 water monitoring and resume sampling for water quality
11745 parameters under Section 611.357(d). The supplier must
11746 begin this standard monitoring no later than the six-month
11747 tap monitoring cycle beginning January 1 of the calendar
11748 year after the supplier fails to comply with the Agency-
11749 specified water quality parameters.

11750
11751 vi) A supplier becoming a large supplier not applying
11752 corrosion control treatment or any large supplier not
11753 applying corrosion control treatment having a 90th
11754 percentile lead concentration exceeding the lead practical
11755 quantitation limit must conduct standard monitoring for at
11756 least two consecutive six-month tap monitoring cycles, then
11757 continue monitoring under this subsection (d)(1)(B)(vi).
11758

11759 2) Criteria for reduced monitoring. Suppliers are eligible for reduced
11760 monitoring if they meet all the requirements of this section, including
11761 collecting at least the minimum number of samples required, for at least
11762 two consecutive tap monitoring periods. The Agency may require an
11763 eligible supplier to conduct more frequent monitoring. ~~Monitoring after~~
11764 ~~Installing Initial or Re-Optimized Corrosion Control Treatment, Installing~~
11765 ~~Source Water Treatment, Adding a New Source, or a Change in Treatment~~
11766

11767 A) Annual monitoring for any supplier size. Any supplier that does
11768 not exceed the lead and copper action levels and, for suppliers with
11769 Agency-designated OWQPs, also maintains the range of optimal
11770 water quality parameters designated by the Agency in compliance
11771 with Section 611.352(f) for two consecutive six-month tap
11772 monitoring periods may reduce the monitoring frequency to annual
11773 monitoring. Suppliers with an annual tap monitoring period must
11774 sample at least the standard number of sampling sites for lead in
11775 subsection (c)(1) and at least the reduced number of sites for

11776 copper as specified in subsection (d)(1). Prior to conducting
 11777 annual monitoring, suppliers must receive a written determination
 11778 from the Agency approving annual monitoring based on the
 11779 Agency's review of monitoring, treatment, and other relevant
 11780 information submitted by the supplier as required by Section
 11781 611.360. For suppliers that reduce to annual monitoring, the first
 11782 annual tap monitoring period must begin no later than six months
 11783 following the last tap monitoring period.~~A supplier installing or re-~~
 11784 ~~optimizing corrosion control treatment after exceeding the lead or~~
 11785 ~~copper action level must monitor for lead and copper every six~~
 11786 ~~months and comply with applicable Agency designated water~~
 11787 ~~quality parameter values until the Agency issues a SEP specifying~~
 11788 ~~new water quality parameter values for optimal corrosion control.~~
 11789

11790 B) Triennial monitoring for small and medium water suppliers. Any
 11791 small or medium water supplier that does not exceed the lead and
 11792 copper action levels and, for suppliers with Agency-designated
 11793 OWQPs, also maintains the range of optimal water quality
 11794 parameters designated by the Agency in compliance with Section
 11795 611.352(f), during three consecutive years of monitoring, including
 11796 monitoring conducted at both standard and annual frequencies
 11797 (standard monitoring completed during both six-month periods of a
 11798 calendar year is considered one year of monitoring), may reduce
 11799 the monitoring frequency to triennial monitoring. Suppliers on
 11800 triennial monitoring must sample at least the reduced number of
 11801 sites for lead and copper in compliance with subsection (d)(1).
 11802 Prior to conducting triennial monitoring, suppliers must receive a
 11803 written determination from the Agency approving triennial
 11804 monitoring based on the Agency's review of monitoring, treatment,
 11805 and other relevant information submitted by the supplier as
 11806 required by Section 611.360. For suppliers that reduce to triennial
 11807 monitoring, the first triennial tap monitoring period must
 11808 immediately follow the last annual monitoring period, and the first
 11809 triennial sampling period must begin no later than three calendar
 11810 years after the last calendar year in which the supplier sampled.~~A~~
 11811 ~~supplier reoptimizing corrosion control treatment as a result of~~
 11812 ~~exceeding the lead trigger level but not exceeding the lead or~~
 11813 ~~copper action level must annually monitor for lead at the standard~~
 11814 ~~number of sites subsection (e) requires. The supplier must~~
 11815 ~~triennially analyze samples for copper. A small or mid-sized~~
 11816 ~~supplier not exceeding the lead trigger level in three annual tap~~
 11817 ~~monitoring cycles may reduce lead monitoring under subsection~~
 11818 ~~(d)(4).~~

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- C) Triennial monitoring for any supplier size. Any supplier that demonstrates for two consecutive tap monitoring periods that its 90th percentile lead level, calculated under Section 611.350(c)(3), is less than or equal to 0.005 mg/L, the 90th percentile copper level, calculated under Section 611.350(c)(3), is less than or equal to 0.65 mg/L and, for suppliers with Agency-designated OWQPs, also maintains the range of optimal water quality parameters designated by the Agency in compliance with Section 611.352(f), may reduce the monitoring frequency to triennial monitoring. Suppliers on triennial monitoring must sample at least the reduced number of sites for lead and copper in compliance with subsection (d)(1). Prior to conducting triennial monitoring, suppliers must receive a written determination from the Agency approving triennial monitoring based on the Agency's review of monitoring, treatment, and other relevant information submitted by the supplier as required by Section 611.360. For suppliers that reduce to triennial monitoring, the first triennial tap monitoring period must immediately follow the last monitoring period, and the first triennial tap sampling period must begin no later than three calendar years after the last calendar year in which the supplier sampled.~~A supplier installing source water treatment under Section 611.353(a)(3) must monitor every six months until the supplier is at or below lead and copper action levels for two consecutive six-month tap sampling periods. A supplier not exceeding the lead or copper action level for two consecutive six-month tap monitoring cycles may reduce monitoring under subsection (d)(4).~~
- D) ~~If a supplier gives prior notice to the Agency under Section 611.360(a)(3) of adding a new source or making a long-term change in treatment, the supplier must monitor every six months at the standard number of sites subsection (c) requires until the supplier is at or below the lead and copper action levels for two consecutive six-month monitoring cycles, unless the Agency issues a SEP determining that adding the new source or making the long-term change in treatment is not significant and does not warrant more frequent monitoring. A supplier not exceeding the lead action level, copper action level, or lead trigger level for two consecutive six-month tap sampling periods may reduce monitoring under subsection (d)(4).~~
- 3) Tap sampling period under reduced monitoring. The tap sampling period for suppliers on reduced monitoring must occur within the months of June,

11862 July, August, or September, unless the Agency has approved a different
11863 tap sampling period in compliance with subsection (d)(3)(A). Only
11864 suppliers on reduced monitoring can monitor during a tap sampling period
11865 that is shorter than the tap monitoring period.~~Monitoring after the Agency~~
11866 ~~Specifies Water Quality Parameter Values for OCCT~~

11867
11868 A) The Agency may approve a different tap sampling period for
11869 suppliers collecting samples on reduced monitoring. An
11870 alternative tap sampling period approved by the Agency must be a
11871 continuous period of time no longer than four consecutive months,
11872 must occur entirely within one calendar year, and must represent a
11873 time of normal operation where the highest levels of lead are most
11874 likely to occur. For a NTNCWS supplier that does not operate
11875 during the months of June through September and for which the
11876 period of normal operation where the highest levels of lead are
11877 most likely to occur is not known, the Agency must designate a
11878 period that represents normal operation for the supplier.~~After the~~
11879 ~~Agency specifies the values for water quality control parameters~~
11880 ~~under Section 611.352(f), the supplier must conduct standard~~
11881 ~~monitoring for two consecutive six-month tap monitoring cycles.~~

11882
11883 B) Suppliers that receive Agency-approval for an alternate tap
11884 sampling period under subsection (d)(3)(A) and have been
11885 sampling in the months of June through September must complete
11886 their next tap sampling period no later than 21 months, if on annual
11887 monitoring, or no later than 45 months, if on triennial monitoring,
11888 following the end of the previous tap sampling period.~~A supplier~~
11889 ~~that must complete the re-optimization steps in Section 611.351(d)~~
11890 ~~after exceeding the lead trigger level but not exceeding the lead or~~
11891 ~~copper action level must monitor for two consecutive six-month~~
11892 ~~tap monitoring cycles. The supplier may then reduce monitoring~~
11893 ~~under subsection (d)(4) after the Agency issues a SEP approving~~
11894 ~~reduced monitoring.~~

11895
11896 C) Suppliers with waivers granted under subsection (g) that have been
11897 collecting samples during the months of June through September
11898 and receive Agency approval to alter their sampling period as per
11899 subsection (d)(3)(A) must collect their next round of samples
11900 before the end of the next nine-year period.

11901
11902 4) ~~Reduced Monitoring Based on 90th Percentile Concentrations. Reduced~~
11903 ~~monitoring refers to an annual or triennial tap monitoring cycle. A~~
11904 ~~supplier's 90th percentile concentration determines the reduced~~

11905 monitoring frequency.

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- A) ~~Reducing to Annual Monitoring for Suppliers Meeting the Criteria for Reduced Monitoring. A supplier meeting the criteria for reduced monitoring under subsection (d)(4) must collect these samples from sampling sites the supplier identified under subsection (a). A supplier monitoring annually or less frequently must conduct lead and copper tap sampling during June, July, August, or September, unless the Agency approves a different tap sampling period under subsection (d)(4)(A)(i)~~
 - i) ~~The Agency may grant a SEP approving a different tap sampling period for conducting lead and copper tap sampling to a supplier collecting samples at a reduced frequency. The duration of the period must not exceed four consecutive months within one calendar year and must represent a time of normal operation when the highest lead levels are most likely to occur. For a NTNCWS supplier not operating during any of the months June through September and whose normal operating period when the highest levels of lead are most likely to occur is not known, the Agency must designate a period that represents a time of normal operation for the system. This reduced monitoring can only begin during the Agency designated period in the calendar year immediately following the end of the second six-month tap monitoring cycle, for a supplier initiating annual monitoring, or in the three-year period following the end of the third consecutive year of annual monitoring, for a supplier initiating triennial monitoring.~~
 - ii) ~~A supplier monitoring annually and collecting samples during the months of June through September that receives Agency approval to alter its tap sampling period under subsection (d)(4)(A)(i) must collect its next round of samples during a time period ending no later than 21 months after its previous round of sampling. A supplier monitoring once every three years and collecting samples during the months of June through September that receives Agency approval to alter its tap sampling period under subsection (d)(4)(A)(i) must collect its next round of samples during a time period ending no later than 45 months after the previous tap sampling period. The supplier must conduct subsequent monitoring annually or~~

11991 also maintain the range of OWQPs the Agency set under Section
 11992 611.352(f) during the same period and receive a SEP from the
 11993 Agency approving triennial monitoring based on the Agency's
 11994 review of monitoring, treatment, and other relevant information the
 11995 supplier reports under Section 611.360. The supplier must begin
 11996 this sampling no later than the third calendar year immediately
 11997 following the last calendar year during which the supplier sampled.

11998
 11999 E) A small or mid-sized supplier not exceeding the lead trigger level
 12000 or copper action level during three consecutive years of monitoring
 12001 (completing standard monitoring during both six-month tap
 12002 monitoring cycles of a calendar year constitutes one year of
 12003 monitoring) may sample at the reduced number of sites for lead
 12004 and copper that subsection (c) provides and reduce its monitoring
 12005 frequency to triennially monitoring. A supplier operating OCCT
 12006 must also maintain the range of OWQPs the Agency set under
 12007 Section 611.352(f) during the same three-year period and receive a
 12008 SEP from the Agency approving triennial monitoring based on the
 12009 Agency's review of monitoring, treatment, and other relevant
 12010 information the supplier reports under Section 611.360. The
 12011 supplier must begin this sampling no later than three calendar years
 12012 after the last calendar year during which the supplier sampled.

12013
 12014 F) A supplier demonstrating for two consecutive six-month tap
 12015 monitoring cycles that its 90th percentile lead concentration,
 12016 calculated under Section 611.350(e)(4), is less than or equal to
 12017 0.005 mg/L and that its 90th percentile copper concentration,
 12018 calculated under Section 611.350(e)(4), is less than or equal to
 12019 0.65 mg/L may sample at the reduced number of sites for lead and
 12020 copper under subsection (c) and reduce its monitoring to
 12021 triennially. A supplier applying corrosion control treatment must
 12022 maintain the range of water quality parameter values reflecting
 12023 OCCT the Agency specifies under Section 611.352(f) to qualify
 12024 for reduced monitoring under this subsection (d)(4)(F).

12025
 12026 e) Inclusion of lead and copper tap samples for calculation of the 90th percentile.
 12027 Suppliers and the Agency must consider the results of any sampling conducted in
 12028 addition to the minimum number of samples required in subsections (c) or (d), as
 12029 applicable, in making any determinations (i.e., calculating the 90th percentile lead
 12030 or copper level in compliance with Section 611.350(c)(3)) under this subpart if
 12031 the samples meet the requirements of subsections (a) and (b). Consumer-
 12032 requested sampling conducted in compliance with Section 611.385(c) must be
 12033 considered if the sample meets the requirements of subsections (a) and (b). If

12034 multiple samples from the same site, taken during the same tap sampling period,
 12035 meet the requirements of this section for consideration of the 90th percentile
 12036 calculation, only the highest value from each site can be considered, except for
 12037 suppliers under section (a)(2).~~Additional Monitoring. The supplier and the~~
 12038 ~~Agency must consider the results of any monitoring the supplier conducts in~~
 12039 ~~addition to the minimum requirements in this Section (such as customer requested~~
 12040 ~~sampling) in making any determinations (i.e., calculating the 90th percentile lead~~
 12041 ~~concentration or copper action level) under this Subpart G. A supplier serving~~
 12042 ~~through lead service lines that cannot collect the minimum number of samples~~
 12043 ~~from Tier 1 or Tier 2 sites must calculate the 90th percentile concentration using~~
 12044 ~~data from all sites it serves through lead service lines (Tier 1 and Tier 2 sites)~~
 12045 ~~together with the highest lead and copper results from lower tier sites to complete~~
 12046 ~~the minimum number of sampling sites subsection (c) requires. The supplier must~~
 12047 ~~submit data from additional Tier 3, Tier 4 or Tier 5 sites to the Agency but may~~
 12048 ~~not use these results in calculating the 90th percentile concentration. The supplier~~
 12049 ~~must include customer requested samples from sites the supplier knows it serves~~
 12050 ~~through lead service lines in calculating its 90th percentile concentration if the~~
 12051 ~~samples comply with this Section.~~

12052
 12053 1) Suppliers sampling at one or more Tier 1 and/or Tier 2 sites in a tap
 12054 sampling period that are unable to collect the minimum number of
 12055 samples required in subsection (c) or (d) from Tier 1 or 2 sites must
 12056 consider the lead and copper values from the next highest tier available in
 12057 compliance with subsection (a). If a supplier has sufficient samples after
 12058 including the samples from the next highest available tier to meet the
 12059 minimum number of samples required in subsection (c) or (d), the supplier
 12060 may not consider additional samples from other available lower tiers.
 12061 Suppliers (or the Agency) must calculate the 90th percentile lead and
 12062 copper values in compliance with Section 611.350(c)(3)(C) using a total
 12063 number of samples equal to the minimum number of samples required in
 12064 subsection (c) or (d). Suppliers must submit all additional sampling
 12065 results to the Agency that were not used in the 90th percentile calculation.

12066
 12067 2) Suppliers (or the Agency when the Agency is calculating the 90th
 12068 percentile) cannot include samples collected as part of Distribution System
 12069 and Site Assessment under Section 611.352(j)(2) in the 90th percentile
 12070 calculation.

12071
 12072 3) Suppliers (or the Agency when the Agency is calculating the 90th
 12073 percentile) cannot include follow-up samples collected as a result of
 12074 monitoring after service line replacement under Section 611.254(h) in the
 12075 90th percentile calculation.
 12076

- 12077 f) Invalidation of lead and copper tap samples used in calculating~~Lead and Copper~~
 12078 ~~Tap Samples Used in Calculating~~ the 90th percentile concentration~~Percentile~~
 12079 ~~Concentration~~. A sample the Agency invalidates under this subsection (f) does
 12080 not count ~~towards~~toward determining lead or copper 90th percentile
 12081 concentrations under Section 611.350(c)(3)~~Section 611.350(c)(4)~~ or
 12082 ~~towards~~toward meeting the minimum monitoring requirements of subsection (c)
 12083 or (d). The supplier must report the results of all samples to the Agency and all
 12084 supporting documentation for samples the supplier believes should be invalidated.
 12085
- 12086 1) The Agency ~~may~~must invalidate a lead or copper tap water sample if at
 12087 least one of the following~~it determines that any of certain~~ conditions is
 12088 met~~exists~~:
- 12089
- 12090 A) The laboratory establishes that improper sample analysis caused
 12091 erroneous results.;
- 12092
- 12093 B) The Agency determines that a sample collected for compliance
 12094 purposes under this section, that is not an additional sample
 12095 collected under subsection (e) was taken from a site that did not
 12096 meet the site section criteria under subsection (a), such as when
 12097 sites of higher tier were still available.~~The supplier took the sample~~
 12098 ~~from a site that did not meet the site selection criteria in this~~
 12099 ~~Section;~~
- 12100
- 12101 C) The Agency determines the sample was collected in a manner that
 12102 did not meet the sample collection protocol under subsection
 12103 (b)(1).~~The sample container sustained damage in transit; or~~
- 12104
- 12105 D) The sample container was damaged in transit.~~There is substantial~~
 12106 ~~reason to believe that someone tampered with the sample.~~
- 12107
- 12108 E) There is a substantial reason to believe that the sample was subject
 12109 to tampering.
- 12110
- 12111 2) To invalidate a sample under subsection (f)(1), the Agency must document
 12112 in writing both the decision and the rationale for the decision. The
 12113 Agency may not invalidate a sample solely on the grounds that a follow-
 12114 up sample result is higher or lower than that of the original sample.~~The~~
 12115 ~~supplier must report the results from all samples to the Agency and submit~~
 12116 ~~all supporting documentation for samples the supplier believes the Agency~~
 12117 ~~should invalidate.~~
- 12118
- 12119 3) The supplier must collect replacement samples for any samples

12120 invalidated under this section if, after the invalidation of one or more
 12121 samples, the supplier has too few samples to meet the minimum
 12122 requirements of subsection (c)(1) or (d)(1). Any such replacement
 12123 samples must be taken as soon as possible, but no later than 20 days after
 12124 the date the Agency notifies the supplier of an invalidated sample or by
 12125 the end of the tap sampling period, whichever occurs later. Replacement
 12126 samples taken after the end of the applicable tap sampling period can only
 12127 be used to meet the monitoring requirements of the applicable tap
 12128 monitoring period in subsection (c) or (d) and not a subsequent tap
 12129 monitoring period. The replacement samples must be taken at the same
 12130 locations as the invalidated samples, except when the sample is
 12131 invalidated due to an error in meeting the site selection criteria under
 12132 subsection (a), or a supplier cannot gain access for sampling. The
 12133 replacement samples must then be taken at locations that meet the site
 12134 selection criteria other than those locations already used for sampling
 12135 during the tap monitoring period.~~To invalidate a sample under subsection~~
 12136 ~~(f)(1), the Agency must document its decision and rationale for the~~
 12137 ~~decision in writing. The Agency may not invalidate a sample solely~~
 12138 ~~because a follow-up sample result is higher or lower than that of the~~
 12139 ~~original sample.~~

12140
 12141 4) ~~The supplier must collect replacement samples for any samples the~~
 12142 ~~Agency invalidates under this Section if the supplier has too few samples~~
 12143 ~~to meet the minimum requirements of subsection (e) after the Agency~~
 12144 ~~invalidates samples. The supplier must take any replacement samples as~~
 12145 ~~soon as possible but no later than the latter of 20 days after the Agency~~
 12146 ~~invalidates the original sample or before the end of the applicable tap~~
 12147 ~~sampling period. The supplier must not use replacement samples it takes~~
 12148 ~~after the end of the applicable tap sampling period to meet the monitoring~~
 12149 ~~requirements of a subsequent tap sampling period. The supplier must take~~
 12150 ~~replacement samples at the same locations where it took the invalidated~~
 12151 ~~samples or, if that is not possible, at other locations the supplier did not~~
 12152 ~~use for sampling during the tap sampling period.~~

12153
 12154 g) Monitoring waivers for suppliers serving 3,300 or fewer persons.~~Waivers for~~
 12155 ~~Suppliers Serving 3,300 or Fewer Persons.~~ Any supplier serving 3,300 or fewer
 12156 persons complying with the criteria in this subsection (g) may apply, in writing, to
 12157 the Agency to reduce the frequency of monitoring ~~for a SEP reducing its lead~~
 12158 ~~and/or copper monitoring frequency under this Section~~ to once every nine years.
 12159 The supplier must meet (i.e., a "full waiver") if the supplier complies with all of
 12160 the materials criteria specified in subsection (g)(1) specifies and all of the
 12161 monitoring criteria specified in subsection (g)(2) specifies. Suppliers meeting only
 12162 the criteria for lead may apply for a lead waiver, suppliers meeting only the

12163 criteria for copper may apply for a copper waiver, and suppliers meeting the
12164 criteria for both lead and copper may apply for a full waiver. ~~Any supplier~~
12165 ~~serving 3,300 or fewer persons complying with the criteria subsections (g)(1) and~~
12166 ~~(g)(2) only for lead or copper may apply to the Agency for a SEP reducing its tap~~
12167 ~~water monitoring frequency to once every nine years for that contaminant only~~
12168 ~~(i.e., a "partial waiver").~~

12169
12170 1) Materials ~~criteria~~ Criteria. The supplier must demonstrate that its
12171 distribution system, service lines, and all drinking water supply plumbing,
12172 including plumbing conveying drinking water within all residences and
12173 buildings connected to the system, are free of lead-containing materials or
12174 copper-containing materials, as those terms are defined in this subsection
12175 (g)(1) ~~as follows~~ defines these terms:

12176
12177 A) Lead. To qualify for ~~a SEP granting a lead~~ full waiver ~~or a partial~~
12178 ~~waiver of the tap water monitoring requirements for lead (i.e., a~~
12179 ~~"lead waiver"), the supplier must~~ certify ~~provide certification~~ and
12180 provide supporting documentation to the Agency demonstrating
12181 that its system including distribution system and all premise
12182 plumbing is free of all lead-containing materials as follows:

- 12183
12184 i) The system has no plastic pipes or service lines containing
12185 lead plasticizers; and
12186
12187 ii) The system is free of lead service lines, galvanized
12188 requiring replacement service lines, lead connectors, lead
12189 pipes, lead soldered pipe joints, and leaded brass- or
12190 bronze-alloy fittings and fixtures, unless ~~such~~ those fittings
12191 and fixtures comply with Section 611.126(b).
12192

12193 BOARD NOTE: Corresponding 40 CFR
12194 141.86(g)(1)(i)(B) specifies "any standard established
12195 under ~~pursuant to~~ 42 U.S.C. 300g-6(e) (SDWA section
12196 1417(e))". Congress changed the lead standards for fittings
12197 and fixtures in the Reduction of Lead in Drinking Water
12198 Act, P.L. 111-380, section 2(a)(2) and (b), 124 Stat. 4131
12199 (Jan. 4, 2011). The Board incorporated the statutory
12200 changes into this Section by referencing Section
12201 611.126(b).
12202

12203 B) Copper. To qualify for ~~a SEP granting a copper~~ full waiver ~~or a~~
12204 ~~partial waiver of the tap water monitoring requirements for copper~~
12205 ~~(i.e., a "copper waiver"), the supplier must~~ certify provide

12206 ~~certification~~ and provide supporting documentation to the Agency
12207 demonstrating that ~~the~~its system contains no ~~copper pipes or~~
12208 copper service lines or premise plumbing.

12209
12210 2) Monitoring ~~criteria~~Criteria for Waiver Issuance. The supplier must have
12211 completed at least one six-month round of standard tap water monitoring
12212 for lead and copper at sites approved by the Agency ~~approved sites~~
12213 and from the number of sites required by subsection (c)(1)~~subsection (e)~~
12214 ~~requires~~ and demonstrate to the Agency that the 90th percentile
12215 concentrations for any and all rounds of monitoring conducted since the
12216 system became free of all lead-containing or copper-containing materials,
12217 as appropriate, meet the following~~certain~~ criteria:

12218
12219 A) Lead ~~levels~~Levels. To qualify for a ~~full waiver or a lead~~ partial
12220 waiver, the supplier must demonstrate that its 90th percentile lead
12221 concentration does not exceed 0.005 mg/L.

12222
12223 B) Copper ~~levels~~Levels. To qualify for a ~~full waiver or a copper~~
12224 partial-waiver, the supplier must demonstrate that its 90th percentile
12225 copper concentration does not exceed 0.65 mg/L.

12226
12227 3) Agency approval of waiver application~~Approval of Waiver Application~~.
12228 The Agency must notify the supplier of its waiver determination in
12229 writing~~a SEP~~ stating the basis of its decision and any condition(s) of an
12230 approved~~condition on the~~ waiver. As a condition of a~~on the~~ waiver, the
12231 Agency may require the supplier to perform specific activities (e.g.,
12232 limited monitoring, periodic outreach to customers to remind them to
12233 avoid installing~~installation of~~ materials that might void the waiver) to
12234 avoid ~~the risk of~~ lead or copper concentrations~~concentration~~ of concern in
12235 tap water. The supplier must continue monitoring for lead and copper at
12236 the tap as required by subsections (c) and (d)~~subsections (d)(1) through~~
12237 (d)(4)~~require~~, as appropriate, until the supplier receives written
12238 notification from the Agency that a~~approving the~~ waiver has been
12239 approved.

12240
12241 4) Monitoring frequency for suppliers with waivers~~Frequency for Suppliers~~
12242 with Waivers

12243
12244 A) A supplier with a full waiver must conduct tap ~~water~~-monitoring
12245 for lead and copper in compliance with subsection (d)~~under~~
12246 subsection (d)(4)(D) at the reduced number of sampling sites
12247 subsection (e) identifies at least once every nine years. A supplier
12248 with a full waiver must ~~and provide to~~ the Agency with the

12249 materials certification specified in subsection (g)(1) ~~specifies~~ for
 12250 both lead and copper when submitting their tap sampling results to
 12251 the Agency together with the monitoring results. The supplier must
 12252 collect samples every nine years no later than the ninth calendar
 12253 year.

12254
 12255 B) A supplier with a lead or copper ~~partial~~ waiver must conduct tap
 12256 ~~water~~ monitoring for only the waived contaminant in compliance
 12257 with ~~under~~ subsection (d) ~~(4)(D)~~ at the reduced number of sampling
 12258 sites ~~subsection (e) specifies~~ at least once every nine years. A
 12259 system with a lead waiver or copper waiver must ~~and~~ provide ~~to~~
 12260 the Agency with the materials certification specified in subsection
 12261 (g)(1) for only ~~specifies pertaining to~~ the waived contaminant when
 12262 submitting their tap sampling results to the Agency. Also, a
 12263 supplier ~~together with the monitoring results~~. ~~Such a supplier also~~
 12264 must continue to monitor for the non-waived contaminant in
 12265 compliance with the requirements ~~under the applicable~~ of
 12266 subsections (c) and (d) as appropriate ~~(d)(1) through (d)(4)~~.

12267
 12268 C) A supplier with a ~~full or partial~~ waiver must notify the Agency in
 12269 writing in compliance with ~~under~~ Section 611.360(a) ~~(4)~~ about any
 12270 addition of a new source water or ~~(3) of any upcoming~~ long-term
 12271 change in treatment ~~or adding a new source~~, as described in that
 12272 section ~~that rule describes~~. The Agency ~~must review and approve~~
 12273 ~~adding a new source or long-term change in water treatment before~~
 12274 ~~the supplier implements it~~. ~~The Agency~~ may add or modify waiver
 12275 conditions (e.g., require recertification that the supplier's system is
 12276 free of lead-containing or copper-containing materials, require
 12277 additional rounds of monitoring, etc.) if the Agency determines
 12278 that the modifications are necessary to address system treatment or
 12279 source water changes at the supplier's system.

12280
 12281 D) If a supplier with a ~~full or partial~~ waiver becomes aware that its
 12282 system is no longer free of lead-containing or copper-containing
 12283 materials, as appropriate (e.g., as a result of new construction or
 12284 repairs), the supplier must notify the Agency in writing no later
 12285 than 60 days after becoming aware of the change.

12286
 12287 5) Discontinuation of eligibility ~~Continued Eligibility~~. ~~If the supplier~~
 12288 ~~continues to comply with subsection (g)(4), the waiver will renew~~
 12289 ~~automatically, unless~~ A supplier with a waiver where any of the following
 12290 conditions occur is not allowed to continue monitoring under its
 12291 waiver: ~~conditions in subsections (g)(5)(A) through (g)(5)(C) occur~~. ~~A~~

- 12292 ~~supplier whose waiver the Agency revokes may re-apply for a waiver~~
12293 ~~when the supplier again meets the appropriate materials and monitoring~~
12294 ~~criteria of subsections (g)(1) and (g)(2).~~
12295
12296 A) ~~A full waiver or a lead partial waiver does not renew if the~~ supplier
12297 with a full waiver or a lead waiver no longer satisfies the materials
12298 criteria of subsection (g)(1)(A) or has a 90th percentile lead
12299 concentration greater than 0.005 mg/L.
12300
12301 B) ~~A full waiver or a copper partial waiver does not renew if the~~
12302 supplier with a full waiver or a copper waiver no longer satisfies
12303 the materials criteria of subsection (g)(1)(B) or has a 90th
12304 percentile copper concentration greater than 0.65 mg/L.
12305
12306 C) ~~The~~ A waiver terminates when the Agency notifies the supplier in
12307 writing, that the Agency revokes the waiver has been revoked,
12308 setting forth the basis of its decision, in writing and describing the
12309 basis of its decision.
12310
12311 6) Requirements following waiver revocation. ~~Following Waiver Revocation.~~
12312 A supplier whose ~~full or partial~~ waiver is revoked may reapply for a
12313 waiver when it meets the appropriate materials criteria and monitoring
12314 criteria of subsections (g)(1) and (2). A supplier whose waiver is revoked
12315 by the Agency is subject to the following ~~the Agency revokes must comply~~
12316 ~~with specific~~ corrosion control treatment and lead and copper tap water
12317 monitoring requirements:
12318
12319 A) If the supplier exceeds the lead and/or copper action level, the
12320 supplier must implement or re-optimize OCCT in compliance
12321 ~~with corrosion control treatment within~~ the deadlines specified in
12322 Section 611.351 ~~(e) specifies~~ and any other applicable requirements
12323 of ~~under~~ this Subpart G.
12324
12325 B) If the supplier is at or below ~~meets~~ both the lead and ~~the~~ copper
12326 action levels, the supplier must monitor for lead and copper at the
12327 tap no less frequently than once every three years using the
12328 reduced number of sampling sites specified in subsection (d)(1)(e)
12329 ~~specifies~~.
12330
12331 7) Pre-existing waivers ~~Pre-Existing Waivers.~~ Waivers approved by A
12332 ~~waiver~~ the Agency granted a supplier in writing prior to the compliance
12333 date specified in 611.350(a)(3) are still in effect if the supplier has
12334 demonstrated that it is both free of lead-containing and copper-containing

12335 materials, as required by subsection (g)(1) and that the supplier's 90th
12336 percentile lead levels and 90th percentile copper levels meet the criteria of
12337 subsection (g)(2), the supplier does not meet the waiver ineligibility
12338 criteria of subsection (g)(5). ~~April 11, 2000 remains in effect under certain~~
12339 ~~conditions:~~

12340
12341 A) ~~If the supplier demonstrates that its system is free of both lead-~~
12342 ~~containing and copper-containing materials, as subsection (g)(1)~~
12343 ~~requires, and that its 90th percentile lead and copper concentrations~~
12344 ~~comply with subsection (g)(2), the waiver remains in effect so long~~
12345 ~~as the supplier continues to be eligible for a waiver under~~
12346 ~~subsection (g)(5). The supplier must complete its first round of tap~~
12347 ~~water monitoring under subsection (g)(4) no later than nine years~~
12348 ~~after the supplier last monitored for lead and copper at the tap.~~

12349
12350 B) ~~If the supplier complies with the materials criteria of subsection~~
12351 ~~(g)(1) but has not complied with the monitoring criteria of~~
12352 ~~subsection (g)(2), the supplier must conduct a round of monitoring~~
12353 ~~for lead and copper at the tap demonstrating that it complied with~~
12354 ~~subsection (g)(2). Thereafter, the waiver remains in effect as long~~
12355 ~~as the supplier complies with the continued eligibility criteria in~~
12356 ~~subsection (g)(5). The supplier must complete its first round of tap~~
12357 ~~water monitoring under subsection (g)(4) no later than nine years~~
12358 ~~after the supplier conducts the monitoring under subsection (g)(2).~~

12359
12360 h) Publicly accessible tap monitoring results used in the 90th percentile calculation.
12361 Unless done by the Agency, all suppliers must make the tap monitoring results,
12362 including data used in the 90th percentile calculation under Section 611.350(c)(3),
12363 publicly accessible within 60 days of the end of the tap sampling period. Under
12364 this subsection (h), suppliers are not required to make the addresses of tap
12365 sampling sites publicly accessible. ~~Follow-Up Samples for "Find and Fix" Under~~
12366 ~~Section 611.352(j). A supplier must collect a follow-up sample at any site~~
12367 ~~exceeding the lead action level within 30 days after receiving the sample results.~~
12368 ~~For these follow-up samples, the supplier may use different sample volumes or~~
12369 ~~different sample collection procedures to assess the source of elevated lead. A~~
12370 ~~supplier must submit the results from samples it collects under this Section to the~~
12371 ~~Agency but must not include those results in calculating its 90th percentile~~
12372 ~~concentration.~~

12373
12374 1) Large suppliers must make the tap monitoring results and associated data
12375 publicly accessible in a digital format.
12376

12377 2) Small and medium suppliers must make the tap monitoring results and
12378 associated data publicly accessible in either a print or digital format.

12379
12380 3) Suppliers must certify to the Agency, in writing, compliance with this
12381 subsection (h) in compliance with Section 611.360(a)(2)(C) and must
12382 retain monitoring data in compliance with the recordkeeping requirements
12383 under Section 611.361.

12384
12385 i) ~~Public Availability of Tap Monitoring Results the Supplier Used in Calculating its~~
12386 ~~90th Percentile Concentration. A supplier must make the results of its compliance~~
12387 ~~tap water monitoring data, including data the supplier used in calculating its 90th~~
12388 ~~percentile concentration under Section 611.350(c)(4), available to the public~~
12389 ~~within 60 days after the end of the applicable tap sampling period. This Section~~
12390 ~~does not require a supplier to make publicly available the addresses of the sites~~
12391 ~~where the supplier collected tap samples. A large supplier must make available~~
12392 ~~the monitoring results in a digital format. A small or mid-sized supplier must~~
12393 ~~make available the monitoring results in either a written or digital format. A~~
12394 ~~supplier must retain tap sampling monitoring data per the recordkeeping~~
12395 ~~requirements under Section 611.361.~~

12396
12397 BOARD NOTE: This Section derives from 40 CFR 141.86.

12398
12399 (Source: Amended at 50 Ill. Reg. _____, effective _____)

12400
12401 **Section 611.357 Monitoring for Water Quality Parameters**

12402 All large suppliers and all medium suppliers with~~A large supplier or any small or mid-sized~~
12403 ~~supplier exceeding the lead or copper action level or a small or mid-sized supplier applying~~
12404 corrosion control treatment (unless deemed optimized under Section 611.351(b)(3)), and all
12405 small and medium suppliers that exceed the lead or copper action levels must sample and
12406 monitor water quality parameters in addition to lead and copper in compliance with the
12407 requirements of this section. Any supplier may be required to monitor water quality parameters
12408 as determined by the Agency, including as provided in this section~~and exceeding the lead trigger~~
12409 ~~level must monitor water quality parameters in addition to lead and copper under this Section.~~

12410
12411
12412 a) General Requirements

12413
12414 1) Distribution system samples for water quality parameters.~~Sample~~
12415 ~~Collection Methods~~

12416
12417 A) Distribution system~~Using Tap Samples. In total, all tap~~ samples
12418 collected at water taps~~a supplier collects~~ must represent water
12419 quality throughout the supplier's distribution system, considering

12420 the number of persons served, the different sources of water, the
12421 different treatment methods employed by the supplier ~~employs~~,
12422 and seasonal variability. Sites selected for sampling in the
12423 supplier's distribution system under this section can be the same or
12424 different from tap sampling sites the supplier~~Although a supplier~~
12425 ~~may conveniently conduct tap sampling for water quality~~
12426 ~~parameters at sites it uses for coliform sampling under Subpart L,~~
12427 ~~if they meet the requirements of this section, the supplier need not~~
12428 ~~do so, and the supplier need not perform tap sampling under this~~
12429 ~~Section at taps it~~ targeted for lead and copper sampling under
12430 Section 611.356(a). Suppliers may consider selecting sites used for
12431 total coliform sampling under 40 C.F.R. 141.21(a)(1). The supplier
12432 must include sites it selects for sampling in the distribution system
12433 ~~tap samples~~ under this Section in the site sample plan under
12434 Section 611.360(a)(1)~~Section 611.356(a)(1)~~. The supplier must
12435 update the site sample plan before changing sampling locations.
12436

12437 B) Samples collected in the supplier's distribution system must be
12438 analyzed for the following parameters, when applicable, as
12439 specified:~~Using Entry Point Samples. A supplier must collect~~
12440 ~~samples at entry points to the distribution system from locations~~
12441 ~~representing each source after treatment. If a supplier draws water~~
12442 ~~from more than one source and combines the sources before~~
12443 ~~distribution, the supplier must sample at an entry point to the~~
12444 ~~distribution system during normal operating conditions (i.e., when~~
12445 ~~the supplier uses water representing all sources).~~

12446 i) pH;

12447 ii) Alkalinity;

12448 iii) Orthophosphate (as PO₄), when an inhibitor containing an
12449 orthophosphate compound is used;

12450 iv) Silica, when an inhibitor containing a silicate compound is
12451 used; and

12452 v) Any parameters specified by the Agency under Section
12453 611.352(a)(1) or 611.352(f)(6).

12454 2) Entry point samples for water quality parameters.~~Number of Samples~~

12455 A) Samples collected at the entry point(s) to the supplier's distribution
12456

12463 system must be from locations representative of each source water
12464 after treatment. If a supplier draws water from more than one
12465 source water and the source waters are combined before
12466 distribution, the supplier must sample at an entry point to the
12467 distribution system during periods of normal operating conditions
12468 when water is representative of all sources typically being
12469 used.~~Tap Samples. A supplier must collect two tap samples for~~
12470 ~~applicable water quality parameters during each six-month water~~
12471 ~~quality monitoring period under subsections (b) through (e) from~~
12472 ~~the minimum number of sites the first column of Table F (labelled~~
12473 ~~“standard monitoring”) indicates. A supplier adding sites under~~
12474 ~~Section 611.352(j) (“find and fix” requirements) must collect tap~~
12475 ~~samples for applicable water quality parameters during each water~~
12476 ~~quality monitoring period under subsections (b) through (e) and~~
12477 ~~must sample from that adjusted minimum number of sites. A~~
12478 ~~supplier needs not add sites if it monitors at least twice the~~
12479 ~~minimum number of sites the first column of Table F indicates.~~

12480
12481 B) Except as provided in subsection (b)(3)(B) for ground water
12482 systems, the following parameters must be measured at each entry
12483 point to the distribution system, when applicable, as
12484 specified:~~Entry Point Samples~~

12485
12486 i) pH:~~Initial Monitoring. Except as subsection (e)(2) provides~~
12487 ~~otherwise, a supplier not applying corrosion control~~
12488 ~~treatment must collect two samples for each applicable~~
12489 ~~water quality parameter at each entry point to its~~
12490 ~~distribution system during each six-month water quality~~
12491 ~~monitoring period subsection (b) specifies.~~

12492
12493 ii) When alkalinity is adjusted as part of corrosion control, a
12494 reading of the dosage rate of the chemical used to adjust
12495 alkalinity, and the alkalinity concentration:~~Subsequent~~
12496 ~~Monitoring. A supplier must collect one sample for each~~
12497 ~~applicable water quality parameter at each entry point to its~~
12498 ~~distribution system during each six-month water quality~~
12499 ~~monitoring period subsections (c) through (e) specify.~~
12500 ~~During each water quality monitoring period subsections~~
12501 ~~(c) through (e) specify, a supplier applying corrosion~~
12502 ~~control treatment must continue collecting one sample for~~
12503 ~~each applicable water quality parameter at each entry point~~
12504 ~~to its distribution system at least once every two weeks.~~

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- iii) When a corrosion inhibitor is used as part of corrosion control, a reading of the dosage rate of the inhibitor used, and the concentration of orthophosphate (as PO₄) or silica (whichever is applicable); and
- iv) Any parameters specified by the Agency under Section 611.352(a)(1) or 611.352(f)(6).

b) Standard monitoring for water quality parameters. ~~Initial Sampling for Suppliers~~

- 1) Number of samples ~~Large Suppliers.— A large supplier not applying corrosion control treatment must begin monitoring for water quality parameters subsection (b)(3) specifies during the first two six month tap monitoring cycles no later than January 1 after the supplier either becomes a large supplier or fails to maintain its 90th percentile lead concentration below the PQL for lead.~~

A) Distribution system samples. Suppliers must collect two distribution system samples for applicable water quality parameters during each monitoring period specified under subsections (b)(2) through (b)(4) from each of the minimum number of sites listed in table 1 to this subsection (b)(1)(A). Suppliers that collect distribution system samples for water quality parameters from additional sites as a result of the Distribution System and Site Assessment requirements in Section 611.352(j) must add those sites to the minimum number of sites listed in table 1 to this subsection (b)(1)(A) up to a maximum of not more than twice the minimum number of sites.

<u>Table 1 to Subsection (b)(1)(A)</u>	
<u>System size (number of people served)</u>	<u>Minimum number of sites for water quality parameters</u>
<u>>100,000</u>	<u>25</u>
<u>10,001 to 100,000</u>	<u>10</u>
<u>3,301 to 10,000</u>	<u>3</u>
<u>501 to 3,300</u>	<u>2</u>
<u>101 to 500</u>	<u>1</u>
<u>≤100</u>	<u>1</u>

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- B) Samples at entry points.
 - i) Suppliers without installed or re-optimized OCCT and without Agency-designated optimal water quality

12540 parameters required to collect entry point samples must
12541 collect a minimum of two entry point samples for each
12542 applicable water quality parameter at each entry point to
12543 the supplier's distribution system at least once during each
12544 monitoring period specified in subsection (b)(2).

12545
12546 ii) Suppliers with installed OCCT or re-optimized OCCT
12547 and/or Agency-designated optimal water quality parameters
12548 required to collect entry point samples, including as
12549 provided in subsection (b)(3)(C), must collect one entry
12550 point sample for each applicable water quality parameter at
12551 each entry point to the supplier's distribution system at least
12552 once every two weeks during each monitoring period the
12553 supplier is required to conduct sampling as specified in
12554 subsections (b)(3) and (b)(4) and (c).
12555

12556 2) Initial sampling for suppliers. A large supplier without corrosion control
12557 treatment must begin monitoring for water quality parameters as specified
12558 in subsections (b)(2)(A) and (b)(2)(B) during the first two six-month
12559 monitoring periods beginning no later than January 1 of the calendar year
12560 after the supplier either becomes a large supplier or exceeds the practical
12561 quantitation limit for lead. Any medium supplier without corrosion
12562 control treatment that exceeds the lead action level or the copper action
12563 level must begin monitoring for applicable distribution system and entry
12564 point water quality parameters as specified in subsections (b)(2)(A) and
12565 (b)(2)(B) for two consecutive six-month monitoring periods beginning the
12566 month immediately following the end of the tap monitoring period in
12567 which the action level exceedance occurred. Any small supplier that
12568 exceeds the lead or copper action level must begin monitoring for
12569 applicable distribution system and entry point water quality parameters as
12570 specified in subsections (b)(2)(A) and (b)(2) B) for two consecutive six-
12571 month monitoring periods beginning the month immediately following the
12572 end of the tap monitoring period in which the action level exceedance
12573 occurred. Suppliers must continue monitoring as described by subsections
12574 (b)(3) and (b)(4). ~~Small and Mid-Sized Suppliers. A small or mid-sized~~
12575 ~~supplier exceeding the lead or copper action level or a supplier applying~~
12576 ~~corrosion control treatment for which the Agency did not designate~~
12577 ~~OWQPs and exceeding the lead trigger level must begin monitoring for~~
12578 ~~water quality parameters subsection (b)(3) specifies for two consecutive~~
12579 ~~six-month water quality monitoring periods in the month immediately~~
12580 ~~after the tap sampling period during which the exceedance occurred.~~
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- A) At sites in the supplier's distribution system, collect two samples for:
 - i) pH; and
 - ii) Alkalinity.

- B) At each entry point to the supplier's distribution system, collect all the applicable parameters listed in subsection (a)(2)(B).

- 3) Monitoring after installation of OCCT or re-optimized OCCT.~~Water Quality Parameters~~
 - A) A supplier that modifies or installs OCCT in compliance with Section 611.351(d)(5) or Section 611.351(e)(5) and is required to conduct follow-up monitoring for lead or copper in compliance with Section 611.351(d)(6) or (e)(6) must monitor for applicable distribution system and entry point water quality parameters as specified in subsections (a)(1) and (a)(2) every six months until the Agency designates new water quality parameter values for OCCT in compliance with Section 611.352(f). Suppliers must collect these samples at a regular frequency throughout the six-month monitoring period to reflect seasonal variability.~~Tap Water Samples. The supplier must collect two samples each for specific parameters:~~
 - i) ~~pH; and~~
 - ii) ~~Alkalinity.~~

 - B) Any ground water supplier can limit entry point sampling described in subsection (a)(2) to those entry points that are representative of water quality and treatment conditions throughout the supplier's system. If water from untreated ground water sources mixes with water from treated ground water sources, the supplier must monitor for water quality parameters both at representative entry points receiving treatment and representative entry points receiving no treatment. Prior to the start of any monitoring under this subsection (b)(3)(B), the supplier must provide to the Agency, written information and documentation identifying the selected entry points, including information on seasonal variability, sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout

12625 ~~the supplier's system.~~
12626 ~~Entry Point Samples. The supplier must~~
12627 ~~collect a sample from each entry point to its distribution system for~~
12628 ~~analyses for the parameters in subsection (b)(3)(A);~~

12629 C) The Agency may require small suppliers with corrosion control
12630 treatment for which the Agency has not designated optimal water
12631 quality parameters that do not exceed the lead or copper action
12632 level to conduct water quality parameter monitoring as described
12633 in this subsection (b) or the Agency can develop its own water
12634 quality parameter monitoring structure for these systems.

12635
12636 4) Monitoring by suppliers with Agency-designated optimal water quality
12637 parameter values for OCCT. Monitoring must occur at a regular
12638 frequency throughout the monitoring period to reflect seasonal variability
12639 and be consistent with the requirements in subsections (a)(1) and (a)(2).

12640
12641 A) Medium suppliers with corrosion control treatment and all large
12642 suppliers must sample for the applicable water quality parameters
12643 designated by the Agency and determine compliance with the
12644 requirements of Section 611.352(g) every six months with the first
12645 six-month monitoring period to begin on either January 1 or July 1,
12646 whichever comes first, after the Agency specifies the optimal
12647 values under Section 611.352(f).

12648
12649 B) A small supplier with corrosion control treatment that exceeds the
12650 lead or copper action level must begin monitoring during the
12651 standard six-month tap monitoring period immediately following
12652 the tap monitoring period in which the action level exceedance(s)
12653 occurs and continue monitoring until the supplier no longer
12654 exceeds the lead action level and/or copper action level and meets
12655 the Agency-designated optimal water quality parameters in two
12656 consecutive six-month tap monitoring periods under Section
12657 611.356(c). For any small supplier that is subject to a reduced
12658 monitoring frequency in compliance with Section 611.356(d) at the
12659 time of the action level exceedance, the start of the six-month
12660 monitoring period under this subsection (b)(4)(B) must coincide
12661 with the start of the tap monitoring period under Section
12662 611.356(c).

12663
12664 C) Compliance with Agency-designated optimal water quality
12665 parameter values must be determined as specified in Section
12666 611.352(g).
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D) The Agency has the discretion to require suppliers described in subsection (b)(4)(B) to continue to monitor optimal water quality parameters.

c) Reduced monitoring. ~~Monitoring after Installing OCCT or Reoptimized OCCT~~

1) A medium or large supplier that maintains the range of values for the water quality parameters reflecting OCCT specified by the Agency under Section 611.352(f) and does not exceed the lead action level or copper action level in either of the two consecutive six-month monitoring periods under subsection (b)(4) must collect two distribution system samples for applicable water quality parameters specified in subsection (a)(1)(B) from each of the minimum number of sites listed in table 1 to this subsection (c)(1) during each six-month monitoring period. These suppliers must collect these samples at a regular frequency throughout the six-month monitoring period to reflect seasonal variability. A supplier meeting the requirements of this subsection (c)(1) must continue to monitor at the entry point(s) to the distribution system as specified in subsection (a)(2). Suppliers with sites added as a result of the Distribution System and Site Assessment requirements in Section 611.352(j) must continue to sample at the added sites up to a maximum of not more than twice the minimum number of sites specified in table 1 to subsection (b)(1)(A). ~~A supplier installing or modifying corrosion control treatment under Section 611.351(d)(5) or (e)(5) that Section 611.351(d)(6) or (e)(6) requires to monitor must monitor the water quality parameters in subsections (e)(1)(A) and (e)(1)(B) every six months at the locations and frequencies those subsections specify until the Agency specifies new water quality parameter values for optimal corrosion control under subsection (d). The supplier must collect these samples evenly throughout the six-month water quality monitoring period to reflect seasonal variability.~~

Table 1 to Subsection (c)(1)

<u>System size (number of people served)</u>	<u>Reduced minimum number of sites for water quality parameters</u>
<u>>100,000</u>	<u>10</u>
<u>10,001 to 100,000</u>	<u>7</u>
<u>3,301 to 10,000</u>	<u>3</u>
<u>501 to 3,300</u>	<u>2</u>
<u>101 to 500</u>	<u>1</u>
<u>≤100</u>	<u>1</u>

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- A) ~~Tap Water Samples. The supplier must collect two samples at each tap for each of specific water quality parameters:~~
 - i) ~~pH;~~
 - ii) ~~Alkalinity;~~
 - iii) ~~Orthophosphate if the supplier uses an inhibitor containing an orthophosphate compound; and~~
 - iv) ~~Silica if the supplier uses an inhibitor containing a silicate compound.~~

 - B) ~~Entry Point Samples. Except as subsection (c)(1)(C) provides otherwise, a supplier must collect one sample at each entry point to its distribution system every two weeks (bi-weekly) for specific water quality parameters:~~
 - i) ~~pH;~~
 - ii) ~~If the supplier adjusts alkalinity as part of optimal corrosion control, a reading of the chemical dosage rate the supplier uses to adjust alkalinity and the alkalinity concentration; and~~
 - iii) ~~If the supplier uses a corrosion inhibitor as part of optimal corrosion control, a reading of the inhibitor dosage rate the supplier uses and the orthophosphate or silica concentration.~~

 - C) ~~Groundwater Systems. A groundwater system supplier can limit entry point sampling under subsection (c)(1)(B) to those entry points representing water quality and treatment conditions throughout the system. If water from untreated groundwater sources mixes with water from treated groundwater sources, the system must monitor for water quality parameters at both representative entry points receiving treatment and representative entry points not receiving treatment. Before starting monitoring under this subsection (c)(1)(C), the supplier must provide written information to the Agency identifying the selected entry points and documentation sufficient to demonstrate that the sites represent water quality and treatment conditions throughout the system, including information on seasonal variability.~~

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- 2) ~~Water quality parameters. Upon determining that doing so is necessary, the Agency may issue a SEP requiring a small or mid-sized supplier applying corrosion control treatment for which the Agency has not designated OWQPs that exceeds the lead trigger level but not the lead or copper action level to conduct water quality parameter monitoring under subsection (c)(1). Alternatively, the Board may require an alternative scheme for monitoring water quality control parameters, by rule, variance, or adjusted standard.~~
- A) A supplier that maintains the range of values for the water quality parameters reflecting OCCT specified by the Agency under Section 611.352(f) and does not exceed the lead or copper action level during three consecutive years of monitoring may reduce the frequency with which it collects distribution system samples for applicable water quality parameters specified in subsection (a)(1)(B) from each of the minimum number of sites listed in table 1 to subsection (c)(1) from every six months to annually. This sampling must begin during the calendar year immediately following the end of the monitoring period in which the third consecutive year of six-month monitoring occurs.
- B) A supplier may reduce the frequency with which it collects distribution system samples for water quality parameters specified in subsection (c)(1) to every year if the supplier demonstrates during two consecutive monitoring periods that its tap water lead level at the 90th percentile is less than or equal to the practical quantitation limit for lead of 0.005 mg/L, that its tap water copper level at the 90th percentile is less than or equal to 0.65 mg/L as calculated in compliance with Section 611.350(c)(3), and that the supplier has maintained the range of values for the water quality parameters reflecting OCCT specified by the Agency under Section 611.352(f).
- 3) A supplier that conducts sampling at taps for water quality parameters annually must collect these samples at a regular frequency throughout the year to reflect seasonal variability.
- 4) A supplier monitoring at a reduced frequency that fails to operate at or within the range of values for the optimal water quality parameters designated by the Agency in Section 611.352(f) for more than nine cumulative days, as specified in Section 611.352(g), in any six-month period under subsection (b)(4) must resume distribution system sampling

12786 in compliance with the number and frequency requirements in subsection
12787 (b)(4). Such a supplier may resume annual monitoring for water quality
12788 parameters in the distribution system at the reduced number of sites
12789 specified in subsection (c)(1) after the supplier completes two subsequent
12790 consecutive six-month rounds of monitoring that meet the criteria of
12791 subsection (c)(1) and/or may resume annual monitoring for water quality
12792 parameters in the distribution system at the reduced number of sites after
12793 the supplier demonstrates through subsequent rounds of monitoring that it
12794 meets the criteria of either subsection (c)(2)(A) or (c)(2)(B).

12795
12796 5) Any supplier monitoring at a reduced frequency that exceeds the lead
12797 action level or copper action level must resume standard water quality
12798 parameter monitoring beginning with the six-month period immediately
12799 following the tap monitoring period in which the action level
12800 exceedance(s) occurs. When the supplier no longer exceeds the lead
12801 action level and/or copper action level and meets the Agency-designated
12802 optimal water quality parameters in two consecutive six-month tap
12803 monitoring periods, the supplier may then reduce monitoring in
12804 compliance with subsections (c)(1) and (c)(2).

12805
12806 d) Additional monitoring by suppliers. The results of any monitoring conducted in
12807 addition to the minimum requirements of this section must be considered by the
12808 supplier and the Agency in determining concentrations of water quality
12809 parameters under this section or Section 611.352. ~~Monitoring after the Agency~~
12810 ~~Specifies Water Quality Parameter Values for Optimal Corrosion Control~~

12811
12812 ~~1) After the Agency specifies the values for water quality control parameters~~
12813 ~~reflecting OCCT under Section 611.352(f), a supplier must monitor for the~~
12814 ~~specified OWQPs during six-month water quality monitoring periods~~
12815 ~~beginning on January 1 or July 1. The supplier must space this monitoring~~
12816 ~~evenly throughout the six-month water quality monitoring period to reflect~~
12817 ~~seasonal variability and be consistent with subsections (c)(1)(A) through~~
12818 ~~(c)(1)(C).~~

12819
12820 ~~A) Large Suppliers. A large supplier must measure the applicable~~
12821 ~~water quality parameters the Agency specifies and determine~~
12822 ~~whether the supplier complies with Section 611.352(g) every six~~
12823 ~~months, with the first six-month water quality monitoring period to~~
12824 ~~begin on the sooner of January 1 or July 1 after the Agency~~
12825 ~~specifies the optimal values under Section 611.352(f).~~

12826
12827 ~~B) Small and Mid-Sized Suppliers. A small or mid-sized supplier~~
12828 ~~exceeding an action level must begin monitoring during the six-~~

12829 ~~month water quality monitoring period immediately following the~~
12830 ~~tap monitoring cycle during which the exceedance occurs and~~
12831 ~~continue monitoring until the supplier no longer exceeds the lead~~
12832 ~~or copper action level and meets the OWQPs in two consecutive~~
12833 ~~six month tap monitoring cycles under Section 611.356(d)(3). For~~
12834 ~~a small or mid sized supplier subject to a reduced water quality~~
12835 ~~monitoring cycle frequency under Section 611.356(d)(4) at the~~
12836 ~~time it exceeds the action level, the start of the applicable six-~~
12837 ~~month water quality monitoring cycle under this subsection (d)~~
12838 ~~must coincide with the start of the applicable tap monitoring cycle~~
12839 ~~under Section 611.356(d)(4).~~

12840
12841 C) ~~A supplier must determine whether it complies with Agency-~~
12842 ~~designated OWQPs as Section 611.352(g) specifies.~~

12843
12844 2) ~~A small or mid sized supplier exceeding the lead trigger level but not the~~
12845 ~~lead or copper action level for which the Agency has set OWQPs must~~
12846 ~~monitor every six months as subsection (d)(1) specifies, until the supplier~~
12847 ~~no longer exceeds the lead trigger level in two consecutive tap monitoring~~
12848 ~~cycles.~~

12849
12850 3) ~~The Agency may issue a SEP requiring a supplier under subsection (d)(2)~~
12851 ~~to continue monitoring the OWQPs.~~

12852
12853 e) **Reduced Monitoring**

12854
12855 1) **Reduced Tap Monitoring.** ~~A large supplier maintaining the range of~~
12856 ~~values for the water quality parameters reflecting OCCT the Agency~~
12857 ~~specifies under Section 611.352(f) and not exceeding the lead trigger level~~
12858 ~~during each of two consecutive six month water quality monitoring cycles~~
12859 ~~under subsection (d) must continue monitoring at the entry points to the~~
12860 ~~distribution system as subsection (c)(1)(B) specifies. The supplier may~~
12861 ~~collect two samples from each tap for applicable water quality parameters~~
12862 ~~from the reduced number of sites the second column of Table F (Standard~~
12863 ~~Monitoring) indicates during each subsequent six month water quality~~
12864 ~~monitoring cycle. The supplier must collect these samples evenly~~
12865 ~~throughout the six month water quality monitoring cycle to reflect~~
12866 ~~seasonal variability.~~

12867
12868 2) **Reduced Monitoring Frequency**

12869
12870 A) **Annual Monitoring.** ~~A supplier maintaining the range of values for~~
12871 ~~the water quality parameters reflecting OCCT under Section~~

12872 ~~611.352(f) not exceeding the lead trigger level or copper action~~
 12873 ~~level during three consecutive years of monitoring may reduce its~~
 12874 ~~tap sampling frequency for applicable water quality parameters~~
 12875 ~~subsection (e)(1) specifies from every six months to annually. The~~
 12876 ~~supplier must begin this reduced sampling during the calendar year~~
 12877 ~~immediately following the end of the water quality monitoring~~
 12878 ~~cycle in which the third consecutive year of six-month monitoring~~
 12879 ~~occurs.~~

12881 ~~B) A supplier may reduce its tap sampling frequency for applicable~~
 12882 ~~water quality parameters in subsection (e)(1) to once every year if~~
 12883 ~~the supplier demonstrates that it complies with subsections~~
 12884 ~~(e)(2)(B)(i) through (e)(2)(B)(iii) during two consecutive water~~
 12885 ~~quality monitoring cycles.~~

12887 ~~i) The supplier must demonstrate that its tap water 90th~~
 12888 ~~percentile concentration for lead is less than or equal to the~~
 12889 ~~PQL for lead of 0.005 mg/L.~~

12891 ~~ii) The supplier must demonstrate that its tap water 90th~~
 12892 ~~percentile concentration for copper is less than or equal to~~
 12893 ~~0.65 mg/L in Section 611.350(c)(3).~~

12895 ~~iii) The supplier must demonstrate that it maintains the range~~
 12896 ~~of values for the water quality parameters reflecting OCCT~~
 12897 ~~the Agency specified under Section 611.352(f).~~

12899 ~~3) A supplier sampling annually or triennially must collect these samples~~
 12900 ~~evenly throughout the calendar year to reflect seasonal variability.~~

12902 ~~4) A supplier on a reduced monitoring frequency under this subsection (e)~~
 12903 ~~failing to operate at or above the minimum value or within the range of~~
 12904 ~~values for the water quality parameters the Agency specifies under Section~~
 12905 ~~611.352(f) for more than nine days in any six-month period for~~
 12906 ~~determining compliance under Section 611.352(g) must resume tap water~~
 12907 ~~sampling complying with the number and frequency of samples subsection~~
 12908 ~~(d) requires. A supplier thus ceasing reduced monitoring may resume~~
 12909 ~~annual monitoring for water quality parameters at the tap at the reduced~~
 12910 ~~number of sites subsection (e)(1) specifies after completing two~~
 12911 ~~subsequent consecutive six-month rounds of monitoring complying with~~
 12912 ~~subsection (e)(1). The supplier may resume annual monitoring for water~~
 12913 ~~quality parameters at the reduced number of sites after demonstrating~~
 12914 ~~through subsequent rounds of monitoring that the supplier complies with~~

12915 subsection (e)(2)(A) or (e)(2)(B).

12916

12917 f) ~~Additional Monitoring by Suppliers. The supplier and the Agency must consider~~
12918 ~~the results any monitoring conducted in addition to what this Section requires in~~
12919 ~~making any determinations (i.e., determining concentrations of water quality~~
12920 ~~parameters) under this Section or Section 611.352.~~

12921

12922 g) ~~Sites Added During Find and Fix. A supplier conducting water quality parameter~~
12923 ~~monitoring at additional sites during a “find and fix” assessment under Section~~
12924 ~~611.352(j) must add those sites to the minimum number of sites subsections (a)~~
12925 ~~through (e) specify, unless the supplier monitors at least twice the required~~
12926 ~~minimum number of sites.~~

12927

12928 BOARD NOTE: This Section derives from 40 CFR 141.87.

12929

(Source: Amended at 50 Ill. Reg. _____, effective _____)

12930

12931 **Section 611.358 Monitoring for Lead and Copper in Source Water**

12932

12933 a) Sampling Location, Collection Methods, and Number of Samples

12934

12935 1) A supplier failing to meet the lead or copper action level on the basis of
12936 tap samples under Section 611.356 must collect lead and copper source
12937 water samples under specific requirements for sample location, number of
12938 samples, and collection methods:

12939

12940 A) A groundwater supplier must take a minimum of one sample at
12941 every entry point to the distribution system after the supplier
12942 applies any treatment or in the distribution system at a point
12943 representing each source after treatment (a "sampling point"). The
12944 supplier must take one sample at the same sampling point unless
12945 conditions make another sampling point more closely represent a
12946 source or treatment plant.

12947

12948 B) A surface water supplier must take a minimum of one sample at
12949 every entry point to the distribution system after treatment or in the
12950 distribution system at a sampling point. The supplier must take
12951 each sample at the same sampling point unless conditions make
12952 another sampling point more closely represent a source or
12953 treatment plant.

12954

12955 BOARD NOTE: For this subsection (a)(1)(B), a system using a
12956 combination of surface water and groundwater sources is a surface
12957

- 12958 water system.
12959
12960 C) If a supplier draws water from more than one source and combines
12961 the sources before distribution, the supplier must sample at an
12962 entry point to the distribution system during periods of normal
12963 operating conditions (i.e., when water represents all sources being
12964 used).
12965
12966 D) The Agency may issue a SEP reducing the total number of samples
12967 a supplier must analyze by allowing the use of compositing.
12968 Certified laboratory personnel must composite the samples. A
12969 composite sample may include a maximum of five samples.
12970 However, if the lead concentration in the composite sample is
12971 greater than or equal to 0.001 mg/L or the copper concentration is
12972 greater than or equal to 0.160 mg/L, the supplier must do either of
12973 two things:
12974
12975 i) The supplier must take and analyze a follow-up sample
12976 within 14 days at each sampling point included in the
12977 composite sample; or
12978
12979 ii) If duplicate samples or sufficient volumes of the original
12980 samples are available from each sampling point the
12981 certified laboratory used in the composite sample, the
12982 supplier may use those instead of resampling.
12983
12984 2) SEP Requiring an Additional Sample
12985
12986 A) Upon determining that sampling indicates exceedance of the lead
12987 or copper MPC under Section 611.353(b)(4), the Agency must
12988 issue a SEP requiring the supplier to collect one additional sample
12989 as soon as possible after the initial sample at the same sampling
12990 point but before two weeks after the supplier took the initial
12991 sample.
12992
12993 B) If a supplier takes an Agency-required confirmation sample for
12994 lead or copper, the supplier must average the results obtained from
12995 the initial sample with those from the confirmation sample to
12996 determine whether it complies with the Agency-specified lead and
12997 copper MPCs.
12998
12999 i) For averaging, consider any analytical result below the
13000 MDL as zero.

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- ii) Consider any value above the MDL but below the PQL either as the measured value or one-half the PQL.
- b) Monitoring Frequency after System Exceeds Tap Water Action Level. A supplier exceeding the lead or copper action level in tap for the first time or for the first time after adding a new source or installing source water treatment under Section 611.353(b)(2) must collect one source water sample from each entry point to its distribution system no later than six months after the end of the tap sampling period during which the supplier exceeds the lead or copper action level. For annual or less frequent tap monitoring ~~periods~~, the end of the tap sampling period is September 30 of the calendar year during which the sampling occurs or the last day of any alternative tap sampling period the Agency establishes in a SEP. If the Agency determines under Section 611.353(b)(2) that source water treatment is not necessary, the Agency may issue a SEP waiving source water monitoring for the supplier subsequently exceeding the lead or copper action level at the tap under subsections (b)(1)(A) through (b)(1)(C).
- 1) The Agency may issue a SEP waiving source water monitoring for the supplier exceeding the lead or copper action level at the tap under specific conditions:
 - A) The supplier already conducted source water monitoring after previously exceeding the lead or copper action level;
 - B) The Agency issued a SEP determining that source water treatment is not necessary; and
 - C) The supplier has not added any new water sources.
 - 2) This subsection (b)(2) corresponds with 40 CFR 141.88(b)(2), which USEPA marked "[reserved]". This statement maintains structural consistency with USEPA's rule.
- c) Monitoring Frequency after Installing Source Water Treatment or Adding a New Source
- 1) A supplier installing source water treatment under Section 611.353(a)(3) must collect one source water sample from each entry point to its distribution system during each of two consecutive six-month source water monitoring periods on or before 36 months after completing step 2, as Section 611.353(a)(4) specifies.

- 13044 2) A supplier adding a new source must collect one source water sample
13045 from each entry point to its distribution system during each six-month
13046 source water monitoring period until the supplier demonstrates that the
13047 supplier has maintained finished drinking water entering the distribution
13048 system below the MPCs for lead and copper the Agency specifies under
13049 Section 611.353(b)(4), or the Agency issues a SEP determining that the
13050 supplier does not need source water treatment.
13051
- 13052 d) Monitoring Frequency after the Agency Specifies the Lead and Copper MPCs
13053
- 13054 1) A supplier must monitor at the frequency subsections (d)(1) and (d)(2)
13055 specify if the Agency specifies the MPCs under Section 611.353(b)(4).
13056
- 13057 A) GWS Suppliers
13058
- 13059 i) A GWS supplier sampling under subsection (d)(1) must
13060 collect samples once during the three-year compliance
13061 period (as Section 611.101 defines the term) during which
13062 the Agency makes its determination under Section
13063 611.353(b)(4).
13064
- 13065 ii) A GWS supplier sampling under subsection (d)(1) must
13066 sample once during each subsequent compliance period.
13067
- 13068 iii) A supplier must triennially collect samples every third
13069 calendar year.
13070
- 13071 B) A SWS or mixed system supplier must collect samples once during
13072 each calendar year, the first annual source water monitoring period
13073 to begin during the year in which the Agency makes its
13074 determination under Section 611.353(b)(4).
13075
- 13076 2) A supplier needs not sample source water for lead or copper if the supplier
13077 meets the action level for the specific contaminant in all tap water samples
13078 during the entire source water monitoring period under subsection
13079 (d)(1)(A) or (d)(1)(B).
13080
- 13081 e) Reduced Monitoring Frequency
13082
- 13083 1) A GWS supplier may reduce its source water monitoring frequency for
13084 lead and copper to once during each nine-year compliance cycle (as
13085 Section 611.101 defines the term), ~~if provided~~ the supplier collects the
13086 samples ~~no later than~~ every ninth calendar year, and only if the supplier

13087 meets certain criteria:

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A) The supplier demonstrates that finished drinking water entering the distribution system remains below the MPCs for lead and copper the Agency specifies under Section 611.353(b)(4) during at least three consecutive monitoring periods under subsection (d)(1).

B) This subsection (e)(1)(B) corresponds with 40 CFR 141.88(e)(1)(ii), which USEPA marked "[reserved]". This statement maintains structural consistency with USEPA's rule.

2) A SWS or mixed system supplier may reduce its monitoring frequency subsection (d)(1) requires to once during each nine-year compliance cycle (as Section 611.101 defines the term) if the supplier collects the samples ~~no later than~~ every ninth calendar year, and only if the supplier meets certain criteria:

A) The supplier demonstrates that finished drinking water entering its distribution system remains below the MPCs for lead and copper the Agency specifies under Section 611.353(b)(4) for at least three consecutive years.

B) This subsection (e)(1)(B) corresponds with 40 CFR 141.88(e)(1)(ii), which USEPA marked "[reserved]". This statement maintains structural consistency with USEPA's rule.

3) A supplier using a new source of water must not reduce its monitoring for lead or copper until after the supplier demonstrates, by samples it collected from the new source during three consecutive source water monitoring periods under subsection (d)(1), that lead or copper levels are below the MPC the Agency specifies under Section 611.353(a)(5).

BOARD NOTE: This Section derives from 40 CFR 141.88.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

Section 611.360 Reporting

A supplier must report the following specific information to the Agency in compliance with this Section ~~provides~~.

a) Reporting requirements for tap monitoring for lead and copper and for distribution system and entry point monitoring for water quality parameters.~~for~~

~~Tap, Lead, and Copper, and Water Quality Parameter Monitoring~~

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- 1) By the start of a supplier's first lead and copper tap monitoring period in Section 611.356(c) and 611.356(d), suppliers must submit the following to the Agency:~~Notwithstanding Section 611.840(a) and except as subsection (a)(1)(H) provides otherwise, a supplier must report the information subsections (a)(1)(A) through (a)(1)(I) specify for all samples and for all water quality parameter samples Section 611.357 specifies within ten days after the end of each applicable tap sampling period Sections 611.356 and 611.357 specify (i.e., every six months, annually, triennially, or every nine years). For a tap monitoring cycle shorter than six months, the end of the tap monitoring cycle is the last date on which the supplier may collect samples during that tap sampling period, as Sections 611.356 and 611.357 specify.~~
 - A) A site sample plan, including a list of tap sample site locations for lead and copper sampling identified from the inventory in Section 611.354(a), and a list of tap sampling sites and entry point to the distribution system sites for water quality parameter monitoring selected under Section 611.357(a)(1) and 611.357(a)(2). Changes to the site sample plan require suppliers to submit an updated site sample plan to the Agency before the start of the next tap sampling period conducted by the supplier. The Agency may require modifications to the site sample plan as necessary.~~The results of all tap samples for lead and copper, including the location of each site and the criteria under Section 611.356(a)(3) through (a)(10) the supplier used as the basis for selecting the site for its sampling pool, accounting for Section 611.356(a)(11);~~
 - i) Suppliers with lead, galvanized requiring replacement, and/or lead status unknown service lines in the service line inventory conducted under Section 611.354(a) and (b) must evaluate the tap sampling locations for lead and copper used in their sampling pool prior to the start of each tap sampling period, beginning with the compliance date specified in 611.350(a)(3). Evaluations that result in changes to the site sample plan require suppliers to submit an updated site sample plan to the Agency prior to each tap sampling period conducted by the supplier.
 - ii) A supplier that cannot identify enough sampling sites with premise plumbing made of lead and/or served by lead service lines to meet the minimum number of sample sites

13173 required in Section 611.356(c)(1) or (d)(1), as required
13174 under Section 611.356(a)(3), must submit documentation,
13175 including documentation of applicable customer refusals
13176 for sampling, in support of the conclusion that there are an
13177 insufficient number of available sites with premise
13178 plumbing made of lead and/or served by lead service lines,
13179 prior to the next tap sampling period.

13180
13181 B) A copy of the sample collection instructions provided to
13182 individuals who are sampling, which meets the requirements of
13183 Section 611.356(b). If supplier seeks to modify its sample
13184 collection instructions specified in this subsection (a)(1)(B), it
13185 must submit the updated version of the instructions to the Agency
13186 for review prior to the next tap sampling period. ~~Supporting~~
13187 ~~documents for each tap water lead or copper sample the supplier~~
13188 ~~requests the Agency invalidate under Section 611.356(f)(2);~~

13189
13190 ~~C) A supplier having lead, galvanized requiring replacement, or lead~~
13191 ~~status unknown service lines in its lead service line inventory~~
13192 ~~under Section 611.354(a) must re-evaluate the tap sampling~~
13193 ~~locations the supplier uses in its sampling pool prior to the~~
13194 ~~compliance date Section 611.350(a) specifies, then the more~~
13195 ~~frequent of annually or prior to the each subsequent round of tap~~
13196 ~~sampling the supplier conducts, whichever is more frequent;~~

13197
13198 i) ~~Before the first applicable tap monitoring cycle under~~
13199 ~~Section 611.356(d), the supplier must submit a site sample~~
13200 ~~plan to the Agency under Section 611.356, including a list~~
13201 ~~of tap sample site locations identified in the inventory~~
13202 ~~under Section 611.354(a), and a list a tap sampling WQP~~
13203 ~~sites the supplier selected under Section 611.357(a)(1).~~
13204 ~~The supplier must update and submit the site sample plan to~~
13205 ~~the Agency before changing any sample site locations. The~~
13206 ~~Agency may issue a SEP requiring the supplier to modify~~
13207 ~~its site sample plan as necessary.~~

13208
13209 ii) ~~For a supplier having lead service line sites but an~~
13210 ~~insufficient number to meet the minimum number Section~~
13211 ~~611.356 requires, the supplier must document support for~~
13212 ~~its conclusion that it has an insufficient number of lead~~
13213 ~~service line sites complying with the applicable of 40 CFR~~
13214 ~~Section 141.86(a)(3) or (a)(4) (for a CWS supplier) or 40~~
13215 ~~CFR Section 141.86(a)(8) (for an NTNCWS supplier);~~

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- ~~D) The 90th percentile lead and copper concentrations the supplier measures from among all lead and copper tap samples the supplier collects during each tap sampling period (calculated under Section 611.350(c)(4)), unless the Agency calculates the supplier's 90th percentile lead and copper concentrations under subsection (h);~~
- ~~E) With the exception of initial tap sampling under Section 611.356(d)(1), the supplier must identify any site it did not sample during previous tap sampling periods and explain why sampling sites have changed;~~
- ~~F) The results of all water quality parameter tap samples the supplier must collect under Section 611.357(b) through (g);~~
- ~~G) The results of all samples the supplier collects at entry points for applicable water quality parameters under Section 611.357(b) through (e);~~
- ~~H) A supplier must report the results of all water quality parameter samples the supplier collects under Section 611.357(c) through (f) during each six month water quality monitoring period Section 611.357(d) specifies within the first ten days following the end of the water quality monitoring period, unless the Agency specifies a more frequent reporting requirement in a SEP; and~~
- ~~I) Before the first applicable tap sampling period under Section 611.356(d), the supplier must submit to the Agency, a copy of the tap sampling protocol the supplier provides to persons sampling. The Agency must verify that the supplier uses wide-mouth collection bottles and the supplier does not recommend pre-stagnation flushing or aerator cleaning or removal before collecting samples under Section 611.356(b). The tap sampling protocol must contain instructions for correctly collecting a first draw sample at a site without a lead service line and a first draw and a fifth liter sample at a site with a lead service line, as applicable. If the supplier seeks to modify the tap sampling protocol it submitted this subsection (a)(1)(I), the supplier must submit the updated version of the protocol to the Agency for review and approval at least 60 days before using it.~~

2) Notwithstanding the requirements of § 40 C.F.R. 141.31(a), a supplier must report the information specified in subsections (a)(2)(B) through (G),

13259 for all lead and copper tap samples specified in Section 611.356 and for all
13260 water quality parameter distribution system and entry point samples
13261 specified in Section 611.357, within the first 10 days following the end of
13262 each applicable sampling period specified in Sections 611.356 and
13263 611.357, unless the Agency specified an earlier reporting requirement.
13264 For tap sampling periods with a duration less than six months, the end of
13265 the sampling period is the last date samples can be collected as specified
13266 in Section 611.356.~~For an NTNCWS supplier, or a CWS supplier~~
13267 ~~complying with Section 611.356 (b)(5), not having enough taps for first-~~
13268 ~~draw or fifth liter tap samples, the supplier must do one of two things:~~
13269
13270 A) The results of all tap samples for lead and copper collected during
13271 the tap sampling period, including results for both first- and fifth-
13272 liter samples collected at lead service line sites, the location of
13273 each site, and the site selection criteria under Section 611.356(a)(3)
13274 and (a)(4) used as the basis for which the site was selected for the
13275 supplier's sampling pool;~~The supplier must identify to the Agency~~
13276 ~~in writing standing times and locations for enough non first draw~~
13277 ~~and fifth liter tap samples to make up its sampling pool under~~
13278 ~~Section 611.356(b)(5) by the start of the first applicable monitoring~~
13279 ~~period under Section 611.356(d), unless the Agency waives prior~~
13280 ~~Agency approval of non first draw and fifth liter tap sampling sites~~
13281 ~~the supplier selects under Section 611.356(b)(5); or~~
13282
13283 B) Documentation for each tap water lead or copper sample for which
13284 the supplier requests invalidation under Section 611.356(f);~~If the~~
13285 ~~Agency waives prior approval of non first draw sampling sites the~~
13286 ~~supplier selects, the supplier must identify each site that did not~~
13287 ~~meet the six hour minimum standing time and the length of~~
13288 ~~standing time for that particular substitute sample collected under~~
13289 ~~Section 611.356(b)(5) in writing and include this information with~~
13290 ~~the lead and copper tap sample results the supplier must submit~~
13291 ~~under subsection (a)(1)(A).~~
13292
13293 C) With the exception of initial tap sampling conducted under Section
13294 611.356(c)(2)(A), a certification the results of monitoring from the
13295 tap monitoring period before the tap monitoring period described
13296 in this subsection (a)(2) were publicly accessible, as specified in
13297 Section 611.356(h);
13298
13299 D) The 90th percentile lead and copper concentrations calculated from
13300 lead and copper tap water samples collected during each tap
13301 sampling period in compliance with Section 611.350 (c)(3), unless

13302 the Agency calculates the supplier's 90th percentile lead and copper
13303 levels under subsection (h);

13304
13305 E) With the exception of initial tap sampling conducted under Section
13306 611.356(c)(2)(A), the supplier must identify any site which was
13307 not sampled during the tap monitoring period previous to the
13308 applicable tap monitoring period described in this subsection
13309 (a)(2), and include an explanation of why sampling sites have
13310 changed;

13311
13312 F) The results of all tap samples for water quality parameters required
13313 to be collected under Sections 611.357(b) through 611.357(d);

13314
13315 G) The results of all samples collected at the entry point(s) to the
13316 distribution system for water quality parameters as required in
13317 Section 611.357(b) through 611.357(d); and

13318
13319 H) The number of sites from which the supplier requested customer
13320 participation for sampling during the tap sampling period and the
13321 customer did not respond after two attempts or refused to
13322 participate.

13323
13324 3) For a NTNCWS, or a CWS supplier meeting the criteria of Section
13325 611.355(b)(8), that does not have enough taps and can provide first liter or
13326 first-and fifth-liter paired samples meeting the six-hour minimum
13327 stagnation time, the supplier must either:~~At a time the Agency specifies in~~
13328 ~~a SEP, a supplier must document adding a new source or any change in~~
13329 ~~water treatment to the Agency describing the addition or change. If the~~
13330 ~~Agency does not specify a time in a SEP, the supplier must document the~~
13331 ~~changes to the Agency as early as possible but no later than six months~~
13332 ~~before adding a new source or any change in water treatment. The~~
13333 ~~Agency may issue a SEP requiring a supplier to take actions before or~~
13334 ~~after adding a new source or making a long-term change in treatment to~~
13335 ~~ensure the supplier will operate and maintain OCCT, such as additional~~
13336 ~~water quality parameter monitoring, additional lead or copper tap~~
13337 ~~sampling, and re-evaluating corrosion control treatment.~~

13338
13339 A) Provide written documentation identifying standing times and
13340 locations for samples that do not meet the six-hour minimum
13341 stagnation time to make up a supplier's sampling pool in order to
13342 meet the minimum number of sites to sample required in Section
13343 611.356(b)(3) by the start of the supplier's first applicable tap
13344 monitoring period under Section 611.356(c), or if there are

13345 changes to the documentation, prior to the next tap sampling
13346 period, unless the Agency waived prior approval of sample sites
13347 not meeting the six-hour stagnation time selected by the supplier
13348 under Section 611.356(b)(3); or

13349
13350 B) If the Agency waived prior approval of sample sites not meeting
13351 the six-hour stagnation time selected by the supplier, identify, in
13352 writing, each site that did not meet the six-hour minimum
13353 stagnation time and the length of standing time for that particular
13354 substitute sample collected under Section 611.356(b)(3) and
13355 include this information with the lead and copper tap sample
13356 results required to be submitted in compliance with subsection
13357 (a)(2)(A).
13358

13359 BOARD NOTE: USEPA gives examples of long-term changes in
13360 treatment ~~as~~ including adding a new treatment process or modifying an
13361 existing treatment process. USEPA gives examples of modifying
13362 treatment ~~as~~ including switching secondary disinfectants, coagulants (*e.g.*,
13363 alum to ferric chloride), or corrosion inhibitor (*e.g.*, orthophosphate to
13364 blended phosphate). USEPA said that long-term changes can also include
13365 dose changes to existing chemicals if the supplier plans long-term changes
13366 to its finished water pH or residual inhibitor concentration. USEPA said
13367 that long-term treatment changes would not include chemical dose
13368 fluctuations associated with daily raw water quality changes where the
13369 supplier does not add a new source.

13370
13371 4) At a time specified by the Agency, or if no specific time is designated, as
13372 early as possible but no later than six months prior to the addition of a new
13373 source or any long-term change in water treatment, a supplier must submit
13374 written documentation describing the addition of a new source or long-
13375 term change in treatment to the Agency. Suppliers may not implement the
13376 addition of a new source or long-term treatment change without Agency
13377 approval. The Agency must review and approve the addition of a new
13378 source or a long-term change in water treatment before it can be
13379 implemented by the supplier. The Agency may require any such supplier
13380 to take actions before or after the addition of a new source or long-term
13381 treatment change to ensure that the supplier will operate and maintain
13382 optimal corrosion control treatment, such as additional water quality
13383 parameter monitoring, additional lead or copper tap sampling, and re-
13384 evaluating corrosion control treatment. Examples of long-term treatment
13385 changes include but are not limited to the addition of a new treatment
13386 process or modification of an existing treatment process. Examples of
13387 modifications include switching secondary disinfectants, switching

13388 coagulants (e.g., alum to ferric chloride), and switching corrosion inhibitor
13389 products (e.g., orthophosphate to blended phosphate). Long-term
13390 treatment changes can also include dose changes to existing chemicals if
13391 the system is planning long-term changes to its finished water pH or
13392 residual inhibitor concentration. Long-term treatment changes would not
13393 include chemical dose fluctuations associated with daily raw water quality
13394 changes where a new source has not been added.~~A small supplier applying~~
13395 ~~for a monitoring waiver under Section 611.356(g) or subject to a waiver~~
13396 ~~granted under Section 611.356(g)(3) must provide certain information to~~
13397 ~~the Agency in writing before the applicable deadline:~~

13398
13399 A) ~~Before the start of the first applicable tap monitoring cycle in~~
13400 ~~Section 611.356(d), a small supplier applying for a monitoring~~
13401 ~~waiver must provide the documents demonstrating that the supplier~~
13402 ~~qualifies for a waiver under Section 611.356(g)(1) and (g)(2).~~

13403
13404 B) ~~No later than nine years after the monitoring the supplier~~
13405 ~~previously conducted under Section 611.356(g)(2) or Section~~
13406 ~~611.356(g)(4)(A), a small supplier wanting to maintain its~~
13407 ~~monitoring waiver must provide the information Section~~
13408 ~~611.356(g)(4)(A) and (g)(4)(B) requires.~~

13409
13410 C) ~~No later than 60 days after the small supplier becomes aware that it~~
13411 ~~is no longer free of lead-containing or copper-containing material,~~
13412 ~~a small supplier having a monitoring waiver must notify the~~
13413 ~~Agency in writing, stating the circumstances introducing lead or~~
13414 ~~copper-containing materials into the system and describing any~~
13415 ~~corrective action the supplier plans to remove these materials.~~

13416
13417 5) Any supplier serving 3,300 or fewer persons applying for a monitoring
13418 waiver under Section 611.356(g), or subject to a waiver granted under
13419 Section 356 (g)(3), must provide the following information to the Agency
13420 in writing by the specified deadline:~~A GWS supplier limiting its water~~
13421 ~~quality parameter monitoring to a subset of entry points under Section~~
13422 ~~611.357(c)(3) must identify its selected entry points to the Agency in~~
13423 ~~writing, including information sufficiently demonstrating that the sites~~
13424 ~~represent water quality and treatment conditions throughout the supplier's~~
13425 ~~system.~~

13426
13427 A) By the start of the supplier's first applicable tap monitoring period
13428 in Section 611.356(c) and 611.356 (d), any supplier applying for a
13429 monitoring waiver must provide the documentation required to

demonstrate that it meets the waiver criteria of Sections 611.356(g)(1) and 611.356(g)(2) to the Agency.

- B) Prior to the beginning of each tap monitoring period in which the supplier desires to maintain its monitoring waiver under Section 611.356(g)(2) or 611.356(g)(4), the supplier must provide the information required by Section 611.356(g)(4)(A) and 611.356(g)(4)(B) to the Agency.
- C) No later than 60 days after it becomes aware that it is no longer free of lead-containing and/or copper-containing material, as appropriate, each supplier with a monitoring waiver must provide written notification to the Agency setting forth the circumstances resulting in the lead-containing and/or copper-containing materials being discovered in the supplier's system and what corrective action, if any, the supplier plans to take to remove these materials.

6) Each supplier that limits water quality parameter monitoring to a subset of entry points under Section 611.357(b)(3)(B) must provide, by the commencement of such monitoring, written correspondence to the Agency that identifies the selected entry points and includes information sufficient to demonstrate that the sites are representative of water quality and treatment conditions throughout the system.

b) Source water monitoring reporting requirements. A supplier must report the following within the first 10 days following the end of each source water monitoring period (i.e., annually, per compliance period, per compliance cycle) specified in Section 611.358.~~Reporting for Source Water Monitoring~~

1) The sampling results for all source water samples collected in compliance with Section 611.358.~~A supplier must report its sampling results for all source water samples it collects under Section 611.358 within ten days after the end of each source water monitoring period Section 611.358 specifies.~~

2) With the exception of the first round of source water sampling a supplier conducts under Section 611.358(b), a supplier must specify any site it did not sample during the previous~~source water~~ monitoring periods, and include an explanation of~~explaining~~ why the supplier changed the sampling point.

c) Corrosion control reporting requirements~~Reporting for Corrosion Control Treatment.~~ Before the applicable dates under Section 611.351, a supplier must

13473 report the following~~ertain~~ information:

13474
 13475 1) For suppliers~~A supplier~~ demonstrating that they have~~it~~ already optimized
 13476 OCCT without optimized water quality parameters set by the Agency,
 13477 ~~corrosion control must provide the~~ information required in Section
 13478 611.351(b)(1) through (b)(3)~~requires~~.

13479
 13480 2) For suppliers required to~~A supplier that must~~ optimize corrosion control,
 13481 ~~must~~ provide its recommendation regarding OCCT under Section
 13482 611.352(a).

13483
 13484 3) For suppliers required to~~A supplier that must~~ evaluate the effectiveness of
 13485 corrosion control treatments under Section 611.352(c), ~~must provide the~~
 13486 information required in Section 611.352(c)~~requires~~.

13487
 13488 4) For suppliers required to~~A supplier that must~~ install OCCT or re-
 13489 optimized OCCT designated by~~optimal corrosion control~~ the Agency
 13490 ~~approves~~ under Section 611.352(d), ~~amust provide a copy of the Agency~~
 13491 ~~permit~~ letter, certifying~~which acts as certification~~ that the supplier
 13492 completed installing that~~the permitted~~ treatment.

13493
 13494 5) For suppliers not required to complete the corrosion control treatment
 13495 steps under Section 611.351(f), a letter certifying the supplier completed
 13496 the mandatory service line replacement program or that the supplier met
 13497 the minimum annual replacement rate calculated under Section
 13498 611.351(f)(1)(B).

13499
 13500 d) Source water treatment reporting requirements. ~~By Reporting for Source Water~~
 13501 ~~Treatment. Before~~ the applicable dates in Section 611.353, ~~a~~ supplier must
 13502 provide the following~~ertain~~ information to the Agency:

13503
 13504 1) If required under Section 611.353(b)(1)~~requires~~, the supplier must
 13505 provide its recommendation regarding~~on~~ source water treatment; or

13506
 13507 2) A supplier required to~~that must~~ install source water treatment under
 13508 Section 611.353(b)(2) must provide a copy of the Agency permit letter,
 13509 which acts as certification that the supplier completed installing the
 13510 Agency-approved treatment within 24 months after Agency approval.

13511
 13512 e) Service line inventory and replacement reporting requirements ~~Reporting for Lead~~
 13513 ~~Service Line Inventory and Replacement.~~ For the purposes of this subsection (e),
 13514 the first mandatory service line replacement program year is from the compliance
 13515 date specified in 611.350(a)(3) to the end of the next calendar year, where every

13516 program year afterwards is on a calendar year basis. A supplier must report the
13517 following~~ertain~~ information to the Agency to demonstrate~~demonstrating~~ it
13518 complies with Sections 611.354~~and 611.355~~;

- 13519
- 13520 1) No later than October 16, 2024, the supplier must submit an initial
13521 inventory of service lines to the Agency, as Section 611.354(a)(1)
13522 requires, including the following:-
- 13523
- 13524 A) The number of lead service lines in the initial inventory;
- 13525
- 13526 B) The number of galvanized requiring replacement service lines in
13527 the initial inventory;
- 13528
- 13529 C) The number of lead status unknown service lines in the initial
13530 inventory; and
- 13531
- 13532 D) Where ownership of the service line is shared, the supplier must
13533 report the information in subsections (e)(1)(A) through (C)
13534 counting each full service line only once.
- 13535
- 13536 2) No later than the compliance date in Section 611.350(a)(3)~~October 16,~~
13537 ~~2024~~, a supplier ~~that inventoried a lead, galvanized requiring replacement,~~
13538 ~~or lead status unknown service line in its distribution system~~ must submit
13539 a baseline inventory of service lines and connectors~~lead service line~~
13540 ~~replacement plan~~ to the Agency, as required in Sections611.354(a)(2)
13541 through 611.354(a)(4)~~Section 141.84(b) requires.~~
- 13542
- 13543 A) The total number of lead service lines in the baseline inventory;
- 13544
- 13545 B) The total number of galvanized requiring replacement service lines
13546 in the baseline inventory;
- 13547
- 13548 C) The total number of lead status unknown service lines in the
13549 baseline inventory;
- 13550
- 13551 D) The total number of non-lead service lines in the baseline
13552 inventory;
- 13553
- 13554 E) The total number of lead connectors in the baseline inventory;
- 13555
- 13556 F) The total number of connectors of unknown material in the
13557 baseline inventory; and
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- G) Where ownership of the service line is shared, the supplier must report the information in subsections (e)(2)(A) through (F) counting each full service line only once.

- 3) Any supplier that has inventoried one or more lead, galvanized requiring replacement, or lead status unknown service lines in its distribution system must:~~The supplier must provide the Agency with an updated version of its inventory under Section 611.354(a) consistent with its tap monitoring cycle schedule under Section 611.356(d), but no more frequently than annually. The supplier must submit its updated inventory within 30 days after the end of each tap monitoring cycle.~~
 - A) No later than the compliance date in Section 611.350 (a)(3), submit a service line replacement plan as specified in Section 611.354(c) to the Agency.~~If the supplier demonstrates that it has no lead, galvanized requiring replacement, or lead status unknown service lines in its inventory, the supplier needs no longer submit inventory updates to the Agency, except as subsection (e)(3)(B) requires.~~
 - B) By January 30 after the end of the first program year, and annually by January 30 thereafter, certify to the Agency that there have been no updates to the service line replacement plan or, if there have been updates, submit an updated service line replacement plan. A supplier may provide instructions on how to access the updated plan online instead of providing the entire updated plan to the Agency.~~If a supplier complying with subsection (e)(3)(A) subsequently discovers that it must replace any service lines in its distribution system, the supplier must notify the Agency within 30 days after identifying the service lines and prepare an updated inventory under Section 611.354(a) on a schedule the Agency establishes in a SEP.~~
 - C) Suppliers replacing service lines under a schedule based on the deferred deadlines criteria in Section 611.354(d)(5)(F) must meet the requirements described in Section 611.354(c)(3) for submitting information to the Agency.

- 4) The supplier must provide the Agency with an updated inventory by January 30 after the end of the first program year, and annually by January 30 thereafter. The updated inventory must conform with inventory requirements under Section 611.351(a) and (b). A supplier must provide the information regarding service line material identification and

13602 replacement as specified in Section 611.354(b)(2)(D) if providing
13603 instructions on how to access the updated inventory online instead of
13604 providing a fixed copy of the entire updated inventory as described in
13605 Section 611.354(b) to the Agency. ~~Within 30 days after the end of each tap~~
13606 ~~monitoring cycle, the supplier must certify replacing any encountered lead~~
13607 ~~goose-necks, pig-tails, and connectors under Section 611.354(e).~~

13608
13609 A) When the supplier demonstrates that its inventory does not contain
13610 lead, galvanized requiring replacement, and lead status unknown
13611 service lines, and known lead connectors and connectors of
13612 unknown material, it is no longer required to submit inventory
13613 updates to the Agency, except as required in subsection (e)(4)(B).

13614
13615 B) In the case that a supplier meeting the requirements of subsection
13616 (e)(4)(A) subsequently discovers any lead or galvanized requiring
13617 replacement service lines or lead connectors in its distribution
13618 system, it must notify the Agency within 60 days of discovering
13619 the service line(s) and connector(s) and prepare an updated
13620 inventory in compliance with Section 611.354(b) on a schedule
13621 established by the Agency.

13622
13623 5) By January 30 after the end of the first program year, and annually by
13624 January 30 thereafter, the supplier must certify to the Agency that it
13625 replaced any encountered lead connectors in compliance with Section
13626 611.354(e) or that it encountered no lead connectors during the calendar
13627 year. ~~Within 30 days after the end of each tap monitoring cycle, the~~
13628 ~~supplier must certify to the Agency that the supplier made any partial and~~
13629 ~~full lead service line replacements under Section 611.354(d) and (e).~~

13630
13631 6) By January 30 after the end of the first program year, and annually by
13632 January 30 thereafter, the supplier must certify to the Agency that it
13633 conducted the notification and mitigation requirements for any partial and
13634 full service line replacements in compliance with Section 611.354(h) or
13635 that it conducted no replacements of lead or galvanized requiring
13636 replacement service lines during the calendar year. ~~If it fails to meet the~~
13637 ~~45-day deadline for completing a customer-initiated lead service line~~
13638 ~~replacement under Section 611.354(d)(4), a supplier must notify the~~
13639 ~~Agency within 30 days after the deadline to request that the Agency~~
13640 ~~extend the deadline up to 180 days for completing the customer initiated~~
13641 ~~lead service line replacement. The supplier must annually certify that it~~
13642 ~~has completed all customer-initiated lead service line replacements under~~
13643 ~~Section 611.354(d)(4).~~

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- 7) The supplier must provide the following information about customer-initiated lead and galvanized requiring replacement service line replacements:~~No later than 30 days after the end of the supplier's annual period for replacing lead service lines under Section 611.354(f) or (g), the supplier must submit certain information to the Agency and continue submitting the information each year the supplier conducts lead service line replacements under Section 611.354(f) or (g):~~
- A) By January 30 after the end of the first program year, and annually by January 30 thereafter, the supplier must certify that it completed all customer-initiated lead and galvanized requiring replacement service line replacements in compliance with Section 611.354(f).~~The number of lead service lines, as Section 611.354(a)(4) defines the term, in its inventory at the beginning of the annual period;~~
 - B) If the supplier cannot meet the 45-day deadline to complete a customer-initiated lead or galvanized requiring replacement service line replacement as required in Section 611.354(f), it must notify the Agency within 30 days following the replacement deadline.~~The number of galvanized requiring replacement service lines in its inventory at the beginning of the annual period;~~
 - C) ~~The number of lead status unknown service lines, as Section 611.354(a)(4) defines the term, in its inventory at the beginning of the annual period;~~
 - D) ~~The number of full lead service line replacements the supplier has made and the street address for each service line the supplier replaced;~~
 - E) ~~The number of galvanized requiring replacement service lines the supplier replaced and the street address for each service line the supplier replaced;~~
 - F) ~~The number of lead status unknown service lines, as Section 611.354(a)(4) defines the term, remaining in its inventory;~~
 - G) ~~The total number of lead status unknown service lines the supplier determines are non-lead, as Section 611.354(a)(4) defines the terms; and~~

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~~H) The total number of service lines the supplier initially inventoried as non-lead later and later discovered are lead or galvanized requiring replacement service lines.~~

8) By January 30 after the end of the first program year, and annually by January 30 thereafter, suppliers conducting mandatory service line replacement under Section 611.354(d) must submit the following information to the Agency.~~No later than 30 days after the end of each tap sampling period, a supplier that received a customer refusal for a lead service line replacement or no customer response after the supplier makes a minimum of two good faith efforts to contact customers regarding a full lead service line replacement under Section 611.354(g)(7) must certify to the Agency the number of customer refusals or non-responses it received from customers the supplier serves through a lead or galvanized requiring replacement service line. The supplier must maintain these documents.~~

A) The following information from the most recent updated inventory submitted under subsection (e)(4), in compliance with table 1 to Section 611.354(d)(6)(C)(i):

- i) The total number of lead service lines in the inventory;
- ii) The total number of galvanized requiring replacement service lines in the inventory;
- iii) The total number of lead status unknown service lines in the inventory;
- iv) The total number of non-lead service lines in the inventory;
- v) The total number of lead connectors in the inventory;
- vi) The total number of connectors of unknown material in the inventory; and
- vii) Where ownership of the service line is shared, the supplier must report the information in subsections (e)(8)(A)(i) through (vi) counting each full service line only once;

B) The total number of full lead service line replacements and full galvanized requiring replacement service line replacements that have been conducted in the preceding program year and the address associated with each replaced service line;

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- C) The total number of partial lead service line replacements and partial galvanized requiring replacement service line replacements conducted in the preceding program year and the address associated with each partially replaced service line;
 - D) The total number of lead connectors that have been replaced or removed in each preceding program year and the address associated with each replaced or removed lead connector;
 - E) The number of service lines in the replacement pool updated at the beginning of the preceding program year in compliance with Section 611.354(d)(6)(A);
 - F) The total number of lead status unknown service lines determined to be non-lead in the preceding program year;
 - G) The address of each non-lead service line discovered in the preceding program year to be a lead or galvanized requiring replacement service line and the method(s) originally used to categorize the material of the service line;
 - H) The applicable deadline for completion of service line replacement and the expected date of completion of service line replacement; and
 - I) The total number of lead and galvanized requiring replacement service lines not replaced because the supplier does not have access to conduct full-service line replacement.
- 9) Suppliers validating service line inventories under Section 611.354(b)(5) must submit a list of the locations of any non-lead service lines identified to be a lead or galvanized requiring replacement service line as well as the method(s) used to categorize the service lines as a result of the assessment. The supplier must submit the specific version (including the date) of the service line inventory used to determine the number of non-lead service lines used when the number of non-lead service lines in the validation pool was determined. The supplier may not use an inventory older than the inventory update that was submitted to the Agency under Section 611.354(b)(2)(D) at the start of the year in which the validation pool was determined. The information must be submitted no later than January 30 following seven years after the compliance date in Section 611.350(a)(3) unless otherwise specified by the Agency in compliance with Section

13773 611.354(b)(5)(D). Documentation of previous validation efforts may be
13774 submitted by the compliance date in Section 611.350(a)(3) for approval by
13775 the Agency as described in Section 611.354(b)(5)(F).~~No later than 12~~
13776 ~~months after the end of a tap sampling period during which a supplier~~
13777 ~~exceeds the lead action level in sampling under Section 611.356, the~~
13778 ~~supplier must provide to the Agency its schedule for annually replacing an~~
13779 ~~average annual rate of at least three percent on a two-year rolling average~~
13780 ~~basis, or as specified in Section 611.354(g), of the number of known lead~~
13781 ~~service lines and galvanized lines requiring replacement when the lead~~
13782 ~~trigger or action level was first exceeded and lead status unknown service~~
13783 ~~lines at the beginning of each year that required replacement occurs in its~~
13784 ~~distribution system.~~

13785
13786 10) By January 30 after the end of the first program year, and annually by
13787 January 30 thereafter, the supplier must submit to the Agency
13788 documentation of the reasons for each service line not replaced due to lack
13789 of access in compliance with Section 611.354(d)(2). The supplier must
13790 also submit to the Agency documentation of each reasonable effort
13791 conducted where the supplier was not able to obtain property owner
13792 consent in compliance with Section 611.354(d)(3) where consent is
13793 required by State or local law.~~No later than 12 months after the end of a~~
13794 ~~sampling period during which a supplier exceeds the lead trigger level in~~
13795 ~~monitoring under Section 611.356 and every 12 months after that, the~~
13796 ~~supplier must certify to the Agency in writing:~~

13797
13798 A) ~~That the supplier conducted consumer notification, as Sections~~
13799 ~~611.354(f)(4) and 611.355(g) require; and~~

13800
13801 B) ~~That the supplier delivered public education materials to the~~
13802 ~~affected consumers, as specified in Section 611.355(a).~~

13803
13804 C) ~~If a supplier does not fulfill its annual service line replacement~~
13805 ~~goal under Section 611.354(f), it must certify to the Agency in~~
13806 ~~writing that the supplier conducted public outreach, as Section~~
13807 ~~141.85(h) requires. The supplier must also submit the outreach~~
13808 ~~materials it used to the Agency.~~

13809
13810 11) This subsection (e)(11) corresponds with 40 CFR 141.90(e)(11), which
13811 USEPA marked "reserved". This statement maintains structural
13812 consistency with the corresponding USEPA rules.~~The annual certification~~
13813 ~~the supplier submits to the Agency under subsection (e)(10) must certify~~
13814 ~~that the supplier provided the results from samples it collected between~~
13815 ~~three months and six months after fully or partially replacing a lead~~

13816 ~~service line to the resident within the timeframe Section 611.355(d)(2)~~
13817 ~~requires. A mailed notice postmarked within three business days after~~
13818 ~~receiving the results is timely.~~
13819

13820 12) Any supplier collecting samples following a partial or full lead or
13821 galvanized requiring replacement service line replacement required by
13822 Section 611.354 (h)(1)(D) or (h)(3)(D) requirements must report the results
13823 to the Agency within the first ten days following the month in which
13824 ~~before the tenth day of the next month after~~ the supplier receives the
13825 ~~laboratory~~ results or as specified by the Agency. ~~specifies in a SEP. The~~
13826 ~~Agency may issue a SEP waiving the supplier reporting these monitoring~~
13827 ~~results, but the supplier must retain these records. Suppliers~~ A supplier
13828 must also report any additional information the Agency specifies in a time
13829 and manner the Agency prescribes to verify that the supplier completed all
13830 partial lead and galvanized requiring replacement service line replacement
13831 activities.
13832

13833 13) By January 30 after the end of the first program year, and annually by
13834 January 30 thereafter, the supplier must certify to the Agency that it
13835 offered to inspect service lines that consumers who suspected the
13836 inventory incorrectly categorized their service line material within 30 days
13837 of receiving the customer notification in compliance with Section
13838 611.354(b)(4). ~~A supplier having lead service lines in its inventory must~~
13839 ~~certify on an annual basis that the supplier complied with consumer~~
13840 ~~notification of service line containing lead under Section 611.355(e).~~
13841

13842 f) Public education program reporting requirements. ~~Reporting for Public Education~~
13843 ~~Program~~
13844

13845 1) A supplier subject to Section 611.355 must submit a copy of all written
13846 public education materials ~~send documents~~ to the Agency prior to delivery.
13847 The Agency may require ~~containing certain items within ten days after the~~
13848 ~~end of each period in which~~ the supplier to obtain approval of the content
13849 of written ~~must perform~~ public education materials prior to delivery in
13850 compliance with Section 611.355(a)(1). ~~under Section 611.355(b):~~
13851

13852 A) ~~The public education materials the supplier delivered, and~~
13853 ~~documents showing that the supplier delivered the public education~~
13854 ~~materials complying with the content requirements in Sections~~
13855 ~~611.355(a) and the delivery requirements in Section 611.355(b);~~
13856 ~~and~~
13857

13858 B) ~~A list of all newspapers, radio stations, television stations, and~~

~~facilities and organizations to which the supplier delivered public education materials when this Subpart G required the supplier to perform public education tasks.~~

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- 2) A supplier subject to the public education requirements in Section 611.355 must within 10 days after the end of each period in which the supplier is required to perform public education in compliance with Section 611.355(b), send written documentation to the Agency that contains:~~Unless the Agency issues a SEP requiring a supplier to do so, a supplier that previously submitted the information subsection (f)(1)(B) requires need not resubmit the information subsection (f)(1)(B) requires, as long as no changes in the distribution list occurred, and the supplier certifies that it distributed the public education materials to the same list the supplier previously submitted.~~
- A) The public education materials delivered, and a statement certifying that the supplier delivered the public education materials meeting the content requirements in Section 611.355(a) and the delivery requirements in Section 611.355(b); and
- B) A list of all the newspapers, radio stations, television stations, and facilities and organizations to which the supplier delivered public education materials during the period in which the supplier was required to perform public education tasks. Unless required by the Agency, a supplier that previously submitted this information need not resubmit it as long as there have been no changes in the distribution list and the supplier certifies that the public education materials were distributed to the same list submitted previously.
- 3) Each supplier must send a copy of the consumer notice of tap results to the Agency and certification the notice has been distributed consistent with the requirements of Section 611.355(d), in compliance with the following schedule:~~No later than three months after the end of the tap sampling period, each supplier must mail a sample copy of the consumer notification of tap water monitoring results to the Agency, certifying that the supplier distributed the notification in a manner complying with Section 611.355(d).~~
- A) No later than three months following the end of the tap sampling period, for tap samples used to calculate the 90th percentile value described in Section 611.356, a copy of the consumer notice provided and certification the notice has been distributed consistent with the requirements of Section 611.355(d).

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- B) Annually by January 30, for tap samples from the previous program year not included in subsection (f)(3)(A), including, but not limited to consumer-requested samples outside the tap sampling period for suppliers on reduced monitoring, a copy of the consumer notice provided and certification the notice has been distributed consistent with the requirements of Section 611.355(d).
- 4) Annually by January 30, the~~The~~ supplier must certify~~demonstrate~~ to the Agency that it before July 1 of each year that the supplier~~delivered annual notification~~consumer notice and lead~~service line~~ information materials under Section 611.355(e) to customers and all persons served by~~affected consumers~~ the supplier at the service connection with~~serves through~~ a lead, galvanized requiring replacement, or lead status unknown service line in compliance with Section 611.355(e) for~~during~~ the previous calendar year. The supplier must also provide an example~~a~~ copy of the notification~~consumer notice~~ and information materials for lead, galvanized requiring replacement, and lead status unknown service lines to the Agency.
- 5) This subsection (f)(5) corresponds with 40 CFR 141.90(f)(5), which USEPA marked "reserved". This statement maintains structural consistency with the corresponding USEPA rules.~~The supplier must demonstrate to the Agency before July 1 of each year that the supplier conducted an outreach activity under Section 611.355(h) if the supplier failed to meet the lead service line replacement goal under Section 611.354(f) during the previous calendar year. The supplier must also submit a copy to the Agency of the outreach it provided to customers.~~
- 6) Annually by January 30, the supplier must certify to the Agency that it delivered notification to affected customers and the persons served by the supplier at the service connection and complied with the filter requirements after any disturbance of a service line known to contain or potentially containing lead in compliance with Section 611.385(f) for the previous calendar year, or that the supplier has not caused any disturbance of a service line known to contain or potentially contain lead, during the preceding year. The supplier must also submit an example copy of the notification to the Agency. Suppliers that are required to provide filters under Section 611.355(f) must also report the number of sites with disturbances that require filters as specified under Section 611.355(f) and number of filters provided.~~The supplier must certify to the Agency before July 1 of each year that the supplier delivered notice to affected customers under Section 611.355(f) after any lead service line disturbance during the~~

13945 ~~previous calendar year. The supplier must also submit a copy of the notice~~
13946 ~~to the Agency.~~

13947
13948 7) Annually by January 30, the~~The~~ supplier must certify to the Agency that it
13949 conducted an outreach activity in compliance with Section 611.355(h)
13950 when it does not meet the service line replacement rate specified in
13951 Section 611.354(d) for the previous calendar year. The supplier must also
13952 submit a copy to the Agency of the outreach materials provided.~~before~~
13953 ~~July 1 of each year that the supplier delivered the required find and fix~~
13954 ~~information to the Agency and local health departments under Section~~
13955 ~~611.356(i) during the previous calendar year.~~

13956
13957 8) Annually by January 30, the supplier must certify to the Agency that it
13958 delivered the required distribution system and site assessment information
13959 and public education materials to the Agency and local health departments
13960 for the previous calendar year in compliance with Section 611.355(i).

13961
13962 9) No later than 60 days after a supplier exceeds the lead action level for the
13963 second time in a rolling five-year period, the supplier must submit a filter
13964 plan to the Agency as specified in Section 611.355(j)(3). Thereafter, a
13965 supplier is not required to resubmit a filter plan unless requested by the
13966 Agency or if the supplier made updates to its plan.

13967
13968 10) Every six months, specifically by January 30 and July 30, any supplier that
13969 meets the criteria of multiple lead action level exceedances in Section
13970 611.355(j)(1) must:

13971
13972 A) Certify compliance with the filter requirements in the previous six
13973 months (the previous July through December for January 30
13974 reports and the previous January through June for July 30 reports)
13975 in compliance with Section 611.355(j)(2) and report the number of
13976 filters provided; and

13977
13978 B) Certify the supplier completed a public outreach activity in the
13979 previous six months (the previous July through December for
13980 January 30 reports and the previous January through June for July
13981 30 reports) in compliance with Section 611.355(j)(4) and submit a
13982 copy of the public education materials provided to consumers.

13983
13984 g) Reporting additional monitoring data.~~Any supplier collecting more samples than~~
13985 ~~the required minimum must report those sampling data results to the Agency~~
13986 ~~within the first ten days following the end of the applicable sampling periods~~
13987 ~~Sections 611.356 through 611.358 specify during which the supplier collected the~~

13988 samples. This includes the monitoring data for “find and fix” under Sections
13989 611.356(h) and 611.357(g). The supplier must certify to the Agency the number
13990 of customer refusals or nonresponses for follow-up sampling it received under
13991 Section 611.352(j) with information supporting the accuracy of the refusals or
13992 non-responses. The supplier must certify within the first ten days after the end of
13993 the applicable tap sampling period during which any individual sample exceeded
13994 the lead action level.

13995
13996 1) Any supplier collecting more samples than the minimum required must
13997 report the results to the Agency within the first ten days following the end
13998 of the applicable monitoring period under Sections 611.356 through
13999 611.358 during which the samples are collected. This includes the
14000 monitoring data pertaining to distribution system and site assessment
14001 under Sections 611.352(j) and 611.356(b)(1)(D).

14002
14003 2) The supplier must certify to the Agency the number of customer refusals
14004 or non-responses for follow-up sampling under Section 611.352(j)(2) it
14005 received and documentation explaining why it was unable to collect a
14006 follow-up sample, within the first 10 days following the end of the
14007 applicable tap monitoring period in which an individual sample exceeded
14008 the action level.

14009
14010 h) Reporting of 90th percentile lead and copper concentrations where~~Percentile Lead~~
14011 ~~and Copper Concentrations~~ If the Agency calculates~~Calculates~~ a
14012 supplier's~~Supplier's~~ 90th percentile concentrations~~Percentile Concentrations~~. A
14013 water supplier is not required to report the~~needs not report its~~ 90th percentile lead
14014 and copper concentrations during each tap sampling period~~tap monitoring cycle~~,
14015 as required by subsection (a)(~~2~~1)(D) if:~~requires, under certain circumstances:~~

14016
14017 1) The Agency previously notified the supplier that the Agency will calculate
14018 the supplier's 90th percentile lead and copper concentrations based on the
14019 lead and copper tap results the supplier submitted under subsection
14020 (h)(2)(A), and the supplier provides the results from lead and copper tap
14021 water samples no later than ten days after the end of the applicable tap
14022 sampling period~~tap monitoring cycle~~; and

14023
14024 2) The supplier provides the following~~specific~~ information to the Agency
14025 by~~before~~ the date specified in subsection (h)(1)-~~specifies~~:

14026
14027 A) The results offrom all tap ~~water~~ samples for lead and copper,
14028 including the location of each site and the site selection criteria
14029 under Section 611.356(a)(4) used as the basis for ~~Section~~
14030 611.356(a)(3) through (a)(10) criteria under which the supplier

selected the site for its sampling pool; and

B) The supplier must identify sampling sites it used during the current ~~monitoring period~~~~tap monitoring eyele~~ that it did not sample during previous ~~tap monitoring period~~~~tap monitoring eyes~~, and ~~explain~~~~explaining~~ why the supplier changed sampling sites; and

3) The Agency provides ~~the~~ written results of ~~calculating~~ the 90th percentile lead and copper ~~calculation~~~~concentrations~~ to the supplier within 15 days ~~of~~~~after~~ the end of the tap sampling period.

i) Reporting ~~requirements~~~~Requirements~~ for CWS ~~supplier's public education and sampling in schools and childcare facilities.~~~~Public Education and Sampling in Schools and Child Care Facilities~~

1) A CWS supplier must ~~provide a list of the schools and childcare facilities they serve, or provide certification that no schools or childcare facilities are served, to the Agency by the compliance date in Section 611.350(a)(3) in compliance with Section 611.362(b)(1). A supplier that certifies that no schools or childcare facilities are served is not required to report the information in subsections (i)(2) and (3). Annually by January 30, beginning one year after the compliance date in Section 611.350(a)(3), the supplier must certify that there are no schools or childcare facilities served by the supplier. When the supplier becomes aware of one or more schools or childcare facilities that it serves, it must provide a list to the Agency and begin to report the information in subsections (i)(2) and (3).~~~~report to the Agency before July 1 of each year the previous calendar year's activity. The report must include certain information:~~

A) ~~The supplier must certify that it made a good faith effort to identify schools and child care facilities under Section 611.362(e). The good faith effort may include reviewing customer records and requesting lists of schools and child care facilities from the Agency, the Department of Children and Family Services, the State Board of Education, or other pertinent local agency. A supplier certifying that it serves no schools or child care facilities needs not include the information subsections (i)(1)(B) through (i)(1)(D) require in the report. If changes occur to schools and child care facilities a supplier serves, the supplier must submit an updated list at least once every five years under Section 611.362(e).~~

~~BOARD NOTE: The Department of Children and Family Services regulates daycare facilities in Illinois, and the State Board of~~

- 14074 Education regulates primary and secondary schools. Local
14075 agencies may play a role, and many facilities and schools are not
14076 regulated under Illinois law. E.g., 225 ILCS 10 and 105 ILCS 5.
14077
- 14078 B) ~~The supplier must certify that it delivered information about health~~
14079 ~~risks from lead in drinking water to the school and child care~~
14080 ~~facilities it serves under Section 611.362(a)(2) and (g)(1).~~
- 14081
- 14082 C) ~~The supplier must certify that it completed notifying and sampling~~
14083 ~~under Section 611.362 and subsections (i)(1)(C)(i) through~~
14084 ~~(i)(1)(C)(v) at a minimum of 20 percent of elementary schools and~~
14085 ~~20 percent of child care facilities the supplier serves. The supplier~~
14086 ~~must certify that it completed notifying and sampling under~~
14087 ~~Section 611.362(g) and subsections (i)(1)(C)(i), (i)(1)(C)(ii), and~~
14088 ~~(i)(1)(C)(v) for secondary schools the supplier sampled. After a~~
14089 ~~supplier completes one cycle of required sampling in all~~
14090 ~~elementary schools and child care facilities it identified under~~
14091 ~~Section 611.362(a)(1), the supplier must subsequently certify that~~
14092 ~~it completed notifying and sampling under Section 611.362(g) and~~
14093 ~~subsections (i)(1)(C)(i), (i)(1)(C)(ii), and (i)(1)(C)(v) for all~~
14094 ~~sampling the supplier later completes in any school or child care~~
14095 ~~facility.~~
- 14096
- 14097 i) ~~The number of schools and child care facilities the supplier~~
14098 ~~serves;~~
- 14099
- 14100 ii) ~~The number of schools and child care facilities the supplier~~
14101 ~~sampled in the calendar year;~~
- 14102
- 14103 iii) ~~The number of schools and child care facilities that refused~~
14104 ~~sampling;~~
- 14105
- 14106 iv) ~~Information about outreach attempts for sampling that a~~
14107 ~~school or child care facility declined; and~~
- 14108
- 14109 v) ~~The analytical results for all schools and child care~~
14110 ~~facilities the supplier sampled in the calendar year.~~
- 14111
- 14112 D) ~~The supplier must certify that it provided its sampling results to~~
14113 ~~schools, child care facilities, and the Illinois Department of Public~~
14114 ~~Health and local health agencies.~~
14115

- 14116 2) A CWS supplier must report the lead analytical sampling results for
14117 schools and childcare facilities within 30 days of receipt of the results in
14118 compliance with Section 611.362(g)(1)(C).~~This subsection (i)(2)~~
14119 ~~corresponds with 40 CFR 141.90(i)(2), which USEPA marked "reserved".~~
14120 ~~This statement maintains structural consistency with the corresponding~~
14121 ~~USEPA rules.~~
14122
- 14123 3) Beginning one year after the compliance date in Section 611.350(a)(3), a
14124 CWS supplier must send a report to the Agency annually by January 30
14125 for the previous year's activity as calculated from the compliance date in
14126 Section 611.350(a)(3). The report must include the following:~~The Agency~~
14127 ~~has provided the results of the 90th percentile lead and copper calculations,~~
14128 ~~in writing, to the supplier before the end of the monitoring period.~~
14129
- 14130 A) Certification that the supplier made a good faith effort to identify
14131 schools and childcare facilities in compliance with Section
14132 611.362(b). The good faith effort may include reviewing customer
14133 records and requesting lists of schools and childcare facilities from
14134 the Agency or other licensing agency. If there are changes to the
14135 list of schools and childcare facilities that a supplier serves, an
14136 updated list must be submitted at least once every five years in
14137 compliance with Section 611.362(b)(2). If there are no changes to
14138 the list of schools or childcare facilities the supplier serves, the
14139 supplier must certify there are no changes to the list.
14140
- 14141 B) Certification that the supplier delivered information about health
14142 risks from lead in drinking water to the school and childcare
14143 facilities that they serve in compliance with Section 611.362(c)(1).
14144
- 14145 C) During the first five years after the compliance date in Section
14146 611.350(a)(3), certification the supplier completed the notification
14147 and sampling requirements in Section 611.362(c)(2)(A) and (d)(1)
14148 for elementary schools and childcare facilities and the information
14149 in subsections (i)(3)(C)(i) through (v).
14150
- 14151 i) The number and names of schools and childcare facilities
14152 served by the supplier;
14153
- 14154 ii) The number and names of schools and childcare facilities
14155 sampled in the previous year;
14156
- 14157 iii) The number and names of elementary schools and childcare
14158 facilities that declined sampling;

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- iv) The number and names of elementary schools and childcare facilities that did not respond to outreach attempts for sampling; and
 - v) Information pertaining to outreach attempts for sampling declined or not responded to by the elementary school or childcare facility.
 - D) During the first five years after the compliance date in Section 611.350(a)(3), certification that the supplier completed the notification and sampling requirements of Section 611.362(c)(2)(B) and (e) for secondary schools and the information in subsections (i)(3)(C)(i) and (ii).
 - E) Starting with the sixth year after the compliance date in Section 611.350(a)(3), the supplier must certify completion of the notification requirements of Section 611.362(c)(3) and sampling requirements of Section 362(d)(2) in elementary schools and childcare facilities and Section 611.362(e) for secondary schools and the information in subsections (i)(3)(C)(i) and (ii), thereafter.
 - F) Certification that sampling results were provided to schools, childcare facilities, and local and State health departments.
- j) Reporting requirements for small supplier compliance flexibility options
~~Requirements for Small Supplier Compliance Flexibility Options. Before the~~
~~dates provided in~~ times subsections (j)(1) and (j)(2) ~~provide~~, a supplier implementing a small supplier compliance option under Section 611.363 must provide the following information ~~certain information~~ to the Agency:
 - 1) Small suppliers serving 3,300 or fewer and ~~Point of Use Device Option. A~~
~~small CWS or~~ NTNCWS supplier implementing the point-of-use device option under Section 611.363(c)(1) ~~Section 611.363(a)(3)~~, must report the results from tap sampling required under Section 611.363.(c)(1)(D) ~~Section 611.363~~ no later than ten days after the end of the tap sampling period ~~tap monitoring cycle. If results exceed the lead trigger level, the supplier must reach out to the homeowner or building management or, if applicable, both within 24 hours after receiving the tap sample results. If the~~ The supplier does not ~~must~~ complete corrective action within 30 days of a POU sample exceeding 0.010 mg/L. ~~If the supplier does not complete corrective action within 30 days,~~ the supplier must provide documentation ~~document~~ to the Agency within 30 days ~~of the~~

14202 ~~failure~~ explaining why ~~it the supplier~~ was unable to correct the issue.
14203 Unless waived by the Agency, the A supplier ~~selecting the point of use~~
14204 ~~device option under Section 611.363(a)(3)~~ must provide documentation to
14205 certify maintenance of ~~document to the Agency certifying that the supplier~~
14206 ~~maintains~~ the point-of-use devices, ~~unless the Agency issues a SEP~~
14207 ~~waiving this requirement.~~

14208
14209 2) Small suppliers serving 3,300 or fewer and ~~Replacing Lead-Bearing~~
14210 ~~Plumbing Option. A small CWS or~~ NTNCWS suppliers ~~supplier~~
14211 implementing the option of replacing all lead-bearing plumbing under
14212 Section 611.363(c)(2) ~~Section 611.363(a)(4)~~ must certify to the Agency
14213 that ~~the supplier replaced~~ all lead-bearing material has been replaced on
14214 the schedule established by the Agency ~~establishes in a SEP~~ within one
14215 year ~~of after~~ designating the option under Section 363(c)(2) ~~Section~~
14216 ~~611.363(a)(4).~~

14217
14218 BOARD NOTE: This Section derives from 40 CFR 141.90.

14219
14220 (Source: Amended at 50 Ill. Reg. _____, effective _____)

14221
14222 **Section 611.361 Recordkeeping**

14223
14224 Any supplier subject to this Subpart G must ~~keep~~ retain original records of all sampling data and
14225 analyses, reports, surveys, letters, evaluations, schedules, Agency determinations, and any other
14226 information Sections 611.351 through 611.360, 611.362, and 611.363 require. Each supplier
14227 must ~~keep~~ retain the records this Section requires on its premises for at least 12 years.

14228
14229 BOARD NOTE: This Section derives from 40 CFR 141.91.

14230
14231 (Source: Amended at 50 Ill. Reg. _____, effective _____)

14232
14233 **Section 611.362 Monitoring for Lead in Schools and Childcare ~~Child Care~~ Facilities**

14234
14235 ~~A CWS supplier must conduct directed public education and lead monitoring at those schools~~
14236 ~~and child care facilities it serves that were constructed prior to January 1, 2014. A supplier~~
14237 ~~must sample for lead at elementary schools and child care facilities it serves once and~~
14238 ~~afterwards on request of the school or facility. The supplier must also sample for lead at~~
14239 ~~secondary schools it serves on request. This Section does not apply to a school or child care~~
14240 ~~facility that is a regulated PWS. This subsection (a) applies until the supplier samples all the~~
14241 ~~elementary schools and child care facilities it serves once under subsection (c). After~~
14242 ~~sampling all elementary schools and child care facilities, the supplier must comply with~~
14243 ~~subsection (g).~~

- 14245 a) General requirements.~~Public Education to Schools and Child Care Facilities~~
14246
14247 1) All CWS suppliers must conduct public education and lead monitoring at
14248 the schools and childcare facilities they serve unless those schools or
14249 childcare facilities.~~Before the compliance date Section 611.350(a)(3)~~
14250 ~~specifies, a supplier must compile a list of schools and child care~~
14251 ~~facilities the supplier serves.~~
14252
14253 A) Were constructed or had full plumbing replacement on or after
14254 January 1, 2014, or the date the Agency adopted standards that
14255 meet the definition of lead free in compliance with section 1417 of
14256 the Safe Drinking Water Act, as amended by the Reduction of
14257 Lead in Drinking Water Act, whichever is earlier; and
14258
14259 B) Are not served by a lead, a galvanized requiring replacement, or an
14260 unknown service line
14261
14262 2) The provisions of this section do not apply to a school or childcare
14263 facility that is regulated as a public water system.~~A supplier must contact~~
14264 ~~elementary schools and child care facilities the supplier listed under~~
14265 ~~subsection (a)(1):~~
14266
14267 A) ~~The supplier must annually or more frequently provide~~
14268 ~~information about health risks from lead in drinking water that~~
14269 ~~complies with Section 611.355(a);~~
14270
14271 B) ~~Notice that the supplier must sample for lead at elementary~~
14272 ~~schools and child care facilities, including certain information:~~
14273
14274 i) ~~A proposed schedule for sampling at the facility;~~
14275
14276 ii) ~~Information about sampling for lead in schools and child~~
14277 ~~care facilities; and~~
14278
14279 ~~BOARD NOTE: USEPA has guidance available from~~
14280 ~~USEPA, National Center for Environmental Publications:~~
14281 ~~"3Ts for Reducing Lead in Drinking Water in Schools and~~
14282 ~~Child Care Facilities: A Training, Testing, and Taking~~
14283 ~~Action Approach, Revised Manual" (October 2018);~~
14284 ~~USEPA, Office of Water, doc. no. EPA-815-B-18-007~~
14285 ~~(search: "815B18007") and "U.S. EPA 3Ts Program~~
14286 ~~Training, Testing & Taking Action: Lead Sample~~
14287 ~~Collection Field Guide for Schools and Child Care~~

14288 Facilities" (July 2022), USEPA, Office of Water, doc. no.
14289 EPA 815-F-22-009 (search: "815F22009") or subsequent
14290 EPA guidance.
14291

14292 iii) Instructions for identifying sampling outlets and preparing
14293 for a sampling event 30 days prior to the event.
14294

14295 3) The supplier must document under Section 611.360(i) if an elementary
14296 school or child care facility fails to respond or otherwise declines to
14297 participate in monitoring or education under this Section. Under this
14298 Section, a school or child care facility fails to respond after the supplier
14299 makes at least two separate good faith attempts to contact the facility to
14300 schedule sampling and receives no response.
14301

14302 4) The supplier must annually or more frequently contact all secondary
14303 schools it listed under subsection (a)(1) to provide information on health
14304 risks from lead in drinking water and how to request lead sampling under
14305 subsection (g)(1).
14306

14307 b) List of schools and childcare facilities. ~~Lead Sampling in Schools and Child Care~~
14308 ~~Facilities~~
14309

14310 1) All CWS suppliers must compile a list of schools and childcare facilities
14311 they serve that meet the criteria of subsection (a) and submit the list to
14312 the Agency in compliance with Section 611.360(i)(1) by the compliance
14313 date specified in Section 611.350(a)(3). ~~The supplier must collect five~~
14314 ~~samples per school and two samples per child care facility at outlets~~
14315 ~~typically used for consumption. Except as subsections (b)(1)(A) through~~
14316 ~~(b)(1)(D) provide otherwise, the outlets must not have a POU device.~~
14317 ~~The supplier must sample at specific locations:~~
14318

14319 A) ~~For schools: two drinking water fountains, one kitchen faucet~~
14320 ~~persons use for preparing food or drink, one classroom faucet or~~
14321 ~~other outlet persons use for drinking, and one nurse's office~~
14322 ~~faucet, as available.~~
14323

14324 B) ~~For child care facilities: one drinking water fountain and one of~~
14325 ~~either a kitchen faucet persons use for preparing food or drink or~~
14326 ~~one classroom faucet or other outlet persons use for drinking.~~
14327

14328 C) ~~If any school or facility has fewer than the required number of~~
14329 ~~outlets, the supplier must sample all outlets persons use for~~
14330 ~~consumption.~~

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- ~~D) The supplier may sample at outlets having POU devices if the school or facility has POU devices installed on all outlets persons typically use for consumption.~~
 - ~~E) If any school or facility does not contain the type of faucet listed above, the supplier must collect a sample from another outlet the school or facility identifies as one persons typically use for consumption.~~
 - ~~F) The supplier must collect all samples from cold water taps fulfilling specific additional requirements:~~

 - ~~i) All samples for lead must be first draw samples;~~
 - ~~ii) All samples must be 250 ml in volume;~~
 - ~~iii) The water must remain stationary in the sampling site's (building's) plumbing system for at least eight but no more than 18 hours before sampling; and~~
 - ~~iv) The supplier must acidify samples and analyze them using the analytical methods in Section 611.359.~~
 - 2) Within five years following the compliance date in Section 611.350(a)(3) and at least once every five-year period after, all CWS suppliers must either certify in writing to the Agency there have been no changes to the list of schools and childcare facilities or submit a revised list to the Agency in compliance with Section 611.360(i)(3)(A). Appropriately trained personnel of the water system, school, or child care facility or another appropriately trained person may collect samples under subsection (b)(1).
 - c) Public education to schools and childcare facilities. Sampling Frequency at Elementary Schools and Child Care Facilities

 - 1) At least once a year beginning with the compliance date in Section 611.350(a)(3), CWS suppliers must contact all schools and childcare facilities identified by the supplier in subsection (b) to provide information about the health risks from lead in drinking water consistent with the content requirements of Section 611.355(a)(1)(B) through 611.355(a)(1)(D) and (F). Annually, or on an alternative Agency-approved schedule, the supplier must collect samples from no fewer than

14374 ~~20 percent of elementary schools and 20 percent of child care facilities~~
14375 ~~the supplier serves, until the supplier samples all schools and child care~~
14376 ~~facilities it listed under subsection (a)(1) that did not decline to~~
14377 ~~participate. Under this Section, a supplier may count an elementary~~
14378 ~~school or child care facility failing to respond or otherwise declining to~~
14379 ~~participate as part of its annual 20 percent minimum.~~

14380
14381 2) Within the first five years following the compliance date in Section
14382 350(a)(3), CWS suppliers must:~~A supplier must sample all elementary~~
14383 ~~schools and child care facilities it serves at least once in the five years~~
14384 ~~following the compliance date under Section 611.350(a)(1)(A).~~

14385
14386 A) Notify elementary schools and childcare facilities, in compliance
14387 with the frequency requirements in subsection (d)(1), that they are
14388 eligible to be sampled for lead by the supplier. This notice must
14389 include:

14390
14391 i) A proposed schedule for sampling at the facility; and

14392
14393 ii) Information about sampling for lead in schools and
14394 childcare facilities (EPA's 3Ts for Reducing Lead in
14395 Drinking Water Toolkit, EPA-815-B-18-007, or subsequent
14396 EPA guidance).

14397
14398 B) Notify all secondary schools identified in subsection (b) at least
14399 once a year that they are eligible to be sampled for lead by the
14400 CWS supplier on request. The notice must provide:

14401
14402 i) Information on how to request sampling for lead at the
14403 facility; and

14404
14405 ii) Information about sampling for lead in schools and
14406 childcare facilities (EPA's 3Ts for Reducing Lead in
14407 Drinking Water Toolkit, EPA-815-B-18-007, or subsequent
14408 EPA guidance).

14409
14410 3) Starting with the sixth year after the compliance date in Section
14411 611.350(a)(3), a CWS supplier must contact all elementary schools,
14412 secondary schools, and childcare facilities identified in subsection (b) to
14413 notify them that they are eligible to be sampled for lead by the CWS
14414 supplier on request and provide the information in subsections
14415 (c)(2)(B)(i) and (ii).~~After a supplier completes one required cycle of~~
14416 ~~sampling in all elementary schools and child care facilities it serves, the~~

14417 ~~supplier must sample at the request of any elementary school or child~~
14418 ~~care facility under subsection (g).~~

14419
14420 4) Thirty days prior to any sampling event, CWS suppliers must provide
14421 schools and childcare facilities with instructions to identify outlets for
14422 lead sampling and prepare for a sampling event.~~A supplier must sample~~
14423 ~~at the request of a secondary school under subsection (g). If a supplier~~
14424 ~~receives requests from more than 20 percent of secondary schools it~~
14425 ~~listed under subsection (a)(1) in any of the five years following the~~
14426 ~~compliance date under 40 CFR Section 141.80(a)(3), the supplier may~~
14427 ~~schedule the requests exceeding 20 percent for the following year, and~~
14428 ~~the supplier needs not sample an individual secondary school more than~~
14429 ~~once during the five years.~~

14430
14431 d) Frequency of sampling at elementary schools and childcare facilities.~~Alternative~~
14432 ~~School and Child Care Lead Sampling Programs~~

14433
14434 1) Within the first five years following the compliance date in Section
14435 611.350(a)(3), CWS suppliers must collect samples from at least 20
14436 percent of the total of elementary schools served by the supplier per year
14437 and at least 20 percent of the total of childcare facilities served by the
14438 supplier per year, or according to an alternative schedule approved by the
14439 Agency, until all elementary schools and childcare facilities identified
14440 under subsection (b) have been sampled once or have declined to
14441 participate or are non-responsive.~~If a CWS supplier conducts mandatory~~
14442 ~~sampling for lead in drinking water for schools and child care facilities~~
14443 ~~the supplier serves under another State or local law or program, the~~
14444 ~~Agency may issue a SEP exempting the supplier from duplicative~~
14445 ~~requirements under this Section:~~

14446
14447 A) CWS suppliers must provide documentation to the Agency in
14448 compliance with Section 611.360(i)(3)(C)(iv) and (v) if an
14449 elementary school or childcare facility is non-responsive or
14450 otherwise declines to participate in the monitoring or education
14451 requirements of this section. For the purposes of this section:~~If~~
14452 ~~the sampling under that State or local law or program is~~
14453 ~~consistent with subsections (b) and (c);~~

14454
14455 i) A CWS supplier may consider an elementary school or
14456 childcare facility non-responsive after the CWS supplier
14457 makes at least two separate outreach attempts to contact the
14458 facility to schedule sampling and does not receive any
14459 response on either attempt; and

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- ii) A CWS supplier may count a refusal or non-response from an elementary school or childcare facility as part of the minimum 20 percent of elementary schools and childcare facilities sampled per year.

- B) This subsection (B) corresponds with 40 CFR 141.92(d)(1)(B), which USEPA removed and reserved. This statement maintains structural consistency with the federal regulations.~~If the sampling under that State or local law or program is consistent with subsections (b)(1)(A) through (b)(1)(F) and (c) and the sampling is coupled with certain remediation actions:~~
 - i) ~~Disconnecting affected fixtures;~~
 - ii) ~~Replacing affected fixtures with fixtures certified lead-free as Section 611.126(j) requires; or~~
 - iii) ~~Installing POU devices;~~

- ~~C) If the sampling under that State or local law or program occurs in schools and child care facilities the supplier serves less frequently than once every five years, and the sampling is coupled with any of the remediation actions in subsection (d)(1)(B); or~~

- ~~D) If the sampling is conducted under a voluntary school and child care program lead testing grant awarded under section 1464(d) of SDWA (42 U.S.C. 300j-24(d)), consistent with the requirements of the grant.~~

- 2) Starting with the sixth year after the compliance date in Section 611.350(a)(3), CWS suppliers must conduct sampling as specified in subsection (f) when requested by an elementary school or childcare facility.~~The term of the waiver may not exceed the duration of the mandatory or voluntary sampling, and the waiver must automatically expire at the end of any 12-month period during which sampling does not occur at the required number of schools or child care facilities.~~
 - A) A CWS supplier is not required under this subsection (d)(2) to sample more than 20 percent of the elementary schools and childcare facilities identified in subsection (b) in any given year. A CWS supplier is not required under this subsection (d)(2) to

14502 sample an individual elementary school or childcare facility more
14503 than once in any five-year period.

14504
14505 B) This subsection (B) corresponds with 40 CFR 141.92(d)(2)(B),
14506 which USEPA removed and reserved.

14507
14508 3) The first time a supplier includes an elementary school or childcare
14509 facility in an update to the list of schools and childcare facilities required
14510 to be submitted to the Agency in subsection (b)(2), the supplier must
14511 conduct outreach at those elementary schools and childcare facilities as
14512 specified in subsection (c)(2) once prior to conducting sampling in
14513 compliance with subsection (d)(2). ~~The Agency may issue a SEP granting~~
14514 ~~the supplier a partial waiver if the sampling covers only a subset of the~~
14515 ~~schools or child care facilities the supplier serves as it listed under~~
14516 ~~subsection (a)(1).~~

14517
14518 A) A CWS supplier may consider an elementary school or childcare
14519 facility non-responsive after the CWS supplier makes at least two
14520 separate outreach attempts to contact the facility to schedule
14521 sampling and does not receive any response on either attempt.

14522
14523 B) This subsection (B) corresponds with 40 CFR 141.92(d)(3)(B),
14524 which USEPA removed and reserved. This statement maintains
14525 structural consistency with the federal regulations

14526
14527 4) ~~The Agency may issue a SEP granting a waiver applicable to more than~~
14528 ~~one supplier (e.g., one waiver for all suppliers subject to a statewide~~
14529 ~~sampling program complying with subsection (d)).~~

14530
14531 e) Frequency of sampling at secondary schools. ~~Confirming or Revising Schools~~
14532 ~~and Child Care Facilities in Inventory. At least once every five years, a supplier~~
14533 ~~must either confirm that the list it assembled under subsection (a)(1) of schools~~
14534 ~~and child care facilities it serves has not changed or submit a revised list.~~

14535
14536 1) Starting with the compliance date in Section 611.350(a)(3), CWS
14537 suppliers must conduct sampling as specified in subsection (f) when
14538 requested by a secondary school

14539
14540 2) A CWS supplier is not required under this subsection (e) to sample more
14541 than 20 percent of the secondary schools identified in subsection (b) in any
14542 given year. A CWS supplier is not required under this subsection (e) to
14543 sample an individual secondary school more than once in any five-year
14544 period.

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- f) Lead sampling protocol for schools and childcare facilities.~~Notice of results.~~
- 1) CWS suppliers must collect five samples per school and two samples per childcare facility at outlets typically used to provide water for human consumption. Except as provided in subsections (f)(1)(C) through (E), the outlets cannot have point-of-use devices. The CWS supplier must sample the following types and number of outlets:~~A supplier must provide analytical results to the school or child care facility as soon as practicable but no later than 30 days after receiving them with information about remediation options.~~
- A) For schools, two drinking water fountains, one kitchen faucet used for drinking or cooking, one classroom faucet or other outlet used to provide water for human consumption, and one nurse's office faucet, as available.
- B) For childcare facilities, one drinking water fountain, and one of either a kitchen faucet used for drinking or cooking or one classroom faucet or other outlet used to provide water for human consumption.
- C) If any school or childcare facility has fewer than the required number of outlets, the CWS supplier must sample all outlets used to provide water for human consumption.
- D) The CWS supplier may sample at outlets with point-of-use devices if the facility has point-of-use devices installed on all outlets typically used to provide water for human consumption or if the school or childcare facility has fewer than the required number of outlets.
- E) If any school or childcare facility does not contain the type of outlet listed in subsections (f)(1)(A) through (D), the CWS supplier must collect a sample from another outlet typically used to provide water for human consumption as identified by the facility, to meet the required number of samples provided in this subsection (f)(1).
- 2) CWS suppliers must collect the samples from the cold water tap subject to the following additional requirements:~~A water system must annually provide analytical results:~~

- 14588 A) Each sample for lead must be a first draw sample;~~To the local~~
14589 ~~and State health departments; and~~
14590
14591 B) The sample must be 250 ml in volume;~~To the Agency under~~
14592 ~~Section 611.360(i).~~
14593
14594 C) The water must have remained stationary in the plumbing system
14595 of the sampling site (building) for at least 8 but no more than 18
14596 hours; and
14597
14598 D) Samples must be analyzed using acidification and the
14599 corresponding analytical methods in Section 611.359.

- 14600
14601 3) CWS suppliers, school, or childcare facility staff, or other appropriately
14602 trained individuals must collect samples in compliance with subsection
14603 (f)(1) and (2).
14604

14605 g) Notification of results.~~Lead Sampling in Schools and Child Care Facilities on~~
14606 ~~Request~~

- 14607
14608 1) CWS suppliers must provide sampling results, regardless of lead sample
14609 concentration, as soon as practicable but no later than 30 days after
14610 receipt of the results to:~~A supplier must contact schools and child care~~
14611 ~~facilities the supplier identified under subsection (a)(1) at least annually~~
14612 ~~to provide:~~

- 14613 A) The sampled school or childcare facility, along with information
14614 about potential options to remediate lead in drinking water
14615 (consistent with EPA's 3Ts for Reducing Lead in Drinking Water
14616 Toolkit, EPA-815-B-18-007, or subsequent EPA
14617 guidance);~~Information about health risks from lead in drinking~~
14618 ~~water;~~

- 14619 B) The local and State health department; and~~Information about how~~
14620 ~~to request sampling for lead at the facility; and~~

- 14621 C) The Agency in compliance with Section 611.360(i).~~Information~~
14622 ~~about sampling for lead in schools and child care facilities.~~

14623
14624 BOARD NOTE: USEPA has guidance available from USEPA,
14625 National Center for Environmental Publications: "3Ts for
14626 Reducing Lead in Drinking Water in Schools and Childcare~~Child~~
14627 Care Facilities: A Training, Testing, and Taking Action
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14631 Approach, Revised Manual" (October 2018), USEPA, Office of
14632 Water, doc. no. EPA 815-B-18-007 (search: "815B18007") and
14633 "U.S. EPA 3Ts Program Training, Testing & Taking Action:
14634 Lead Sample Collection Field Guide for Schools and
14635 Childcare~~Child-Care~~ Facilities" (July 2022), USEPA, Office of
14636 Water, doc. no. EPA 815-F-22-009 (search: "815F22009") or
14637 subsequent EPA guidance.
14638

14639 2) This subsection (g)(2) corresponds with 40 CFR 141.92(g)(2), which
14640 USEPA removed and reserved. This statement maintains structural
14641 consistency with the federal regulations~~A supplier must conduct~~
14642 ~~sampling under subsection (b) when the school or facility requests, and~~
14643 ~~the supplier must provide information to the facility:~~
14644

14645 A) ~~Instructions for identifying outlets for sampling and preparing for~~
14646 ~~sampling at least 30 days before it occurs; and~~
14647

14648 B) ~~Results as subsection (f) requires.~~
14649

14650 3) ~~If a supplier receives requests from more than 20 percent of the schools~~
14651 ~~and child care facilities the supplier listed under subsection (a)(1) in a~~
14652 ~~given year, the supplier may schedule sampling for those exceeding 20~~
14653 ~~percent for the following year. A supplier needs not sample an~~
14654 ~~individual school or child care facility more than once every five years.~~
14655

14656 4) ~~The Agency may issue a SEP exempting a CWS supplier from this~~
14657 ~~Section by issuing a written waiver under subsection (d) if the supplier~~
14658 ~~conducts voluntary sampling for lead in drinking water complying with~~
14659 ~~this Section at schools and child care facilities the supplier serves.~~
14660

14661 h) Alternative school and childcare lead sampling programs.
14662

14663 1) If schools and childcare facilities served by a CWS supplier are sampled
14664 for lead in drinking water under a State or local law or program, the
14665 Agency may exempt one or more CWS(s) suppliers from the sampling
14666 requirements of this section by issuing a written waiver:
14667

14668 A) If the sampling meets the frequency requirements in subsection (d)
14669 for elementary schools and childcare facilities and subsection (e)
14670 for secondary schools and the protocol requirements in subsection
14671 (f); or
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- B) If the sampling meets the frequency requirements in subsection (d) for elementary schools and childcare facilities and subsection (e) for secondary schools and the protocol requirements in subsection (f) with the exception of sample size and stagnation time in subsections (f)(2)(B) and (C) and the sampling is conducted in addition to any of the following actions to remediate lead in drinking water:
 - i) Disconnect affected fixtures;
 - ii) Replace affected fixtures with fixtures certified as lead free; and
 - iii) Install and maintain point-of-use devices certified by an American National Standards Institute accredited certifier to reduce lead levels; or
 - C) If the sampling is conducted in schools and childcare facilities served by the CWS supplier less frequently than once every five years and that sampling is conducted in addition to any of the actions to remediate lead in drinking water specified in subsection (h)(1)(B); or
 - D) If the school or childcare facility maintains point-of use treatment devices as defined in Section 611.101 on all outlets used to provide water for human consumption; or
 - E) If the sampling is conducted under a grant awarded under section 1464(d) of the SDWA, consistent with the requirements of the grant and at least the minimum number of samples required in subsection (f) are collected.
- 2) The duration of the waiver cannot exceed the time period covered by the sampling and will automatically expire at the end of any 12-month period during which sampling is not conducted at the required number of schools or childcare facilities.
- 3) The Agency must only issue a waiver to the CWS supplier for the subset of the schools or childcare facilities served by the supplier as designated under subsection (b) that are sampled under an alternative program as described in subsection (h)(1).

14715 4) The Agency may issue a written waiver applicable to more than one CWS
14716 supplier (e.g., one waiver for all CWS suppliers subject to a statewide
14717 sampling program that meets the requirements of this subsection (h)).

14718
14719 5) The Agency may issue a waiver for CWS suppliers to conduct the
14720 sampling requirements for the first five years following the compliance
14721 date in Section 350(a)(3) in the schools and childcare facilities that were
14722 sampled for lead between January 1, 2021, and the compliance date in
14723 Section 350(a)(3) that otherwise meets the requirements of subsection
14724 (h)(1).

14725
14726 BOARD NOTE: This Section derives from 40 CFR 141.92

14727
14728 (Source: Amended at 50 Ill. Reg. _____, effective _____)

14729
14730 **Section 611.363 Small Supplier Compliance Flexibility**

14731
14732 Small CWS suppliers~~This section gives compliance flexibility options applying to a small CWS~~
14733 ~~supplier serving 3,300~~10,000 ~~or fewer persons and all or an~~ NTNCWS supplier- ~~that~~
14734 ~~exceed the lead action level, but do not exceed the copper action level, may elect to use this~~
14735 ~~provision in lieu of the corrosion control treatment requirements otherwise applicable to small~~
14736 ~~and NTNCWS suppliers in Section 611.351(a)(3), if approved by the Agency. This compliance~~
14737 ~~flexibility is not available to suppliers where the Agency has obtained primacy for this subpart~~
14738 ~~and the Agency does not adopt regulations to provide compliance flexibility consistent with this~~
14739 ~~section. A CWS or NTNCWS supplier having corrosion control treatment in place must continue~~
14740 ~~operating and maintaining OCCT until the Agency issues a SEP determining this no longer~~
14741 ~~necessary, and the supplier must comply with any conditions the Agency are appropriate before~~
14742 ~~implementing an Agency approved compliance flexibility option under this Section.~~

14743
14744 a) Small CWS suppliers and NTNCWS suppliers that elect to use this section
14745 ~~must: A small CWS or NTNCWS supplier exceeding the lead trigger level but~~
14746 ~~neither the lead nor copper action level must collect samples for water quality~~
14747 ~~parameters under Section 611.357(b), evaluate compliance flexibility options~~
14748 ~~under subsections (a)(1) through (a)(4), and recommend a compliance flexibility~~
14749 ~~option to the Agency within six months of the end of the tap sampling period in~~
14750 ~~which the exceedance occurred. When recommending to the Agency, the supplier~~
14751 ~~must comply with Section 611.382(a)(1). The Agency must either approve the~~
14752 ~~supplier's recommended compliance flexibility option or designate an alternative~~
14753 ~~under subsections (a)(1) through (a)(4) within six months after the supplier~~
14754 ~~recommends an option. If the supplier subsequently exceeds the lead action level,~~
14755 ~~the supplier must implement the Agency approved compliance flexibility option~~
14756 ~~under subsection (b). A supplier must select one from among specific compliance~~
14757 ~~flexibility options:~~

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- 1) ~~Replacing Lead Service Lines. A supplier must implement a program for full lead service line replacement on an Agency-approved schedule not exceeding 15 years. The supplier must begin replacing lead service lines within one year after the Agency approves or designates this compliance flexibility option.~~
 - A) ~~The supplier must replace lead service lines complying with Section 611.354(e) and (g)(4), (g)(8), and (g)(9).~~
 - B) ~~The supplier must continue replacing lead service lines even if the supplier's 90th percentile lead concentration is at or below the lead action level in future tap monitoring cycles.~~
 - C) ~~The supplier must have no lead, galvanized requiring replacement, or lead status unknown service lines in its inventory before ending its lead service line replacement program.~~

- 2) For suppliers without corrosion control, collect water quality parameters in compliance with Section 611.357 and, if the supplier has not installed OCCT in compliance with Section 611.351(e), evaluate compliance options in subsections (c)(1) and (2) and corrosion control treatment under Section 611.351(e)(1). ~~Corrosion Control Treatment. A supplier must install and maintain OCCT under Sections 611.351 and 611.352, even if its 90th percentile concentration is at or below the lead action level in future tap monitoring cycles. A supplier having installed corrosion control treatment must re-optimize its corrosion control treatment under Section 611.351(d). A supplier the Agency requires to optimize or re-optimize corrosion control treatment must follow the appropriate schedule in Section 611.351(d) or (e), beginning with Step 3 in Section 611.351(d)(3) or (e)(3), unless the Agency specifies OCCT under the applicable of Section 611.351(d)(2)(B) or (e)(2).~~

- 3) ~~Point-of-Use Devices. A supplier must continue installing, maintaining, and monitoring POU devices in each household or building it serves even if its 90th percentile lead concentration is at or below the action level in future tap monitoring cycles.~~
 - A) ~~Schedule for Installing POU Devices~~
 - i) ~~A CWS supplier must install a minimum of one POU device (at one tap) in every household and at every tap persons use for cooking or drinking in every non-residential~~

- 14801 building the supplier serves on a schedule not exceeding
14802 one year the Agency specifies in a SEP.
14803
- 14804 ii) An NTNCWS supplier must provide a POU device to every
14805 tap persons use for cooking or drinking on a schedule not
14806 exceeding three months the Agency specifies in a SEP.
14807
- 14808 B) A third party must independently certify the POU device to meet
14809 the American National Standards Institute standard applying to the
14810 specific type of POU unit for reducing lead in drinking water.
14811
- 14812 C) The supplier must maintain each POU device according to its
14813 manufacturer's recommendations to ensure the POU device
14814 continues effectively filtering, including changing filter cartridges
14815 and resolving any operational issues. The POU devices must have
14816 mechanical warnings ensuring automatic notice to customers of
14817 operational problems. The supplier must certify to the Agency
14818 under Section 611.360(j)(1) that it maintains the POU devices,
14819 unless the Agency issues a SEP waiving this requirement.
14820
- 14821 D) The supplier must monitor one third of the POU devices each year
14822 and all POU devices within a three year cycle. The supplier must
14823 collect first draw tap samples under this Section after water passes
14824 through the POU device to assess its performance. Samples must
14825 be one liter in volume and have had a minimum six hour
14826 stagnation time. Results from all samples must not exceed the lead
14827 trigger level. The supplier must report its tap sampling results no
14828 later than 10 days after the end of the tap monitoring cycle under
14829 Section 611.360(j)(1). The supplier must document the problem
14830 and take corrective action at any site exceeding the lead trigger
14831 level. If a site exceeds the lead trigger level, the supplier must
14832 reach out to the homeowner or building manager or, if applicable,
14833 both no later than 24 hours after receiving the tap sample results.
14834 The supplier must complete the corrective action within 30 days.
14835 If the supplier does not complete the corrective action within 30
14836 days, the supplier must document to the Agency within 30 days
14837 explaining why the supplier was unable to correct the issue.
14838
- 14839 E) The supplier must provide public education to consumers under
14840 Section 611.355(j) informing them how to properly use POU
14841 devices to maximize their effectiveness in reducing lead
14842 concentrations.
14843

- 14844 F) ~~The supplier must operate and maintain the POU devices until the~~
14845 ~~Agency approves another compliance flexibility option, and~~
14846 ~~supplier implements it.~~
14847
14848 4) ~~Replacing Lead-Bearing Plumbing. A supplier controlling all plumbing in~~
14849 ~~buildings the supplier serves and having no lead status unknown,~~
14850 ~~galvanized requiring replacement, or lead service lines must replace all~~
14851 ~~plumbing that is not lead free as Section 611.126(e) defines the term when~~
14852 ~~the supplier replaces it. Replacing all lead-bearing plumbing must occur~~
14853 ~~on a schedule not exceeding one year as established by the Agency in a~~
14854 ~~SEP. The supplier must certify to the Agency that it has replaced all lead-~~
14855 ~~bearing material under Section 611.360(j)(2).~~
14856
14857 b) The supplier must make a compliance option recommendation to the Agency
14858 within six months of the end of the tap sampling period in which the lead action
14859 level exceedance occurred. Within six months of the recommendation by the
14860 supplier, the Agency must approve or disapprove the recommendation. If the
14861 Agency disapproves the recommendation, the Agency may designate the other
14862 compliance alternative as an option for the supplier. If the Agency does not
14863 designate the other compliance alternative as an option for the supplier, the
14864 supplier must comply with the otherwise applicable corrosion control treatment
14865 requirements under Section 611.351(d) for suppliers with corrosion control or
14866 Section 611.351(e) for suppliers without corrosion control treatment. Suppliers
14867 must follow the schedules in Section 351(d) or (e), beginning with step 3 in
14868 Section 611.351(d)(3) or (e)(3) unless the Agency specifies optimal corrosion
14869 control treatment under either Section 611.351(d)(2) or (e)(2), as applicable. If the
14870 supplier fails to implement the approved alternative compliance option, or the
14871 Agency revokes approval for the alternative compliance option, then the supplier
14872 must follow the requirements for small and NTNCWS suppliers as described
14873 under Section 611.351(a)(3). ~~Implementing a Compliance Option after Exceeding~~
14874 ~~an Action Level~~
14875
14876 1) ~~A supplier exceeding the lead action level after exceeding the lead trigger~~
14877 ~~level but not exceeding the copper action level must implement the~~
14878 ~~compliance option the Agency approved under subsection (a).~~
14879
14880 2) ~~A supplier exceeding the lead action level but not the copper action level~~
14881 ~~and not previously exceeding the lead trigger level must comply with~~
14882 ~~subsection (a) and implement the compliance option the Agency approved~~
14883 ~~under subsection (a).~~
14884
14885 3) ~~A supplier exceeding the lead trigger level after implementing a~~
14886 ~~compliance option the Agency approved under subsection (a) must~~

14887 ~~complete the steps in subsection (a). If the supplier later exceeds the lead~~
14888 ~~action level, the supplier must implement the compliance option the~~
14889 ~~Agency approved under subsection (a).~~
14890

14891 c) Alternative compliance options:

14892
14893 1) Alternative compliance option: point-of-use devices. A supplier that
14894 elects the compliance option in this subsection (c)(1), must install,
14895 maintain, and monitor POU devices in each household and each building
14896 served by the supplier.

14897
14898 A) POU device installation.

14899
14900 i) A CWS supplier must install a minimum of one POU
14901 device (at one tap) in every household and at every tap that
14902 is used for cooking and/or drinking in every non-residential
14903 building in its distribution system on a schedule specified
14904 by the Agency, but not to exceed one year after Agency
14905 approval.

14906
14907 ii) An NTNCWS supplier must provide a POU device to every
14908 tap that is used for cooking and/or drinking on a schedule
14909 specified by the Agency, but not to exceed three months.

14910
14911 B) The POU device must be independently certified by a third party to
14912 meet the American National Standards Institute standard
14913 applicable to the specific type of POU unit to reduce lead in
14914 drinking water.

14915
14916 C) The POU device must be maintained by the supplier in compliance
14917 with the manufacturer's recommendations or on a more frequent
14918 schedule if required by the Agency to ensure continued effective
14919 filtration, including but not limited to changing filter cartridges and
14920 resolving any operational issues. The POU device must be
14921 equipped with mechanical warnings to ensure that consumers are
14922 automatically notified of operational problems. The supplier must
14923 provide documentation to the Agency to certify maintenance of the
14924 POU devices, unless the Agency waives this requirement, in
14925 compliance with Section 611.360(j)(1).

14926
14927 D) The supplier must monitor, in compliance with this subsection
14928 (c)(1)(D), one-third of the POU devices each year and all POU
14929 devices must be monitored within a three-year cycle. First liter tap

14930 samples collected under this section must be taken after water
14931 passes through the POU device to assess its performance. Samples
14932 must be one liter in volume and have had a minimum 6-hour
14933 stagnation time. All samples must be at or below 0.010 mg/L.
14934 Suppliers must report the results from the tap sampling no later
14935 than 10 days after the end of the tap sampling period in compliance
14936 with Section 611.360(j)(1). If a sample exceeds 0.010 mg/L, the
14937 supplier must notify the persons served by the POU device, and/or
14938 building management no later than one business day of receiving
14939 the tap sample results. The supplier must document and take
14940 corrective action at each site where the sample result exceeds the
14941 lead action level. Corrective action must be completed within 30
14942 days. If the corrective action is not completed within 30 days, the
14943 supplier must provide documentation to the Agency within 30 days
14944 explaining why it was unable to correct the issue.

14945
14946 E) The supplier must provide public education to consumers to inform
14947 them of proper use of POU devices.

14948
14949 i) Content. All small CWS suppliers serving 3,300 or fewer
14950 persons and NTNCWS suppliers approved to implement
14951 POU devices under this subsection (c)(1) must provide
14952 public education materials to inform users how to properly
14953 use POU devices to maximize the units' effectiveness in
14954 reducing lead levels in drinking water. Public education
14955 materials must meet the requirements of Sections
14956 611.355(a)(1)(B) through (D).

14957
14958 ii) Timing. Suppliers must provide the public education
14959 materials at the time of POU device delivery.

14960
14961 iii) Delivery. Suppliers must provide the public education
14962 materials in person, by mail, or by another method
14963 approved by the Agency, to persons at locations where the
14964 supplier has delivered POU devices.

14965
14966 F) The supplier must operate and maintain the POU devices even if
14967 the supplier's system is at or below the action level in future tap
14968 monitoring periods until the supplier receives Agency approval to
14969 select the other compliance flexibility option or follow Section
14970 611.351(d) or (e) and the supplier has fully implemented it.
14971

14972 2) Alternative compliance option: replacement of lead-bearing plumbing. A
14973 supplier that has control over all plumbing in its buildings, and is not
14974 served by lead, galvanized requiring replacement, or unknown service
14975 lines, must replace all plumbing that does not meet the definition of "lead
14976 free" in section 1417 of the Safe Drinking Water Act, as amended by the
14977 Reduction of Lead in Drinking Water Act and any future amendments
14978 applicable at the time of replacement. The replacement of all lead-bearing
14979 plumbing must occur on a schedule established by the Agency but not to
14980 exceed one year. Suppliers must provide certification to the Agency that
14981 all lead-bearing material has been replaced in compliance with Section
14982 611.360(j)(2).
14983

14984 (Source: Amended at 50 Ill. Reg. _____, effective _____)
14985

14986 SUBPART I: DISINFECTANT RESIDUALS, DISINFECTION
14987 BYPRODUCTS, AND DISINFECTION BYPRODUCT PRECURSORS
14988

14989 **Section 611.380 General Requirements**
14990

- 14991 a) This Subpart I Constitutes NPDWRs
14992
14993 1) This Subpart I establishes standards for a CWS supplier or an NTNCWS
14994 supplier adding a chemical disinfectant to its water in any part of the
14995 treatment process modifying its practices to comply with MCLs and
14996 MRDLs in Sections 611.312 and 611.313, respectively, and complying
14997 with the treatment technique requirements for DBP precursors in Section
14998 611.385.
14999
15000 2) This Subpart I establishes standards for a transient non-CWS supplier
15001 using chlorine dioxide as a disinfectant or oxidant modifying its practices
15002 to comply with the MRDL for chlorine dioxide in Section 611.313.
15003
15004 3) MCLs for TTHM and HAA5 and treatment technique requirements for
15005 DBP precursors limit the levels of known and unknown DBPs that may
15006 have adverse health effects. These DBPs may include chloroform,
15007 bromodichloromethane, dibromochloromethane, bromoform,
15008 dichloroacetic acid, and trichloroacetic acid.
15009
15010 b) This subsection (b) corresponds with 40 CFR 141.130(b), which recites past
15011 implementation deadlines. This statement maintains structural consistency with
15012 the corresponding federal rules.
15013
15014 c) Qualified personnel complying with 35 Ill. Adm. Code 681 must operate the

15015 water system for each CWS or NTNCWS supplier subject to subsection (a).

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- d) Controlling Disinfectant Residuals. ~~Despite~~**Notwithstanding** the MRDLs in Section 611.313, a supplier may increase residual disinfectant levels of chlorine or chloramines (but not chlorine dioxide) in its distribution system to a level and for a time necessary to protect public health, to address specific microbiological contamination problems caused by circumstances such as distribution line breaks, storm run-off events, source water contamination events, or cross-connection events.

BOARD NOTE: This Section derives from 40 CFR 141.130.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

Section 611.381 Analytical Requirements

- a) A supplier must use only the analytical methods this Section specifies, each incorporated by reference in Section 611.102, or alternative methods that the Agency approved under Section 611.480 to demonstrate that it complies with this Subpart I and Subparts W and Y.
- b) Disinfection Byproducts (DBPs)
 - 1) Methods for Disinfection Byproducts (DBPs)
 - A) TTHM
 - i) By Purge and Trap, Gas Chromatography, Electrolytic Conductivity Detector, and Photoionization Detector. USEPA 502.2 (95). If TTHMs are the only analytes the laboratory measures in the sample, it needs not use a photoionization detector.
 - ii) By Purge and Trap, Gas Chromatography-Mass Spectrometer. USEPA 524.2 (95) or USEPA 524.3 (09), or USEPA 524.4 (13).
 - iii) By Liquid-Liquid Extraction, Gas Chromatography, Electron Capture Detector. USEPA 551.1 (95).
 - B) HAA5

- 15057 i) Liquid-Liquid Extraction (Diazomethane), Gas
- 15058 Chromatography, Electron Capture Detector. SM 6251 B
- 15059 (94) or SM 6251 B (07).
- 15060
- 15061 ii) Solid Phase Extractor (Acidic Methanol), Gas
- 15062 Chromatography, Electron Capture Detector. USEPA
- 15063 552.1 (92).
- 15064
- 15065 iii) Liquid-Liquid Extraction (Acidic Methanol), Gas
- 15066 Chromatography, Electron Capture Detector. USEPA
- 15067 552.2 (95) or 552.3 (03).
- 15068
- 15069 iv) Ion Chromatography, Electrospray Ionization, Tandem
- 15070 Mass Spectrometry. USEPA 557 (09).
- 15071
- 15072 v) Two-Dimensional Ion Chromatography (IC) with
- 15073 Suppressed Conductivity Detection. Thermo-Fisher 557.1
- 15074 (17).
- 15075
- 15076 C) Bromate
- 15077
- 15078 i) Ion Chromatography. ASTM D6581-00 or USEPA 300.1
- 15079 (97).
- 15080
- 15081 ii) Ion Chromatography and Post-Column Reaction. USEPA
- 15082 317.0 (01) or USEPA 326.0 (02).
- 15083
- 15084 iii) Inductively Coupled Plasma-Mass Spectrometer. USEPA
- 15085 321.8 (97).
- 15086
- 15087 iv) Two-Dimensional Ion Chromatography. USEPA 302.0
- 15088 (09).
- 15089
- 15090 v) Ion Chromatography, Electrospray Ionization, Tandem
- 15091 Mass Spectrometry. USEPA 557 (09).
- 15092
- 15093 vi) Chemically Suppressed Chromatography. ASTM D6581-
- 15094 08 A.
- 15095
- 15096 vii) Electrolytically Suppressed Chromatography. ASTM
- 15097 D6581-08 B.
- 15098

15099 BOARD NOTE: The supplier must use ion chromatography and
 15100 post column reaction or inductively coupled plasma-mass

15101 spectrometry to monitor bromate to demonstrate eligibility for
15102 reduced monitoring under Section 611.382(b)(3)(B). For
15103 inductively coupled plasma-mass spectrometry, the supplier must
15104 preserve samples at the time of sampling with 50 mg
15105 ethylenediamine (EDA) per liter of sample, and the supplier must
15106 analyze the samples within 28 days.

15107
15108 D) Chlorite

15109
15110 i) Amperometric Titration for Daily Monitoring Under
15111 Section 611.382(b)(2)(A)(i). SM 4500-CIO₂ E (93) or
15112 4500-CIO₂ E (00).

15113
15114 ii) Amperometric Sensor for Daily Monitoring Under Section
15115 611.382(b)(2)(A)(i). Palintest ChlordioX Plus (13) or
15116 Palintest ChlordioX Plus (20).

15117
15118 iii) Spectrophotometry. USEPA 327.0 (05).

15119
15120 iv) Ion Chromatography. USEPA 300.0 (09), USEPA 300.1
15121 (97), USEPA 317.0 (01), USEPA 326.0 (02), or ASTM
15122 D6581-00.

15123
15124 v) Chemically Suppressed Chromatography. ASTM D6581-
15125 08 A.

15126
15127 vi) Electrolytically Suppressed Chromatography. ASTM
15128 D6581-08 B.

15129
15130 BOARD NOTE: The supplier may use amperometric titration or
15131 spectrophotometry for routine daily monitoring of chlorite at the
15132 entrance to the distribution system under Section
15133 611.382(b)(2)(A)(i). The supplier must use ion chromatography
15134 for routine monthly chlorite monitoring and additional chlorite
15135 monitoring in the distribution system, as Section
15136 611.382(b)(2)(A)(ii) and (b)(2)(B) require.

15137
15138 2) Only a certified laboratory in one of the categories in Section 611.490(a)
15139 may conduct analyses for DBPs under this Section except as subsection
15140 (b)(3) specifies otherwise. To receive certification to conduct analyses for
15141 the DBP contaminants in Sections 611.312 and 611.381 and Subparts W
15142 and Y, the laboratory must fulfill the specific conditions in subsections
15143 (b)(2)(A), (b)(2)(C), and (b)(2)(D).

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- A) The laboratory must analyze performance evaluation (PE) samples acceptable to the Agency at least once during each consecutive 12-month period by each method for which the laboratory seeks certification.
 - B) This subsection corresponds with 40 CFR 141.131(b)(2)(ii), which has expired by its own terms. This statement maintains structural consistency with the corresponding federal rule.
 - C) The laboratory must achieve quantitative results on the PE sample analyses within the acceptance limits in subsections (b)(2)(C)(i) through (b)(2)(B)(xi), subject to subsections (b)(2)(C)(xii) and (b)(2)(C)(xiii):
 - i) Chloroform (a THM): $\pm 20\%$ of true value;
 - ii) Bromodichloromethane (a THM): $\pm 20\%$ of true value;
 - iii) Dibromochloromethane (a THM): $\pm 20\%$ of true value;
 - iv) Bromoform (a THM): $\pm 20\%$ of true value;
 - v) Monochloroacetic Acid (an HAA5): $\pm 40\%$ of true value;
 - vi) Dichloroacetic Acid (an HAA5): $\pm 40\%$ of true value;
 - vii) Trichloroacetic Acid (an HAA5): $\pm 40\%$ of true value;
 - viii) Monobromoacetic Acid (an HAA5): $\pm 40\%$ of true value;
 - ix) Dibromoacetic Acid (an HAA5): $\pm 40\%$ of true value;
 - x) Chlorite: $\pm 30\%$ of true value; and
 - xi) Bromate: $\pm 30\%$ of true value.
 - xii) The laboratory must meet all four of the individual THM acceptance limits in subsections (b)(2)(B)(i) through (b)(2)(B)(iv) to successfully pass a PE sample for TTHM.
 - xiii) The laboratory must meet the acceptance limits for four out of the five HAA5 compounds in subsections (b)(2)(B)(v)

15187 through (b)(2)(B)(ix) to successfully pass a PE sample for
 15188 HAA5.
 15189

15190 D) The laboratory must report quantitative data for concentrations at
 15191 least as low as the minimum reporting levels (MRLs) in
 15192 subsections (b)(2)(D)(i) through (b)(2)(D)(xi), subject to
 15193 subsections (b)(2)(D)(xii) and (b)(2)(D)(xiii), for all DBP samples
 15194 it analyzes to comply with Sections 611.312 and 611.385 and
 15195 Subparts W and Y:
 15196

15197 i) Chloroform (a THM): 0.0010 mg/L;
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15199 ii) Bromodichloromethane (a THM): 0.0010 mg/L;
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15201 iii) Dibromochloromethane (a THM): 0.0010 mg/L;
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15203 iv) Bromoform (a THM): 0.0010 mg/L;
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15205 v) Monochloroacetic Acid (an HAA5): 0.0020 mg/L;
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15207 vi) Dichloroacetic Acid (an HAA5): 0.0010 mg/L;
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15209 vii) Trichloroacetic Acid (an HAA5): 0.0010 mg/L;
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15211 viii) Monobromoacetic Acid (an HAA5): 0.0010 mg/L;
 15212

15213 ix) Dibromoacetic Acid (an HAA5): 0.0010 mg/L;
 15214

15215 x) Chlorite: 0.020 mg/L, applicable to monitoring as required
 15216 by Section 611.382(b)(2)(A)(ii) and (b)(2)(B); and
 15217

15218 xi) Bromate: 0.0050, or 0.0010 mg/L if the laboratory uses
 15219 USEPA 317.0 (01), USEPA 321.8 (97), or USEPA 326.0
 15220 (02).
 15221

15222 xii) The calibration curve must encompass the regulatory MRL
 15223 concentration. The laboratory may report data for
 15224 concentrations lower than the regulatory MRL if the
 15225 laboratory meets the precision and accuracy criteria by
 15226 analyzing an MRL check standard at the lowest reporting
 15227 limit the laboratory chooses. The laboratory must verify
 15228 the accuracy of the calibration curve at the MRL
 15229 concentration by analyzing an MRL check standard with a

15230 concentration less than or equal to 110% of the MRL with
15231 each batch of samples. The measured concentration for the
15232 MRL check standard must be $\pm 50\%$ of the expected value
15233 if any field sample in the batch has a concentration less
15234 than five times the regulatory MRL. The laboratory must
15235 analyze higher concentration check standards and meet
15236 tighter acceptance criteria in addition to the MRL check
15237 standard.

15238
15239 xiii) When adding the individual trihalomethane or haloacetic
15240 acid concentrations for the compounds listed in subsections
15241 (b)(2)(D)(v) through (b)(2)(D)(ix) to calculate the TTHM
15242 or HAA5 concentrations, a zero is used for any analytical
15243 result that is less than the MRL concentration for that DBP,
15244 unless the Agency specifies otherwise.

15245
15246 3) A party must measure daily chlorite samples at the entrance to the
15247 distribution system as the Agency requires.

15248
15249 c) Disinfectant Residuals

15250
15251 1) A supplier must measure residual disinfectant concentrations for free
15252 chlorine, combined chlorine (chloramines), and chlorine dioxide using the
15253 methods in subsections (c)(1)(A) through (c)(1)(D), subject to subsection
15254 (c)(1)(E):

15255
15256 A) Free Chlorine

15257
15258 i) Amperometric Titration. ASTM D1253-86, ASTM D1253-
15259 96, ASTM D1253-03, ASTM D1253-08, ASTM D1253-
15260 14, SM 4500-Cl D (93), or SM 4500- Cl D (00).

15261
15262 ii) DPD Ferrous Titration. SM 4500-Cl F (93) or SM 4500-Cl
15263 F (00).

15264
15265 iii) DPD Colorimetric. Hach 10260 (13), SM 4500-Cl G (93),
15266 or SM 4500-Cl G (00).

15267
15268 iv) Syringaldazine (FACTS). SM 4500-Cl H (93) or SM 4500-
15269 Cl H (00).

15270
15271 v) Test Strips. ITS D99-003 (03) if approved by the Agency
15272 under subsection (c)(2).
15273

- 15274 vi) Amperometric Sensor. Palintest ChloroSense (09) or
- 15275 Palintest ChloroSense (20).
- 15276
- 15277 vii) On-Line Chlorine Analyzer. USEPA 334.0 (09).
- 15278
- 15279 viii) Indenophenol Colorimetric. Hach 10241 (15).
- 15280
- 15281 B) Combined Chlorine
- 15282
- 15283 i) Amperometric Titration. ASTM D1253-86, ASTM D1253-
- 15284 96, ASTM D1253-03, ASTM D1253-08, or ASTM D1253-
- 15285 14, SM 4500-Cl D (93), or SM 4500-CL D (00).
- 15286
- 15287 ii) DPD Ferrous Titration. SM 4500-Cl F (93) or SM 4500-Cl
- 15288 F (00).
- 15289
- 15290 iii) DPD Colorimetric. Hach 10260 (13), SM 4500-Cl G (93),
- 15291 or SM 4500-Cl G (00).
- 15292
- 15293 C) Total Chlorine
- 15294
- 15295 i) Amperometric Titration. ASTM D1253-86, ASTM D1253-
- 15296 96, ASTM D1253-03, ASTM D1253-08, or ASTM D1253-
- 15297 14, SM 4500-Cl D (93), or SM 4500-Cl D (00).
- 15298
- 15299 ii) Low-Level Amperometric Titration. SM 4500-Cl E (93) or
- 15300 SM 4500-Cl E (00).
- 15301
- 15302 iii) DPD Ferrous Titration. SM 4500-Cl F (93) or SM 4500-Cl
- 15303 F (00).
- 15304
- 15305 iv) DPD Colorimetric. Hach 10260 (13), SM 4500-Cl G (93),
- 15306 or SM 4500-Cl G (00).
- 15307
- 15308 v) Iodometric Electrode. SM 4500-Cl I (93) or SM 4500-Cl I
- 15309 (00).
- 15310
- 15311 vi) Amperometric Sensor. Palintest ChloroSense (09) or
- 15312 Palintest ChloroSense (20).
- 15313
- 15314 vii) On-Line Chlorine Analyzer. USEPA 334.0 (09).
- 15315
- 15316 D) Chlorine Dioxide

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- i) DPD. SM 4500-ClO₂ D (93) or SM 4500-ClO₂ D (00).
 - ii) Amperometric Method II. SM 4500-ClO₂ E (93) or SM 4500-ClO₂ E (00).
 - iii) Amperometric Sensor. Palintest ChlordioX Plus (13) or Palintest ChlordioX Plus (20).
 - iv) Lissamine Green Spectrophotometric. USEPA 327.0 (05).
- E) USEPA approved these methods for measuring the specified disinfectant residual. The supplier may measure free chlorine or total chlorine for the chlorine MRDL and combined chlorine. The supplier may measure total chlorine for the chloramine MRDL.
- 2) Alternative Methods Available Only upon Specific Agency Approval
- A) Test Strips. ITS Method D99-003 (03).

BOARD NOTE: USEPA added ITS Method D99-003 (03) as an approved alternative method, contingent upon specific State approval. The Agency may issue a SEP approving this method on a case-by-case basis.
 - B) If the Agency approves in a SEP, a supplier may also measure residual disinfectant concentrations for chlorine, chloramines, and chlorine dioxide using DPD colorimetric test kits.
- 3) An Agency-approved party must measure residual disinfectant concentration.
- d) A supplier that must analyze parameters not included in subsections (b) and (c) must use the methods in this subsection (d). An Agency-approved party must measure certain parameters:
- 1) Alkalinity. All methods in Section 611.611(a)(21) for alkalinity.
 - 2) Bromide. Ion Chromatography. ASTM D6581-00, USEPA 300.0 (93), USEPA 300.1 (97), USEPA 317.0 (01), or USEPA 326.0 (02).
 - 3) Total Organic Carbon (TOC), by any of the methods in subsection (d)(3)(A), subject to subsection (d)(3)(B).

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- A) Analytical Methods
 - i) High-Temperature Combustion. SM 5310 B (92), SM 5310 B (96), SM 5310 B (00), SM 5310 B (14), [SM 5310 B \(22\)](#), USEPA 415.3 (05), or USEPA 415.3 (09).
 - ii) Persulfate-Ultraviolet or Heated-Persulfate Oxidation. Hach 10267 (15), SM 5310 C (92), SM 5310 C (96), SM 5310 C (00), SM 5310 C (14), USEPA 415.3 (05), or USEPA 415.3 (09).
 - iii) Wet Oxidation Method. SM 5310 D (92), SM 5310 D (96), SM 5310 D (00), SM 5310 D (14), USEPA 415.3 (05), or USEPA 415.3 (09).
 - iv) Ozone Oxidation. Hach 10261 (15).

- B) The supplier must remove inorganic carbon from the samples prior to analysis. The supplier and supplier must not filter TOC samples prior to analysis. The supplier must acidify TOC samples at the time of sample collection to achieve pH less than or equal to 2 with minimal addition of the acid the method specifies or instrument manufacturer recommends. The supplier must analyze acidified TOC samples within 28 days.

- 4) Specific Ultraviolet Absorbance (SUVA). SUVA is equal to the UV absorption at 254 nm (UV_{254}) (measured in m^{-1}) divided by the dissolved organic carbon (DOC) concentration (measured as mg/L). To determine SUVA, the supplier must separately measure UV_{254} and DOC. When determining SUVA, a supplier must use the methods in subsection (d)(4)(A) for DOC and the method in subsection (d)(4)(B) for UV_{254} . The supplier must determine SUVA on water prior to the supplier adding disinfectants or oxidants. The supplier must take DOC and UV_{254} samples for a SUVA value at the same time and at the same location.
 - A) Dissolved Organic Carbon (DOC). Prior to analysis, the supplier must filter DOC samples through the 0.45 μm pore-diameter filter as soon as practical after sampling, not to exceed 48 hours. After filtration, the supplier must acidify DOC samples to achieve pH less than or equal to 2 with minimal addition of the acid the method or instrument manufacturer specifies. The supplier must analyze acidified DOC samples within 28 days after sample

collection. The supplier must remove inorganic carbon from the samples prior to analysis. The supplier must use water passed through the filter as the filtered blank. The supplier must analyze this filtered blank using procedures identical to those it used for analysis of the samples, and the blank must less than 0.5 mg/L DOC.

- i) High-Temperature Combustion Method. SM 5310 B (92), SM 5310 B (96), SM 5310 B (00), SM 5310 B (14), [SM 5310 B \(22\)](#) USEPA 415.3 (05), or USEPA 415.3 (09).
- ii) Persulfate-Ultraviolet or Heated-Persulfate Oxidation Method. SM 5310 C (92), SM 5310 C (96), SM 5310 C (00), SM 5310 C (14), USEPA 415.3 (05), or USEPA 415.3 (09).
- iii) Wet-Oxidation Method. SM 5310 D (92), (96), SM 5310 D (00), USEPA 415.3 (05), or USEPA 415.3 (09).

B) Ultraviolet Absorption at 254 nm (UV₂₅₄) by Spectrometry. SM 5910 B (94), SM 5910 B (00), 5910 B (11), 5910 B (13), USEPA 415.3 (05), or USEPA 415.3 (09). The supplier must measure UV absorption at 253.7 nm (may be rounded off to 254 nm). Prior to analysis, the supplier must filter UV₂₅₄ samples through a 0.45 µm pore-diameter filter. The supplier must not adjust pH of UV₂₅₄ samples. The supplier must analyze samples as soon as practical after sampling, not to exceed 48 hours.

5) pH. All methods in Section 611.611(a)(17) for pH.

6) Magnesium. All methods in Section 611.611(a) for magnesium.

BOARD NOTE: This Section derives from 40 CFR 141.131 and appendix A to 40 CFR 141. The Board did not separately list approved alternative methods from Standard Methods Online that are the same version as a method appearing in a printed edition of Standard Methods. Using the Standard Methods Online copy is acceptable.

Standard Methods Online, Methods 4500-CI D-93, 4500-CI E-93, 4500-CI F-93, 4500-CI G-93, 4500-CI H-93, and 4500-CI I-93 appear in the 19th and 20th editions as Methods 4500-CI D, 4500-CI E, 4500-CI F, 4500-CI G, 4500-CI H, and 4500-CI I. These appear in this Section as SM 4500-CI D (93), SM 4500-CI E (93), SM 4500-CI F (93), SM 4500-CI G (93), SM 4500-CI H (93), and SM 4500-CI I (93).

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Standard Methods Online, Methods 4500-CI D-00, 4500-CI E-00, 4500-CI F-00, 4500-CI G-00, 4500-CI H-00, and 4500-CI I-00 appear in the 21st, 22nd, and 23rd editions as Methods 4500-CI D, 4500-CI E, 4500-CI F, 4500-CI G, 4500-CI H, and 4500-CI I. These appear in this Section as SM 4500-CI D (00), 4500-CI E (00), 4500-CI F (00), 4500-CI G (00), 4500-CI H (00), and 4500-CI I (00).

Standard Methods Online, Methods 4500-CIO2 D-93 and 4500-CIO2 E-93 appear in the 19th and 20th editions as Methods 4500-CIO2 D and 4500-CIO2 E. These appear in this Section as SM 4500-CIO2 D (93) and SM 4500-CIO2 E (93).

Standard Methods Online, Methods 4500-CIO2 D-00 and 4500-CIO2 E-00 appear in the 21st, 22nd, ~~and 23rd~~, and 24th editions as Methods 4500-CIO2 D and 4500-CIO2 E. These appear in this Section as SM 4500-CIO2 D (00) and SM 4500-CIO2 E (00).

Standard Methods Online, Methods 5310 B-00, 5310 C-00, and 5310 D-00 appear in the 21st and 22nd editions as Methods 5310 B, 5310 C, and 5310 D. These appear in this Section as SM 5310 B (00), SM 5310 C (00), and SM 5310 D (00).

Standard Methods Online, Method 5910 B-00 appears in the 21st edition as Method 5910 B. This appears in this Section as SM 5910 B (00).

Standard Methods Online, Method 5910 B-11 appears in the 22nd edition as Method 5910 B. This appears in this Section as SM 5910 B (11).

Standard Methods Online, Method 6251 B-94 appears in the 19th, 20th, and 21st editions as Method 6251 B. This appears in this Section as SM 6251 B (94).

Standard Methods Online, Method 6251 B-07 appears in the 22nd and 23rd editions as Method 5910 B. This appears in this Section as SM 6251 B (07).

(Source: Amended at 50 Ill. Reg. _____, effective _____)

Section 611.382 Monitoring Requirements

a) General Requirements

- 1) A supplier must take all samples during normal operating conditions.
- 2) A supplier may consider multiple wells drawing water from a single aquifer as one treatment plant for determining the minimum number of TTHM and HAA5 samples required with Agency approval.

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- 3) Failure to monitor in ~~compliance~~~~accordance~~ with the monitoring plan required under subsection (f) is a monitoring violation.
 - 4) ~~If~~~~Where~~ compliance is based on a running annual average of monthly or quarterly samples or averages and the supplier's failure to monitor makes it impossible to determine compliance with MCLs or MRDLs, this failure to monitor will be treated as a violation for the entire period covered by the annual average.
 - 5) A supplier must use only data collected under the provisions of this Subpart I to qualify for reduced monitoring.
- b) Monitoring Requirements for Disinfection Byproducts (DBPs)
- 1) TTHMs and HAA5
 - A) Routine Monitoring. A supplier must monitor at the following frequency:
 - i) A Subpart B system supplier that serves 10,000 or more persons must collect four water samples per quarter per treatment plant. At least 25 percent of all samples collected each quarter must be collected at locations representing maximum residence time. The remaining samples may be taken at locations representative of at least average residence time in the distribution system and representing the entire distribution system, taking into account the number of persons served, the different sources of water, and the different treatment methods.
 - ii) A Subpart B system supplier that serves from 500 to 9,999 persons must collect one water sample per quarter per treatment plant. The samples must be collected from locations representing maximum residence time.
 - iii) A Subpart B system supplier that serves fewer than 500 persons must collect one sample per year per treatment plant during month of warmest water temperature. The samples must be collected from locations representing maximum residence time. If the sample (or average of annual samples, if more than one sample is taken) exceeds the MCL, the supplier must increase the monitoring

15532 frequency to one sample per treatment plant per quarter,
15533 taken at a point reflecting the maximum residence time in
15534 the distribution system, until the supplier meets the
15535 standards in subsection (b)(1)(D).

15536
15537 iv) A supplier that uses only groundwater not under direct
15538 influence of surface water, ~~that~~~~which~~ uses chemical
15539 disinfectant, and ~~that~~~~which~~ serves 10,000 or more persons
15540 must collect one water sample per quarter per treatment
15541 plant. The samples must be collected from locations
15542 representing maximum residence time.

15543
15544 v) A supplier that uses only groundwater not under direct
15545 influence of surface water, ~~that~~~~which~~ uses chemical
15546 disinfectant, and ~~that~~~~which~~ serves fewer than 10,000
15547 persons must collect one sample per year per treatment
15548 plant during month of warmest water temperature. The
15549 samples must be collected from locations representing
15550 maximum residence time. If the sample (or average of
15551 annual samples, if more than one sample is taken) exceeds
15552 MCL, the supplier must increase monitoring to one sample
15553 per treatment plant per quarter, taken at a point reflecting
15554 the maximum residence time in the distribution system,
15555 until the supplier meets standards in subsection (b)(1)(D).

15556
15557 BOARD NOTE: If a supplier elects to sample more frequently
15558 than the minimum required, at least 25 percent of all samples
15559 collected each quarter (including those taken in excess of the
15560 required frequency) must be taken at locations that represent the
15561 maximum residence time of the water in the distribution system.
15562 The remaining samples must be taken at locations representative of
15563 at least average residence time in the distribution system. For a
15564 supplier using groundwater not under the direct influence of
15565 surface water, multiple wells drawing water from a single aquifer
15566 may be considered one treatment plant for determining the
15567 minimum number of samples required, with Agency approval.

15568
15569 B) A supplier may reduce monitoring, except as otherwise provided,
15570 in ~~compliance~~~~accordance~~ with the following:

15571
15572 i) A Subpart B system supplier that serves 10,000 or more
15573 persons and ~~that~~~~which~~ has a source water annual average
15574 TOC level, before any treatment, of less than or equal to

15575 4.0 mg/ℓ may reduce monitoring if it has monitored for at
15576 least one year and its TTHM annual average is less than or
15577 equal to 0.040 mg/ℓ and HAA5 annual average is less than
15578 or equal to 0.030 mg/ℓ. The reduced monitoring allowed is
15579 a minimum of one sample per treatment plant per quarter at
15580 a distribution system location reflecting maximum
15581 residence time.

- 15582
- 15583 ii) A Subpart B system supplier that serves from 500 to 9,999
15584 persons and ~~that~~~~which~~ has a source water annual average
15585 TOC level, before any treatment, of less than or equal to
15586 4.0 mg/ℓ may reduce monitoring if it has monitored at least
15587 one year and its TTHM annual average is less than or equal
15588 to 0.040 mg/ℓ and HAA5 annual average is less than or
15589 equal to 0.030 mg/ℓ. The reduced monitoring allowed is a
15590 minimum of one sample per treatment plant per year at a
15591 distribution system location reflecting maximum residence
15592 time during month of warmest water temperature.

15593

15594 BOARD NOTE: Any Subpart B system supplier that
15595 serves fewer than 500 persons may not reduce its
15596 monitoring to less than one sample per treatment plant per
15597 year.

- 15598
- 15599 iii) A supplier using only groundwater not under direct
15600 influence of surface water using chemical disinfectant and
15601 that serves 10,000 or more persons may reduce monitoring
15602 if it has monitored at least one year and its TTHM annual
15603 average is less than or equal to 0.040 mg/ℓ and HAA5
15604 annual average is less than or equal to 0.030 mg/ℓ. The
15605 reduced monitoring allowed is a minimum of one sample
15606 per treatment plant per year at a distribution system
15607 location reflecting maximum residence time during month
15608 of warmest water temperature.

- 15609
- 15610 iv) A supplier using only groundwater not under direct
15611 influence of surface water that uses chemical disinfectant
15612 and ~~that~~~~which~~ serves fewer than 10,000 persons may
15613 reduce monitoring if it has monitored at least one year and
15614 its TTHM annual average is less than or equal to 0.040
15615 mg/ℓ and HAA5 annual average is less than or equal to
15616 0.030 mg/ℓ for two consecutive years or TTHM annual
15617 average is less than or equal to 0.020 mg/ℓ and HAA5

15618 annual average is less than or equal to 0.015 mg/l for one
 15619 year. The reduced monitoring allowed is a minimum of
 15620 one sample per treatment plant per three year monitoring
 15621 cycle at a distribution system location reflecting maximum
 15622 residence time during month of warmest water temperature,
 15623 with the three-year cycle beginning on January 1 following
 15624 the quarter in which the supplier qualifies for reduced
 15625 monitoring.
 15626

15627 C) Monitoring Requirements for Source Water TOC. In order to
 15628 qualify for reduced monitoring for TTHM and HAA5 under
 15629 subsection (b)(1)(B), a Subpart B system supplier not monitoring
 15630 under the provisions of subsection (d) must take monthly TOC
 15631 samples every 30 days at a location prior to any treatment. In
 15632 addition to meeting other criteria for reduced monitoring in
 15633 subsection (b)(1)(B), the source water TOC running annual
 15634 average must be ≤ 4.0 mg/l (based on the most recent four quarters
 15635 of monitoring) on a continuing basis at each treatment plant to
 15636 reduce or remain on reduced monitoring for TTHM and HAA5.
 15637 Once qualified for reduced monitoring for TTHM and HAA5
 15638 under subsection (b)(1)(B), a system may reduce source water
 15639 TOC monitoring to quarterly TOC samples taken every 90 days at
 15640 a location prior to any treatment.
 15641

15642 D) A Subpart B system supplier on a reduced monitoring schedule
 15643 may remain on that reduced schedule as long as the average of all
 15644 samples taken in the year (for a supplier that must monitor
 15645 quarterly) or the result of the sample (for a supplier that must
 15646 monitor no more frequently than annually) is no more than 0.060
 15647 mg/l and 0.045 mg/l for TTHMs and HAA5, respectively. A
 15648 supplier that does not meet these levels must resume monitoring at
 15649 the frequency identified in subsection (b)(1)(A) in the quarter
 15650 immediately following the monitoring period in which the supplier
 15651 exceeds 0.060 mg/l for TTHMs or 0.045 mg/l for HAA5. For a
 15652 supplier that uses only groundwater not under the direct influence
 15653 of surface water and ~~that~~ which serves fewer than 10,000 persons, if
 15654 either the TTHM annual average is greater than 0.080 mg/l or the
 15655 HAA5 annual average is greater than 0.060 mg/l, the supplier
 15656 must go to increased monitoring identified in subsection (b)(1)(A)
 15657 in the quarter immediately following the monitoring period in
 15658 which the supplier exceeds 0.080 mg/l for TTHMs or 0.060 mg/l
 15659 for HAA5.
 15660

- 15661 E) The Agency may return a supplier to routine monitoring.
- 15662
- 15663 2) Chlorite. A CWS or NTNCWS supplier using chlorine dioxide, for
- 15664 disinfection or oxidation, must conduct monitoring for chlorite.
- 15665
- 15666 A) Routine Monitoring
- 15667
- 15668 i) Daily Monitoring. A supplier must take daily samples at
- 15669 the entrance to the distribution system. For any daily
- 15670 sample that exceeds the chlorite MCL, the supplier must
- 15671 take additional samples in the distribution system the
- 15672 following day at the locations required by subsection
- 15673 (b)(2)(B), in addition to the sample required at the entrance
- 15674 to the distribution system.
- 15675
- 15676 ii) Monthly Monitoring. A supplier must take a three-sample
- 15677 set each month in the distribution system. The supplier
- 15678 must take one sample at each of the following locations:
- 15679 near the first customer, at a location representative of
- 15680 average residence time, and at a location reflecting
- 15681 maximum residence time in the distribution system. Any
- 15682 additional routine sampling must be conducted in the same
- 15683 manner (as three-sample sets, at the specified locations).
- 15684 The supplier may use the results of additional monitoring
- 15685 conducted under subsection (b)(2)(B) to meet the
- 15686 requirement for monitoring in this subsection (b)(2)(A)(ii).
- 15687
- 15688 B) Additional Monitoring. On each day following a routine sample
- 15689 monitoring result that exceeds the chlorite MCL at the entrance to
- 15690 the distribution system, the supplier must take three chlorite
- 15691 distribution system samples at the following locations: as close to
- 15692 the first customer as possible, in a location representative of
- 15693 average residence time, and as close to the end of the distribution
- 15694 system as possible (reflecting maximum residence time in the
- 15695 distribution system).
- 15696
- 15697 C) Reduced Monitoring
- 15698
- 15699 i) Chlorite monitoring at the entrance to the distribution
- 15700 system required by subsection (b)(2)(A)(i) may not be
- 15701 reduced.
- 15702
- 15703 ii) Chlorite monitoring in the distribution system required by

15704 subsection (b)(2)(A)(ii) may be reduced to one three-
 15705 sample set per quarter after one year of monitoring ~~if~~^{where}
 15706 no individual chlorite sample taken in the distribution
 15707 system under subsection (b)(2)(A)(ii) has exceeded the
 15708 chlorite MCL and the supplier has not been required to
 15709 conduct monitoring under subsection (b)(2)(B). The
 15710 supplier may remain on the reduced monitoring schedule
 15711 until either any of the three individual chlorite samples
 15712 taken quarterly in the distribution system under subsection
 15713 (b)(2)(A)(ii) exceeds the chlorite MCL or the supplier is
 15714 required to conduct monitoring under subsection (b)(2)(B),
 15715 at which time the supplier must revert to routine
 15716 monitoring.

15717
 15718 3) Bromate

- 15719
 15720 A) Routine Monitoring. A CWS or NTNCWS supplier using ozone,
 15721 for disinfection or oxidation, must take one sample per month for
 15722 each treatment plant in the system using ozone. A supplier must
 15723 take samples monthly at the entrance to the distribution system
 15724 while the ozonation system is operating under normal conditions.
 15725
 15726 B) Reduced Monitoring. A supplier required to analyze for bromate
 15727 may reduce monitoring from monthly to quarterly if the supplier's
 15728 running annual average bromate concentration is not greater than
 15729 0.0025 mg/ℓ based on monthly bromate measurements under
 15730 subsection (b)(3)(A) for the most recent four quarters, with
 15731 samples analyzed using USEPA 302.0 (09), USEPA 317.0 (01),
 15732 USEPA 321.8 (97), USEPA 326.0 (02), or USEPA 557 (09), each
 15733 incorporated by reference in Section 611.102. If a supplier has
 15734 qualified for reduced bromate monitoring under subsection
 15735 (b)(3)(B)(i), that supplier may remain on reduced monitoring as
 15736 long as the running annual average of quarterly bromate samples
 15737 not greater than 0.0025 mg/ℓ based on samples analyzed using
 15738 USEPA 302.0 (09), USEPA 317.0 (01), USEPA 321.8 (97), 326.0
 15739 (02), or USEPA 557 (09). If the running annual average bromate
 15740 concentration is greater than 0.0025 mg/ℓ, the supplier must
 15741 resume routine monitoring required by subsection (b)(3)(A).
 15742

15743 c) Monitoring Requirements for Disinfectant Residuals

15744
 15745 1) Chlorine and Chloramines
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- A) Routine Monitoring. A CWS or NTNCWS supplier that uses chlorine or chloramines must measure the residual disinfectant level in the distribution system at the same point in the distribution system and at the same time as total coliforms are sampled, as specified in Sections 611.1054 through 611.1058. A Subpart B system supplier may use the results of residual disinfectant concentration sampling conducted under Section 611.532 for unfiltered systems or Section 611.533 for systems that filter, in lieu of taking separate samples.
 - B) Reduced Monitoring. Monitoring may not be reduced.
- 2) Chlorine Dioxide
- A) Routine Monitoring. A CWS, an NTNCWS, or a transient non-CWS supplier that uses chlorine dioxide for disinfection or oxidation must take daily samples at the entrance to the distribution system. For any daily sample that exceeds the MRDL, the supplier must take samples in the distribution system the following day at the locations required by subsection (c)(2)(B), in addition to the sample required at the entrance to the distribution system.
 - B) Additional Monitoring. On each day following a routine sample monitoring result that exceeds the MRDL, the supplier must take three chlorine dioxide distribution system samples. If chlorine dioxide or chloramines are used to maintain a disinfectant residual in the distribution system, or if chlorine is used to maintain a disinfectant residual in the distribution system and there are no disinfection addition points after the entrance to the distribution system (i.e., no booster chlorination), the supplier must take three samples as close to the first customer as possible, at intervals of at least six hours. If chlorine is used to maintain a disinfectant residual in the distribution system and there are one or more disinfection addition points after the entrance to the distribution system (i.e., booster chlorination), the supplier must take one sample at each of the following locations: as close to the first customer as possible, in a location representative of average residence time, and as close to the end of the distribution system as possible (reflecting maximum residence time in the distribution system).
 - C) Reduced Monitoring. Monitoring may not be reduced.

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- d) Monitoring Requirements for Disinfection Byproduct (DBP) Precursors
 - 1) Routine Monitoring. A Subpart B system supplier that uses conventional filtration treatment (as defined in Section 611.101) must monitor each treatment plant for TOC not past the point of combined filter effluent turbidity monitoring and representative of the treated water. A supplier required to monitor under this subsection (d)(1) must also monitor for TOC in the source water prior to any treatment at the same time as monitoring for TOC in the treated water. These samples (source water and treated water) are referred to as paired samples. At the same time as the source water sample is taken, a system must monitor for alkalinity in the source water prior to any treatment. A supplier must take one paired sample and one source water alkalinity sample per month per plant at a time representative of normal operating conditions and influent water quality.
 - 2) Reduced Monitoring. A Subpart B system supplier with an average treated water TOC of less than 2.0 mg/ℓ for two consecutive years, or less than 1.0 mg/ℓ for one year, may reduce monitoring for both TOC and alkalinity to one paired sample and one source water alkalinity sample per plant per quarter. The supplier must revert to routine monitoring in the month following the quarter when the annual average treated water TOC greater than or equal to 2.0 mg/ℓ.
- e) Bromide. A supplier required to analyze for bromate may reduce bromate monitoring from monthly to once per quarter, if the supplier demonstrates that the average source water bromide concentration is less than 0.05 mg/ℓ based upon representative monthly measurements for one year. The supplier must continue bromide monitoring to remain on reduced bromate monitoring.
- f) Monitoring Plans. Each supplier required to monitor under this Subpart I must develop and implement a monitoring plan. The supplier must maintain the plan and make it available for inspection by the Agency and the general public no later than 30 days following the applicable compliance dates in Section 611.380(b). A Subpart B system supplier that serves more than 3,300 persons must submit a copy of the monitoring plan to the Agency no later than the date of the first report required under Section 611.384. After review, the Agency may require changes in any plan elements. The plan must include at least the following elements:
 - 1) Specific locations and schedules for collecting samples for any parameters included in this Subpart I;

- 15833 2) How the supplier will calculate compliance with MCLs, MRDLs, and
- 15834 treatment techniques; and
- 15835
- 15836 3) If approved for monitoring as a consecutive system, or if providing water
- 15837 to a consecutive system, under the provisions of Section 611.500, the
- 15838 sampling plan must reflect the entire distribution system.
- 15839

15840 BOARD NOTE: Derived from 40 CFR 141.132.

15841 (Source: Amended at 50 Ill. Reg. _____, effective _____)

15842

15843 **Section 611.383 Compliance Requirements**

15844

15845

15846 a) General Requirements

- 15847
- 15848 1) If/Where compliance is based on a running annual average of monthly or
- 15849 quarterly samples or averages and the supplier fails to monitor for TTHM,
- 15850 HAA5, or bromate, this failure to monitor will be treated as a monitoring
- 15851 violation for the entire period covered by the annual average. If/Where
- 15852 compliance is based on a running annual average of monthly or quarterly
- 15853 samples or averages and the supplier's failure to monitor makes it
- 15854 impossible to determine compliance with the MRDL for chlorine or
- 15855 chloramines, this failure to monitor will be treated as a monitoring
- 15856 violation for the entire period covered by the annual average.
- 15857
- 15858 2) All samples taken and analyzed under the provisions of this Subpart I must
- 15859 be included in determining compliance, even if that number is greater than
- 15860 the minimum required.
- 15861
- 15862 3) If, during the first year of monitoring under Section 611.382, any
- 15863 individual quarter's average will cause the running annual average of that
- 15864 supplier to exceed the MCL for TTHM, HAA5, or bromate or the MRDL
- 15865 for chlorine or chloramine, the supplier is out of compliance at the end of
- 15866 that quarter.

15867

15868 b) Disinfection Byproducts (DBPs)

- 15869
- 15870 1) TTHMs and HAA5
- 15871
- 15872 A) For a supplier monitoring quarterly, compliance with MCLs in
- 15873 Section 611.312 must be based on a running annual arithmetic
- 15874 average, computed quarterly, of quarterly arithmetic averages of all
- 15875 samples collected by the supplier as prescribed by Section

- 15876 611.382(b)(1).
15877
15878 B) For a supplier monitoring less frequently than quarterly, the
15879 supplier demonstrates MCL compliance if the average of samples
15880 taken that year under the provisions of Section 611.382(b)(1) does
15881 not exceed the MCLs in Section 611.312. If the average of these
15882 samples exceeds the MCL, the supplier must increase monitoring
15883 to once per quarter per treatment plant, and such a system is not in
15884 violation of the MCL until it has completed one year of quarterly
15885 monitoring, unless the result of fewer than four quarters of
15886 monitoring will cause the running annual average to exceed the
15887 MCL, in which case the supplier is in violation at the end of that
15888 quarter. A supplier required to increase to quarterly monitoring
15889 must calculate compliance by including the sample that triggered
15890 the increased monitoring plus the following three quarters of
15891 monitoring.
15892
15893 C) If the running annual arithmetic average of quarterly averages
15894 covering any consecutive four-quarter period exceeds the MCL,
15895 the supplier is in violation of the MCL and must notify the public
15896 under Subpart V in addition to reporting to the Agency under
15897 Section 611.384.
15898
15899 D) If a PWS fails to complete four consecutive quarter's monitoring,
15900 compliance with the MCL for the last four-quarter compliance
15901 period must be based on an average of the available data.
15902
15903 2) Bromate. Compliance must be based on a running annual arithmetic
15904 average, computed quarterly, of monthly samples (or, for months in which
15905 the supplier takes more than one sample, the average of all samples taken
15906 during the month) collected by the supplier, as prescribed by Section
15907 611.382(b)(3). If the average of samples covering any consecutive four-
15908 quarter period exceeds the MCL, the supplier is in violation of the MCL
15909 and must notify the public under Subpart V, in addition to reporting to the
15910 Agency under Section 611.384. If a PWS supplier fails to complete 12
15911 consecutive months' monitoring, compliance with the MCL for the last
15912 four-quarter compliance period must be based on an average of the
15913 available data.
15914
15915 3) Chlorite. Compliance must be based on an arithmetic average of each
15916 three sample set taken in the distribution system as prescribed by Section
15917 611.382(b)(2)(A)(ii) and Section 611.382(b)(2)(B). If the arithmetic
15918 average of any three sample set exceeds the MCL, the supplier is in

15919 violation of the MCL and must notify the public under Subpart V, in
15920 addition to reporting to the Agency under Section 611.384.

15921
15922 c) Disinfectant Residuals

15923
15924 1) Chlorine and Chloramines

15925
15926 A) Compliance must be based on a running annual arithmetic average,
15927 computed quarterly, of monthly averages of all samples collected
15928 by the supplier under Section 611.382(c)(1). If the average of
15929 quarterly averages covering any consecutive four-quarter period
15930 exceeds the MRDL, the supplier is in violation of the MRDL and
15931 must notify the public under Subpart V, in addition to reporting to
15932 the Agency under Section 611.384.

15933
15934 B) ~~If in cases where~~ a supplier switches between the use of chlorine
15935 and chloramines for residual disinfection during the year,
15936 compliance must be determined by including together all
15937 monitoring results of both chlorine and chloramines in calculating
15938 compliance. Reports submitted under Section 611.384 must
15939 clearly indicate that residual disinfectant was analyzed for each
15940 sample.

15941
15942 2) Chlorine Dioxide

15943
15944 A) Acute Violations. Compliance must be based on consecutive daily
15945 samples collected by the supplier under Section 611.382(c)(2). If
15946 any daily sample taken at the entrance to the distribution system
15947 exceeds the MRDL, and on the following day one (or more) of the
15948 three samples taken in the distribution system exceeds the MRDL,
15949 the supplier is in violation of the MRDL and must take immediate
15950 corrective action to lower the level of chlorine dioxide below the
15951 MRDL and must notify the public under the procedures for acute
15952 health risks in Subpart V, in addition to reporting to the Agency
15953 under Section 611.384. Failure to take samples in the distribution
15954 system the day following an exceedance of the chlorine dioxide
15955 MRDL at the entrance to the distribution system will also be
15956 considered an MRDL violation and the supplier must notify the
15957 public of the violation in ~~compliance~~ accordance with the
15958 provisions for acute violations under Subpart V, in addition to
15959 reporting to the Agency under Section 611.384.

15960
15961 B) Nonacute Violations. Compliance must be based on consecutive

15962 daily samples collected by the supplier under Section
15963 611.382(c)(2). If any two consecutive daily samples taken at the
15964 entrance to the distribution system exceed the MRDL and all
15965 distribution system samples taken are below the MRDL, the
15966 supplier is in violation of the MRDL and must take corrective
15967 action to lower the level of chlorine dioxide below the MRDL at
15968 the point of sampling and must notify the public under the
15969 procedures for nonacute health risks in Subpart V, in addition to
15970 reporting to the Agency under Section 611.384. Failure to monitor
15971 at the entrance to the distribution system the day following an
15972 exceedance of the chlorine dioxide MRDL at the entrance to the
15973 distribution system is also an MRDL violation and the supplier
15974 must notify the public of the violation in compliance~~accordance~~
15975 with the provisions for nonacute violations under Subpart V, in
15976 addition to reporting to the Agency under Section 611.384.
15977

- 15978 d) Disinfection Byproduct (DBP) Precursors. Compliance must be determined as
15979 specified by Section 611.385(c). A supplier may begin monitoring to determine
15980 whether Step 1 TOC removals can be met 12 months prior to the compliance date
15981 for the supplier. This monitoring is not required and failure to monitor during this
15982 period is not a violation. However, any supplier that does not monitor during this
15983 period, and then determines in the first 12 months after the compliance date that it
15984 is not able to meet the Step 1 requirements in Section 611.141(b)(2) and must
15985 therefore apply for alternate minimum TOC removal (Step 2) requirements, is not
15986 eligible for retroactive approval of alternate minimum TOC removal (Step 2)
15987 requirements as allowed under Section 611.385(b)(3) and is in violation of an
15988 NPDWR. A supplier may apply for alternate minimum TOC removal (Step 2)
15989 requirements any time after the compliance date. For a supplier required to meet
15990 Step 1 TOC removals, if the value calculated under Section 611.385(c)(1)(D) is
15991 less than 1.00, the supplier is in violation of the treatment technique requirements
15992 and must notify the public under Subpart V, in addition to reporting to the Agency
15993 under Subpart V.
15994

15995 BOARD NOTE: Derived from 40 CFR 141.133.

15996 (Source: Amended at 50 Ill. Reg. _____, effective _____)
15997
15998

15999 **Section 611.384 Reporting and Recordkeeping Requirements**
16000

- 16001 a) A supplier required to sample quarterly or more frequently must report to the
16002 Agency within ten days after the end of each quarter in which samples were
16003 collected, despite~~notwithstanding~~ the provisions of Section 611.840. A supplier
16004 required to sample less frequently than quarterly must report to the Agency within

16005 ten days after the end of each monitoring period in which samples were collected.

16006

16007 b) Disinfection Byproducts (DBPs). A supplier must report the following specified
16008 information:

16009

16010 1) A supplier that monitors for TTHMs and HAA5 under the requirements of
16011 Section 611.382(b) on a quarterly or more frequently basis must report the
16012 following:

16013

16014 A) The number of samples taken during the last quarter;

16015

16016 B) The location, date, and result of each sample taken during the last
16017 quarter;

16018

16019 C) The arithmetic average of all samples taken over the last quarter;

16020

16021 D) The annual arithmetic average of the quarterly arithmetic averages
16022 of this Section for the last four quarters; and

16023

16024 E) Whether, based on Section 611.383(b)(1), the MCL was violated.

16025

16026 2) A supplier that monitors for TTHMs and HAA5 under the requirements of
16027 Section 611.382(b) less frequently than quarterly (but at least annually)
16028 must report the following:

16029

16030 A) The number of samples taken during the last year;

16031

16032 B) The location, date, and result of each sample taken during the last
16033 monitoring period;

16034

16035 C) The arithmetic average of all samples taken over the last year; and

16036

16037 D) Whether, based on Section 611.383(b)(1), the MCL was violated.

16038

16039 3) A supplier that monitors for TTHMs and HAA5 under the requirements of
16040 Section 611.382(b) less frequently than annually must report the
16041 following:

16042

16043 A) The location, date, and result of the last sample taken; and

16044

16045 B) Whether, based on Section 611.383(b)(1), the MCL was violated.

16046

- 16047 4) A supplier that monitors for chlorite under the requirements of Section
16048 611.382(b) must report the following:
 - 16049 A) The number of entry point samples taken each month for the last
16050 three months;
 - 16051 B) The location, date, and result of each sample (both entry point and
16052 distribution system) taken during the last quarter;
 - 16053 C) For each month in the reporting period, the arithmetic average of
16054 each three-sample set for all sample sets taken in the distribution
16055 system; and
 - 16056 D) Whether, based on Section 611.383(b)(3), the MCL was violated,
16057 in which month it was violated, and how many times it was
16058 violated in each month.
- 16063 5) A supplier that monitors for bromate under the requirements of Section
16064 611.382(b) must report the following:
 - 16065 A) The number of samples taken during the last quarter;
 - 16066 B) The location, date, and result of each sample taken during the last
16067 quarter;
 - 16068 C) The arithmetic average of the monthly arithmetic averages of all
16069 samples taken in the last year; and
 - 16070 D) Whether, based on Section 611.383(b)(2), the MCL was violated.

16076 BOARD NOTE: The Agency may choose to perform calculations and determine
16077 whether the MCL was exceeded, in lieu of having the supplier report the required
16078 information.
16079

- 16080 c) Disinfectants. A supplier must report the following specified information:
 - 16081 1) A supplier that monitors for chlorine or chloramines under the
16082 requirements of Section 611.382(c) must report the following:
 - 16083 A) The number of samples taken during each month of the last
16084 quarter.

- 16089 B) The monthly arithmetic average of all samples taken in each month
- 16090 for the last 12 months.
- 16091
- 16092 C) The arithmetic average of all monthly averages for the last 12
- 16093 months.
- 16094
- 16095 D) Whether, based on ~~Section~~ Section 611.383(c)(1), the MRDL was
- 16096 violated.
- 16097

16098 2) A supplier that monitors for chlorine dioxide under the requirements of

16099 Section 611.382(c) must report the following:

- 16100
- 16101 A) The dates, results, and locations of samples taken during the last
- 16102 quarter;
- 16103
- 16104 B) Whether, based on Secton 611.383(c)(2), the MRDL was violated;
- 16105 and
- 16106
- 16107 C) Whether the MRDL was exceeded in any two consecutive daily
- 16108 samples and whether the resulting violation was acute or nonacute.
- 16109

16110 BOARD NOTE: The Agency may choose to perform calculations and determine

16111 whether the MRDL was exceeded, in lieu of having the supplier report the

16112 required information.

16113

16114 d) Disinfection Byproduct (DBP) Precursors and Enhanced Coagulation or

16115 Enhanced Softening. A supplier must report the following specified information:

16116

16117 1) A supplier that monitors monthly or quarterly for TOC under the

16118 requirements of Section 611.382(d) and required to meet the enhanced

16119 coagulation or enhanced softening requirements in Section 611.385(b)(2)

16120 or (b)(3) must report the following:

16121

- 16122 A) The number of paired (source water and treated water) samples
- 16123 taken during the last quarter;
- 16124
- 16125 B) The location, date, and result of each paired sample and associated
- 16126 alkalinity taken during the last quarter;
- 16127
- 16128 C) For each month in the reporting period that paired samples were
- 16129 taken, the arithmetic average of the percent reduction of TOC for
- 16130 each paired sample and the required TOC percent removal;
- 16131

- 16132 D) Calculations for determining compliance with the TOC percent
16133 removal requirements, as provided in Section 611.385(c)(1); and
16134
- 16135 E) Whether the supplier is in compliance with the enhanced
16136 coagulation or enhanced softening percent removal requirements in
16137 Section 611.385(b) for the last four quarters.
16138
- 16139 2) A supplier that monitors monthly or quarterly for TOC under the
16140 requirements of Section 611.382(d) and meeting one or more of the
16141 alternative compliance standards in Section 611.385(a)(2) or (a)(3) must
16142 report the following:
16143
 - 16144 A) The alternative compliance criterion that the supplier is using;
 - 16145
 - 16146 B) The number of paired samples taken during the last quarter;
 - 16147
 - 16148 C) The location, date, and result of each paired sample and associated
16149 alkalinity taken during the last quarter;
 - 16150
 - 16151 D) The running annual arithmetic average based on monthly averages
16152 (or quarterly samples) of source water TOC for a supplier meeting
16153 a criterion in Section 611.385(a)(2)(A) or (a)(2)(C) or of treated
16154 water TOC for a supplier meeting the criterion in Section
16155 611.385(a)(2)(B);
16156
 - 16157 E) The running annual arithmetic average based on monthly averages
16158 (or quarterly samples) of source water SUVA for a supplier
16159 meeting the criterion in Section 611.385(a)(2)(E) or of treated
16160 water SUVA for a supplier meeting the criterion in Section
16161 611.385(a)(2)(F);
16162
 - 16163 F) The running annual average of source water alkalinity for a
16164 supplier meeting the criterion in Section 611.385(a)(2)(C) and of
16165 treated water alkalinity for a supplier meeting the criterion in
16166 Section 611.385(a)(3)(A);
16167
 - 16168 G) The running annual average for both TTHM and HAA5 for a
16169 supplier meeting the criterion in Section 611.385(a)(2)(C) or (D);
16170
 - 16171 H) The running annual average of the amount of magnesium hardness
16172 removal (as CaCO₃ in mg/ℓ) for a supplier meeting the criterion in
16173 Section 611.385(a)(3)(B); and
16174

16175 I) Whether the supplier is in compliance with the particular
16176 alternative compliance criterion in Section 611.385(a)(2) or (a)(3).
16177

16178 BOARD NOTE: The Agency may choose to perform calculations and determine
16179 whether the treatment technique was met, in lieu of having the supplier report the
16180 required information.
16181

16182 BOARD NOTE: Derived from 40 CFR 141.134.

16183
16184 (Source: Amended at 50 Ill. Reg. _____, effective _____)
16185

16186 **Section 611.385 Treatment Technique for Control of Disinfection Byproduct (DBP)**
16187 **Precursors**
16188

16189 a) Applicability
16190

16191 1) A Subpart B system supplier using conventional filtration treatment (as
16192 defined in Section 611.101) must operate with enhanced coagulation or
16193 enhanced softening to achieve the TOC percent removal levels specified in
16194 subsection (b) unless the supplier meets at least one of the alternative
16195 compliance standards listed in subsection (a)(2) or (a)(3).
16196

16197 2) Alternative compliance standards for enhanced coagulation and enhanced
16198 softening systems. A Subpart B system supplier using conventional
16199 filtration treatment may use the alternative compliance standards in
16200 subsections (a)(2)(A) through (a)(2)(F) to comply with this Section in lieu
16201 of complying with subsection (b). A supplier must comply with
16202 monitoring requirements in Section 611.382(d).
16203

16204 A) The supplier's source water TOC level, measured according to
16205 Section 611.381(d)(3), is less than 2.0 mg/l, calculated quarterly as
16206 a running annual average.
16207

16208 B) The supplier's treated water TOC level, measured according to
16209 Section 611.381(d)(3), is less than 2.0 mg/l, calculated quarterly as
16210 a running annual average.
16211

16212 C) The supplier's source water TOC level, measured according to
16213 Section 611.381(d)(3), is less than 4.0 mg/l, calculated quarterly as
16214 a running annual average; the source water alkalinity, measured
16215 according to Section 611.381(d)(1), is greater than 60 mg/l (as
16216 CaCO₃), calculated quarterly as a running annual average; and
16217 either the TTHM and HAA5 running annual averages are no

16218 greater than 0.040 mg/l and 0.030 mg/l, respectively; or prior to
 16219 the effective date for compliance in Section 611.380(b), the system
 16220 has made a clear and irrevocable financial commitment, not later
 16221 than the effective date for compliance in Section 611.380(b), to use
 16222 technologies that will limit the levels of TTHMs and HAA5 to no
 16223 more than 0.040 mg/l and 0.030 mg/l, respectively. A supplier
 16224 must submit evidence of a clear and irrevocable financial
 16225 commitment, in addition to a schedule containing milestones and
 16226 periodic progress reports for installation and operation of
 16227 appropriate technologies, to the Agency for approval. Failure to
 16228 install and operate these technologies by the date in the approved
 16229 schedule will constitute a violation of an NPDWR.

16230
 16231 D) The TTHM and HAA5 running annual averages are no greater than
 16232 0.040 mg/l and 0.030 mg/l, respectively, and the supplier uses
 16233 only chlorine for primary disinfection and maintenance of a
 16234 residual in the distribution system.

16235
 16236 E) The supplier's source water SUVA, prior to any treatment and
 16237 measured monthly according to Section 611.381(d)(4), is less than
 16238 or equal to 2.0 l/mg-m, calculated quarterly as a running annual
 16239 average.

16240
 16241 F) The supplier's finished water SUVA, measured monthly according
 16242 to Section 611.381(d)(4), is less than or equal to 2.0 ~~2.0~~ l/mg-m,
 16243 calculated quarterly as a running annual average.

16244
 16245 3) Additional Alternative Compliance Standards for Softening Systems. A
 16246 supplier practicing enhanced softening that cannot achieve the TOC
 16247 removals required by subsection (b)(2) may use the alternative compliance
 16248 standards in subsections (a)(3)(A) and (a)(3)(B) in lieu of complying with
 16249 subsection (b). A supplier must comply with monitoring requirements in
 16250 Section 611.382(d). The alternative compliance standards are as follows:

16251
 16252 A) The supplier may undertake softening that results in lowering the
 16253 treated water alkalinity to less than 60 mg/l (as CaCO₃), measured
 16254 monthly according to Section 611.381(d)(1) and calculated
 16255 quarterly as a running annual average; and

16256
 16257 B) The supplier may undertake softening that results in removing at
 16258 least 10 mg/l of magnesium hardness (as CaCO₃), measured
 16259 monthly according to Section 611.381(d)(6) and calculated
 16260 quarterly as a running annual average.

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b) Enhanced Coagulation and Enhanced Softening Performance Requirements

- 1) A supplier must achieve the percent reduction of TOC specified in subsection (b)(2) between the source water and the combined filter effluent, unless the Agency approves a supplier's request for alternate minimum TOC removal (Step 2) requirements under subsection (b)(3).
- 2) Required Step 1 TOC reductions, indicated in the following table, are based upon specified source water parameters measured in ~~compliance~~~~accordance~~ with Section 611.381(d). A supplier practicing softening must meet the Step 1 TOC reductions in the far-right column (source water alkalinity greater than 120 mg/l) for the following specified source water TOC:

Step 1 Required Removal of TOC by Enhanced Coagulation and Enhanced Softening for a Subpart B System Supplier Using Conventional Treatment^{1,2}

Source-water TOC, mg/l	Source-water alkalinity, mg/l as CaCO ₃		
	0-60	> 60-120	> 120 ³
> 2.0-4.0	35.0%	25.0%	15.0%
> 4.0-8.0	45.0%	35.0%	25.0%
> 8.0	50.0%	40.0%	30.0%

¹ A supplier meeting at least one of the conditions in subsections (a)(2)(A) through (a)(2)(F) are not required to operate with enhanced coagulation.

² A softening system that meets one of the alternative compliance standards in subsection (a)(3) is not required to operate with enhanced softening.

³ A supplier that practices softening must meet the TOC removal requirements in this column.

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- 3) A Subpart B conventional treatment system supplier that cannot achieve the Step 1 TOC removals required by subsection (b)(2) due to water quality parameters or operational constraints must apply to the Agency, within three months after failure to achieve the TOC removals required by subsection (b)(2), for approval of alternative minimum TOC (Step 2) removal requirements submitted by the supplier. If the PWS cannot achieve the Step 1 TOC removal requirement due to water quality parameters or operational constraints, the Agency must approve the use of

16289 the Step 2 TOC removal requirement. If the Agency approves the
 16290 alternative minimum TOC removal (Step 2) requirements, the Agency
 16291 may make those requirements retroactive for the purposes of determining
 16292 compliance. Until the Agency approves the alternative minimum TOC
 16293 removal (Step 2) requirements, the supplier must meet the Step 1 TOC
 16294 removals contained in subsection (b)(2).
 16295

16296 4) Alternative Minimum TOC Removal (Step 2) Requirements. An
 16297 application made to the Agency by an enhanced coagulation system
 16298 supplier for approval of alternative minimum TOC removal (Step 2)
 16299 requirements under subsection (b)(3) must include, at a minimum, results
 16300 of bench- or pilot-scale testing conducted under subsection (b)(4)(B). The
 16301 submitted bench- or pilot-scale testing must be used to determine the
 16302 alternative enhanced coagulation level.
 16303

16304 A) For the purposes of this Subpart I, "alternative enhanced
 16305 coagulation level" is defined as coagulation at a coagulant dose
 16306 and pH, as determined by the method described in subsections
 16307 (b)(4)(A) through (b)(4)(E), such that an incremental addition of
 16308 10 mg/l of alum (or equivalent amount of ferric salt) results in a
 16309 TOC removal of less than or equal to 0.3 mg/l. The percent
 16310 removal of TOC at this point on the "TOC removal versus
 16311 coagulant dose" curve is then defined as the minimum TOC
 16312 removal required for the supplier. Once approved by the Agency,
 16313 this minimum requirement supersedes the minimum TOC removal
 16314 required by the table in subsection (b)(2). This requirement will be
 16315 effective until such time as the Agency approves a new value
 16316 based on the results of a new bench- and pilot-scale test. Failure to
 16317 achieve alternative minimum TOC removal levels is a violation of
 16318 National Primary Drinking Water Regulations.
 16319

16320 B) Bench- or pilot-scale testing of enhanced coagulation must be
 16321 conducted by using representative water samples and adding 10
 16322 mg/l increments of alum (or equivalent amounts of ferric salt)
 16323 until the pH is reduced to a level less than or equal to the enhanced
 16324 coagulation Step 2 target pH shown in the following table:
 16325

Enhanced Coagulation Step 2 Target pH

Alkalinity (mg/l as CaCO ₃)	Target pH
0-60	5.5
> 60-120	6.3

> 120-240	7.0
> 240	7.5

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- C) For waters with alkalinities of less than 60 mg/ℓ for which addition of small amounts of alum or equivalent addition of iron coagulant drives the pH below 5.5 before significant TOC removal occurs, the supplier must add necessary chemicals to maintain the pH between 5.3 and 5.7 in samples until the TOC removal of 0.3 mg/ℓ per 10 mg/ℓ alum added (or equivalent addition of iron coagulant) is reached.
- D) The supplier may operate at any coagulant dose or pH necessary (consistent with other NPDWRs) to achieve the minimum TOC percent removal approved under subsection (b)(3).
- E) If the TOC removal is consistently less than 0.3 mg/ℓ of TOC per 10 mg/ℓ of incremental alum dose at all dosages of alum (or equivalent addition of iron coagulant), the water is deemed to contain TOC not amenable to enhanced coagulation. The supplier may then apply to the Agency for a waiver of enhanced coagulation requirements. If the TOC removal is consistently less than 0.3 mg/ℓ of TOC per 10 mg/ℓ of incremental alum dose at all dosages of alum (or equivalent addition of iron coagulant), the Agency must grant the waiver of enhanced coagulation requirements.

c) Compliance Calculations

- 1) A Subpart B system supplier other than those identified in subsection (a)(2) or (a)(3) must comply with requirements contained in subsection (b)(2) or (b)(3). A supplier must calculate compliance quarterly, beginning after the supplier has collected 12 months of data, by determining an annual average using the following method:

- A) Determine actual monthly TOC percent removal, equal to the following:

$$\left(1 - \left(\frac{\text{treated water TOC}}{\text{source water TOC}} \right) \right) \times 100$$

- B) Determine the required monthly TOC percent removal.

- 16365 C) Divide the value in subsection (c)(1)(A) by the value in subsection
16366 (c)(1)(B).
- 16367
- 16368 D) Add together the results of subsection (c)(1)(C) for the last 12
16369 months and divide by 12.
- 16370
- 16371 E) If the value calculated in subsection (c)(1)(D) is less than 1.00, the
16372 supplier is not in compliance with the TOC percent removal
16373 requirements.
- 16374
- 16375 2) A supplier may use the provisions in subsections (c)(2)(A) through
16376 (c)(2)(E) in lieu of the calculations in subsection (c)(1)(A) through
16377 (c)(1)(E) to determine compliance with TOC percent removal
16378 requirements.
- 16379
- 16380 A) In any month that the supplier's treated or source water TOC level,
16381 measured according to Section 611.381(d)(3), is less than 2.0
16382 mg/l, the supplier may assign a monthly value of 1.0 (in lieu of the
16383 value calculated in subsection (c)(1)(C)) when calculating
16384 compliance under the provisions of subsection (c)(1).
- 16385
- 16386 B) In any month that a system practicing softening removes at least 10
16387 mg/l of magnesium hardness (as CaCO₃), the supplier may assign
16388 a monthly value of 1.0 (in lieu of the value calculated in subsection
16389 (c)(1)(C)) when calculating compliance under the provisions of
16390 subsection (c)(1).
- 16391
- 16392 C) In any month that the system's source water SUVA, prior to any
16393 treatment and measured according to Section 611.381(d)(4), is less
16394 than or equal to 2.0 l/mg-m, the supplier may assign a monthly
16395 value of 1.0 (in lieu of the value calculated in subsection (c)(1)(C))
16396 when calculating compliance under the provisions of subsection
16397 (c)(1).
- 16398
- 16399 D) In any month that the system's finished water SUVA, measured
16400 according to Section 611.381(d)(4), is less than or equal to 2.0
16401 l/mg-m, the supplier may assign a monthly value of 1.0 (in lieu of
16402 the value calculated in subsection (c)(1)(C)) when calculating
16403 compliance under the provisions of subsection (c)(1).
- 16404
- 16405 E) In any month that a system practicing enhanced softening lowers
16406 alkalinity below 60 mg/l (as CaCO₃), the supplier may assign a
16407 monthly value of 1.0 (in lieu of the value calculated in subsection

(c)(1)(C)) when calculating compliance under the provisions of subsection (c)(1).

3) A Subpart B system supplier using conventional treatment may also comply with the requirements of this Section by meeting the standards in subsection (a)(2) or (a)(3).

d) Treatment Technique Requirements for Disinfection Byproduct (DBP) Precursors. Treatment techniques to control the level of disinfection byproduct (DBP) precursors in drinking water treatment and distribution systems, for a Subpart B system supplier using conventional treatment, are enhanced coagulation or enhanced softening.

BOARD NOTE: Derived from 40 CFR 141.135.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

SUBPART K: GENERAL MONITORING AND ANALYTICAL REQUIREMENTS

Section 611.490 Certified Laboratories

a) For the purpose of determining compliance with Subparts G, K through O, Q, ~~and~~ S, and AZ samples will be considered only if they have been analyzed by one of the following:

1) A laboratory certified under Section 4(o) of the Act;

2) A laboratory certified by USEPA;

3) When no laboratory has been certified under subsection (a)(1) to analyze a particular contaminant, a laboratory certified, registered, accredited, licensed, or otherwise approved by another state with primary enforcement responsibility, or an agency of the federal government, unless the Agency has, by written notice, informed the supplier that a particular laboratory or laboratories may not be used; or

4) For measurements of alkalinity, calcium, conductivity, disinfectant residual, orthophosphate, silica, turbidity, free chlorine residual, temperature, and pH, a person under the supervision of a certified operator (35 Ill. Adm. Code 603.103).

b) Nothing in this Part must be construed to preclude the Agency or any duly designated representative of the Agency from taking samples or from using the

16451 results from ~~those~~ such samples to determine compliance by a supplier of water
16452 with the applicable requirements of this Part.

16453
16454 c) The CWS supplier must have required analyses performed either at an Agency
16455 laboratory or a certified laboratory. The Agency may require that some or all of
16456 the required samples be submitted to its laboratories.

16457
16458 BOARD NOTE: Subsections (a)(1), (a)(2), (a)(4), and (b) are derived from 40 CFR
16459 141.28. Subsections (a)(3) and (c) are additional State requirements.

16460
16461 (Source: Amended at 50 Ill. Reg. _____, effective _____)

16462
16463 **Section 611.500 Consecutive PWSs**

16464
16465 When a PWS supplies water to one or more other PWSs, the Agency must modify the
16466 monitoring requirements imposed by this Part to the extent that the interconnection of the PWSs
16467 justifies treating them as a single PWS for monitoring purposes. Any modified monitoring must
16468 be conducted under a schedule specified by a SEP. The Agency must not approve ~~the~~ such
16469 modified monitoring without the concurrence of USEPA.

16470
16471 BOARD NOTE: Derived from 40 CFR 141.29 ~~(2002)~~.

16472
16473 (Source: Amended at 50 Ill. Reg. _____, effective _____)

16474
16475 **SUBPART L: MICROBIOLOGICAL MONITORING**
16476 **AND ANALYTICAL REQUIREMENTS**

16477
16478 **Section 611.531 Analytical Requirements**

16479
16480 A supplier must use the analytical methods in this Section or Agency-approved alternative
16481 methods under Section 611.480 to demonstrate compliance with only 611.Subpart B. A supplier
16482 must measure pH, temperature, turbidity, and RDCs under the supervision of a certified operator.
16483 A supplier must conduct measurements for total coliforms, fecal coliforms and HPC using a
16484 certified laboratory in one of the categories in Section 611.490(a). The supplier must perform
16485 analyses using the methods in this Section, each incorporated by reference in Section 611.102:

- 16486
16487 a) **Basic Water Parameters and Microbiological Quality**
16488
16489 1) The supplier must analyze for pH and temperature using one of the
16490 methods in Section 611.611; and
16491
16492 2) The supplier must analyze for total coliforms, fecal coliforms,
16493 heterotrophic bacteria, and turbidity using specific methods and analytical

16494 test procedures in USEPA Technical Notes, incorporated by reference in
16495 Section 611.102:

16496
16497 A) Total Coliforms

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16499 BOARD NOTE: The time from sample collection to beginning
16500 analysis for source (raw) water samples must not exceed eight
16501 hours. The supplier should but needs not hold samples below 10°
16502 C during transit.

16503
16504 i) Total Coliform Fermentation Technique. SM 9221 A (93),
16505 SM 9221 A (94), SM 9221 A (99), SM 9221 A (06), SM
16506 9221 A (14), SM 9221 B (93), SM 9221 B (94), SM 9221
16507 B (99), SM 9221 B (06), SM 9221 B (14), SM 9221 C (93),
16508 SM 9221 C (94), SM 9221 C (99), SM 9221 C (06), or SM
16509 9221 C (14).

16510
16511 BOARD NOTE: The supplier may use commercially
16512 available lactose broth in lieu of lauryl tryptose broth if the
16513 supplier conducts at least 25 parallel tests between this
16514 medium and lauryl tryptose broth using the water it
16515 normally tests, and this comparison demonstrates that the
16516 false-positive rate and false-negative rate for total coliforms
16517 is less than ten percent using lactose broth. If the supplier
16518 uses inverted tubes to detect gas production, the media
16519 should cover these tubes at least one-half to two-thirds after
16520 the supplier adds the sample. The supplier needs not run the
16521 completed phase on ten percent of all total coliform-
16522 positive confirmed tubes.

16523
16524 ii) Total Coliform Membrane Filter Technique. SM 9222 A
16525 (91), SM 9222 A (94), SM 9222 A (97), SM 9222 A (06),
16526 SM 9222 A (15), [SM 9222 A \(22\)](#), SM 9222 B (91), SM
16527 9222 B (94), SM 9222 B (97), 9222 B (06), SM 9222 B
16528 (15), [SM 9222 B \(22\)](#), SM 9222 C (91), SM 9222 C (94),
16529 SM 9222 C (97), SM 9222 C (06), ~~or~~ SM 9222 C (15) , or
16530 [SM 9222 C \(22\)](#).

16531
16532 iii) ONPG-MUG (also known as Colilert®). SM 9223 (92),
16533 SM 9223 (94), SM 9223 (97), SM 9223 B (04), or SM
16534 9223 B (16).

16535
16536 B) Fecal Coliforms

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BOARD NOTE: The time from collecting the sample to beginning analysis of source (raw) water samples must not exceed eight hours. The supplier should but needs not hold samples below 10° C during transit.

- i) Fecal Coliform Procedure. SM 9221 E (93), SM 9221 E (94), SM 9221 E (99), SM 9221 E (06), or SM 9221 E (14).

BOARD NOTE: A-1 broth may be held up to seven days in a tightly closed screwcap tube at 4° C (39° F).

BOARD NOTE: The supplier may hold A-1 broth up to seven days in a tightly closed screwcap tube at 4 °C (39 °F).

- ii) Fecal Coliform Membrane Filter Procedure. SM 9222 D (91), SM 9222 D (94), SM 9222 D (97), SM 9222 D (06), ~~SM 9222 D (15)~~, [SM 9222 D \(22\)](#).

C) Heterotrophic Bacteria

- i) Pour Plate Method. SM 9215 B (88), SM 9215 B (94), SM 9215 B (00), SM 9215 B (04), ~~SM 9215 B (16)~~, [SM 9215 B \(22\)](#).

BOARD NOTE: The time from collecting the sample to beginning analysis must not exceed eight hours. The supplier should but needs not hold samples below 10 °C during transit.

- ii) SimPlate (00).

D) Turbidity

BOARD NOTE: Styrene divinyl benzene beads (e.g., AMCO-AEPA-1 or equivalent) and stabilized formazin (e.g., Hach StablCal™ or equivalent) are acceptable substitutes for formazin.

- i) Nephelometric Method. SM 2130 B (88), SM 2130 B (94), SM 2130 B (01); USEPA 180.1 (93); or Hach 8195 (18).
- ii) GLI Method 2 (92).

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- iii) Laser Nephelometry. Hach 10133 (00) (FilterTrak).
 - iv) Laser Nephelometry (On-Line). Lovibond PTV 6000 (16), Mitchell M5271 (09), or Mitchell M5331 (16).
 - v) Laser Nephelometry (Portable). Lovibond TB 6000 (21).
 - vi) LED Nephelometry (On-Line). AMI Turbiwell (09), Lovibond PTV 1000 (16), Lovibond PTV 2000 (16), Mitchell M5331 (09), ~~or~~ Mitchell M5331 (16), [Yokogawa 820 \(22\)](#).
 - vii) LED Nephelometry (Portable). Orion AQ4500 (09), Lovibond TB 3500 (21), Lovibond TB 5000 (21).
 - viii) 360° Nephelometry. Hach 10258 (16) or Hach 10258 (18).

b) A supplier must measure residual disinfectant concentrations with specific analytical methods:

1) Free Chlorine

- A) Amperometric Titration. ASTM D1253-03, ASTM D1253-08, ASTM D1253-14, SM 4500-Cl D (89), SM 4500-Cl D (93), or SM 4500-Cl D (00).
- B) DPD Ferrous Titrimetric. SM 4500-Cl F (89), SM 4500-Cl F (93), or SM 4500-Cl F (00).
- C) DPD Colimetric. Hach 10260 (13), SM 4500-Cl G (89), SM 4500-Cl G (93), or SM 4500-Cl G (00).
- D) Syringaldazine (FACTS). SM 4500-Cl H (89), SM 4500-Cl H (93), or SM 4500-Cl H (00).
- E) On-Line Chlorine Analyzer. USEPA 334.0 (09).
- F) Amperometric Sensor. Palintest ChloroSense (09) and Palintest ChloroSense (20).
- G) Indophenol Colorimetric. Hach 10241 (15).

2) Total Chlorine

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- A) Amperometric Titration. ASTM D1253-03, ASTM D1253-08, ASTM D1253-14, SM 4500-Cl D (89), SM 4500-Cl D (93), or SM 4500-Cl D (00).
 - B) Amperometric Titration (low level measurement). SM 4500-Cl E (89), SM 4500-Cl E (93), or SM 4500-Cl E (00).
 - C) DPD Ferrous Titrimetric. SM 4500-Cl F (89), SM 4500-Cl F (93), or SM 4500-Cl F (00).
 - D) DPD Colimetric. SM 4500-Cl G (89), SM 4500-Cl G (93), SM 4500-Cl G (00), or Hach 10260 (13).
 - E) Iodometric Electrode. SM 4500-Cl I (89), SM 4500-Cl I (93), or SM 4500-Cl I (00).
 - F) On-Line Chlorine Analyzer. USEPA 334.0 (09).
 - G) Amperometric Sensor. Palintest ChloroSense (09) and Palintest ChloroSense (20).
 - H) Indophenol Colorimetric. USEPA 127 (21).
- 3) Chlorine Dioxide
- A) Amperometric Titration. ~~Palintest ChlordioX Plus (13), Palintest ChlordioX Plus (20)~~, SM 4500-ClO₂ C (88), SM 4500-ClO₂ C (93), SM 4500-ClO₂ C (00), SM 4500-ClO₂ E (88), SM 4500-ClO₂ E (93), or SM 4500-ClO₂ E (00).
 - B) DPD Method. SM 4500-ClO₂ D (88) or SM 4500-ClO₂ D (93).
 - C) Spectrophotometric. USEPA 327.0 (05).
 - D) Amperometric Sensor. Palintest ChlordioX Plus (13), Palintest ChlordioX Plus (20).
- 4) Ozone. Indigo Method. SM 4500-O₃ B (88), SM 4500-O₃ B (93), or SM 4500-O₃ B (97).
- 5) Alternative Test Methods. The Agency may issue a SEP allowing a supplier to use alternative chlorine test methods:

- 16668 A) DPD Colorimetric Test Kits. A supplier may measure residual
16669 disinfectant concentrations for free chlorine and combined chlorine
16670 using ITS Method D99-003.
16671
- 16672 B) Continuous Monitoring for Free and Total Chlorine. A supplier
16673 may measure free and total chlorine residuals continuously by
16674 adapting a specified chlorine residual method for use with a
16675 continuous monitoring instrument ~~if, provided~~ the chemistry,
16676 accuracy, and precision remain the same. A supplier must
16677 calibrate instruments it uses for continuous monitoring with a grab
16678 sample measurement at least every five days or as the Agency
16679 provides otherwise in a SEP.
16680

16681 BOARD NOTE: This Section derives from 40 CFR 141.74(a) and appendix A to subpart C of
16682 40 CFR 141. The Board did not separately list approved alternative methods from Standard
16683 Methods Online that are the same version as a method appearing in a printed edition of Standard
16684 Methods. Using the Standard Methods Online copy is acceptable.
16685

16686 Standard Methods Online, Method 2130 B-01 appears in the 21st, 22nd, ~~and~~ 23rd , and 24th
16687 editions as Method 2130 B. This appears in this Section as SM 2130 B (01).
16688

16689 Standard Methods Online, Methods 4500-Cl D-93, 4500-Cl E-93, 4500-Cl F-93, 4500-Cl
16690 G-93, 4500-Cl H-93, and 4500-Cl I-93 appear in the 19th and 20th editions as Methods
16691 4500-Cl D, 4500-Cl E, 4500-Cl F, 4500-Cl G, 4500-Cl H, and 4500-Cl I. These appear
16692 in this Section as SM 4500-Cl D (93), SM 4500-Cl E (93), SM 4500-Cl F (93), SM
16693 4500-Cl G (93), SM 4500-Cl H (93), and SM 4500-Cl I (93).
16694

16695 Standard Methods Online, Methods 4500-Cl D-00, 4500-Cl E-00, 4500-Cl F-00, 4500-Cl
16696 G-00, 4500-Cl H-00, and 4500-Cl I-00 appear in the 21st, 22nd, ~~and~~ 23rd , and 24th editions
16697 as Methods 4500-Cl D, 4500-Cl E, 4500-Cl F, 4500-Cl G, 4500-Cl H, and 4500-Cl I.
16698 These appear in this Section as SM 4500-Cl D (00), SM 4500-Cl E (00), SM 4500-Cl F
16699 (00), SM 4500-Cl G (00), SM 4500-Cl H (00), and SM 4500-Cl I (00).
16700

16701 Standard Methods Online, Methods 4500-ClO₂ C-93, 4500-ClO₂ D-93, and 4500-ClO₂ E-
16702 93 appear in the 19th and 20th editions as Methods 4500-ClO₂ C, 4500-ClO₂ D, and
16703 4500-ClO₂ E. These appear in this Section as SM 4500-ClO₂ C (93), SM 4500-ClO₂ D
16704 (93), and SM 4500-ClO₂ E (93).
16705

16706 Standard Methods Online, Methods 4500-ClO₂ C-00 and 4500-ClO₂ E-00 appear in the
16707 19th , ~~and~~ 20th , 21st, 22nd, 23rd, and 24th editions as Methods 4500-ClO₂ C and 4500-ClO₂
16708 E. These appear in this Section as SM 4500-ClO₂ C (00) and SM 4500-ClO₂ E (00).
16709

16710 Standard Methods Online, Method 4500-O₃ B-97 appears in the 20th, 21st, 22nd, 23rd, and
16711 24th editions~~edition~~ as Method 4500-O₃ B. This appears in this Section as SM 4500-O₃
16712 B (97).

16713
16714 Standard Methods Online, Method 9215 B-00 appears in the 21st edition as Method 9215
16715 B. This appears in this Section as SM 9215 B (00).

16716
16717 Standard Methods Online, Method 9215 B-04 appears in the 22nd edition as Method 9215
16718 B. This appears in this Section as SM 9215 B (04).

16719
16720 Standard Methods Online, Methods 9221 A-99, 9221 B-99, and 9221 C-99 appear in the
16721 21st edition as Methods 9221 A, 9221 B, and 9221 C. These appear in this Section as SM
16722 9221 A (99), SM 9221 B (99), and SM 9221 C (99).

16723
16724 Standard Methods Online, Methods 9221 A-06, 9221 B-06, 9221 C-06, and 9221 E-06
16725 appear in the 22nd edition as Methods 9221 A, 9221 B, 9221 C, and 9221 E. These
16726 appear in this Section as SM 9221 A (06), SM 9221 B (06), SM 9221 C (06), and SM
16727 9221 E (06).

16728
16729 Standard Methods Online, Methods 9222 A-97, 9222 B-97, and 9222 C-97 appear in the
16730 20th and 21st editions as Methods 9222 A, 9222 B, and 9222 C. These appear in this
16731 Section as SM 9222 A (97), SM 9222 B (97), and SM 9222 C (97).

16732
16733 Standard Methods Online, Method 9223 B-97 appears in the 20th and 21st editions as
16734 Method 9223 B. This appears in this Section as SM 9223 B (97).

16735
16736 Standard Methods Online, Method 9223 B-04 appears in the 22nd edition as Method 9223
16737 B. This appears in this Section as SM 9223 B (04).

16738
16739 (Source: Amended at 50 Ill. Reg. _____, effective _____)

16740
16741 **Section 611.533 Filtered PWSs**

16742
16743 A supplier using a surface water source or a groundwater source under the direct influence of
16744 surface water and providing filtration treatment must monitor in compliance~~accordance~~ with this
16745 Section.

- 16746
16747 a) The supplier must perform turbidity measurements Section 611.250 requires on
16748 representative samples of the PWS's filtered water every four hours (or more
16749 frequently) when the supplier serves water to the public. A supplier may
16750 substitute continuous turbidity monitoring for grab sample monitoring if it
16751 validates the continuous measurement for accuracy on a regular basis using a
16752 protocol the Agency approved in a SEP. For a supplier using slow sand filtration

16753 or filtration treatment other than conventional treatment, direct filtration, or
 16754 diatomaceous earth filtration, the Agency must reduce the sampling frequency to
 16755 once per day in a SEP if the Agency determines that less frequent monitoring is
 16756 sufficient to indicate effective filtration performance. For a supplier serving 500
 16757 or fewer persons, the Agency must reduce the turbidity sampling frequency to
 16758 once per day in a SEP if the Agency determines that less frequent monitoring is
 16759 sufficient to indicate effective filtration performance regardless of the type of
 16760 filtration treatment used.

16761
 16762 b) RDC Entering Distribution System
 16763

- 16764 1) Suppliers Serving More Than 3300 Persons. The supplier must
 16765 continuously monitor the RDC of the water entering the distribution
 16766 system, and the supplier must record the lowest value each day, except
 16767 that the supplier may conduct grab sampling every four hours in lieu of
 16768 continuous monitoring if there is a failure in the continuous monitoring
 16769 equipment, but not for more than five working days following the
 16770 equipment failure.
 16771
- 16772 2) Suppliers Serving 3,300 or Fewer Persons. The supplier may take grab
 16773 samples in lieu of providing continuous monitoring on an ongoing basis at
 16774 the frequencies each day Table C prescribes. If at any time the RDC falls
 16775 below 0.2 mg/L in a system using grab sampling in lieu of continuous
 16776 monitoring, the supplier must take a grab sample every four hours until
 16777 RDC is equal to or greater than 0.2 mg/L.
 16778

16779 c) Points of Measurement
 16780

- 16781 1) The supplier must measure the RDC at least at the same points in the
 16782 distribution system and at the same time as sampling total coliforms, as
 16783 Sections 611.1054 through 611.1058 specify. The Agency must allow a
 16784 supplier using both a surface water source and a groundwater source or a
 16785 groundwater source under direct influence of surface water and a
 16786 groundwater source to take RDC samples at points other than the total
 16787 coliform sampling points if the Agency determines that ~~those~~ ~~such~~ points
 16788 are more representative of treated (disinfected) water quality within the
 16789 distribution system. The supplier may measure HPC, as Section
 16790 611.531(a) specifies, in lieu of RDC.
 16791
- 16792 2) Subsection (c)(1) does not apply if the Agency determines under Section
 16793 611.213(c) that a system has no means for having a certified laboratory
 16794 analyze a sample for PHC under the requisite time and temperature
 16795 conditions Section 611.531(a) specifies and the supplier provides adequate

16796 disinfection in its distribution system.

16797

16798 BOARD NOTE: This Section derives from 40 CFR 141.74(c).

16799

16800 (Source: Amended at 50 Ill. Reg. _____, effective _____)

16801

16802 SUBPART N: INORGANIC MONITORING AND ANALYTICAL REQUIREMENTS

16803

16804 **Section 611.601 Monitoring Frequency**

16805

16806 Monitoring must be conducted as follows:

16807

16808 a) Required Sampling

16809

16810 1) Each supplier must take a minimum of one sample at each sampling point
16811 at the times required by Section 611.610 beginning in the initial
16812 compliance period.

16813

16814 2) Each sampling point must produce samples that are representative of the
16815 water from each source after treatment or from each treatment plant, as
16816 required by subsection (b). The total number of sampling points must be
16817 representative of the water delivered to users throughout the PWS.

16818

16819 3) The supplier must take each sample at the same sampling point unless
16820 conditions make another sampling point more representative of each
16821 source or treatment plant and the Agency has granted a SEP under
16822 subsection (b)(5).

16823

16824 b) Sampling Points

16825

16826 1) Sampling points for GWSs. Unless otherwise provided by SEP, a GWS
16827 supplier must take at least one sample from each of the following points:
16828 each entry point that is representative of each well after treatment.

16829

16830 2) Sampling points for an SWS or a mixed system supplier. Unless
16831 otherwise provided by SEP, an SWS or mixed system supplier must take
16832 at least one sample from each of the following points:

16833

16834 A) Each entry point after the application of treatment; or

16835

16836 B) A point in the distribution system that is representative of each
16837 source after treatment.

16838

- 16839 3) If a supplier draws water from more than one source, and the sources are
16840 combined before distribution, the supplier must sample at an entry point
16841 during periods of normal operating conditions when water is
16842 representative of all sources being used.
16843
16844 4) Additional sampling points. The Agency must, by SEP, designate
16845 additional sampling points in the distribution system or at the consumer's
16846 tap if it determines that ~~additional~~ such samples are necessary to more
16847 accurately determine consumer exposure.
16848
16849 5) Alternative sampling points. The Agency must, by SEP, approve alternate
16850 sampling points if the supplier demonstrates that the points are more
16851 representative than the generally required point.
16852
16853 c) This subsection corresponds with 40 CFR 141.23(a)(4), an optional provision
16854 relating to compositing of samples that USEPA does not require for state
16855 programs. This statement maintains structural consistency with USEPA rules.
16856
16857 d) The frequency of monitoring for the following contaminants must be in
16858 ~~compliance~~ accordance with the following Sections:
16859
16860 1) Asbestos: Section 611.602;
16861
16862 2) Antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide,
16863 fluoride, mercury, nickel, selenium, and thallium: Section 611.603;
16864
16865 3) Nitrate: Section 611.604; and
16866
16867 4) Nitrite: Section 611.605.
16868

16869 BOARD NOTE: Derived from 40 CFR 141.23(a) and (c).

16870 (Source: Amended at 50 Ill. Reg. _____, effective _____)

16871
16872
16873 **Section 611.602 Asbestos Monitoring Frequency**

16874
16875 The frequency of monitoring conducted to determine compliance with the MCL for asbestos in
16876 Section 611.301 is as follows:

- 16877
16878 a) Unless the Agency has determined under subsection (c) that the PWS is not
16879 vulnerable, each CWS and NTNCWS supplier must monitor for asbestos during
16880 the first compliance period of each compliance cycle.
16881

- 16882 b) CWS suppliers may apply to the Agency, by way of an application for a SEP, for
16883 a determination that the CWS is not vulnerable based on consideration of the
16884 criteria listed in subsection (c).
16885
- 16886 c) The Agency must determine that the CWS is "not vulnerable" if the CWS is not
16887 vulnerable to contamination either from asbestos in its source water, from
16888 corrosion of asbestos-cement pipe, or from both, based on a consideration of the
16889 following factors:
16890
- 16891 1) Potential asbestos contamination of the water source; and
16892
- 16893 2) The use of asbestos-cement pipe for finished water distribution and the
16894 corrosive nature of the water.
16895
- 16896 d) A SEP based on a determination that a CWS is not vulnerable to asbestos
16897 contamination expires at the end of the compliance cycle for which it was issued.
16898
- 16899 e) A supplier of a PWS vulnerable to asbestos contamination due solely to corrosion
16900 of asbestos-cement pipe must take one sample at a tap served by asbestos-cement
16901 pipe and under conditions ~~that~~where asbestos contamination is most likely to
16902 occur.
16903
- 16904 f) A supplier of a PWS vulnerable to asbestos contamination due solely to source
16905 water must monitor in ~~compliance~~accordance with Section 611.601.
16906
- 16907 g) A supplier of a PWS vulnerable to asbestos contamination due both to its source
16908 water supply and corrosion of asbestos-cement pipe must take one sample at a tap
16909 served by asbestos-cement pipe and under conditions ~~that~~where asbestos
16910 contamination is most likely to occur.
16911
- 16912 h) A supplier that exceeds the MCL, as determined in Section 611.609, must monitor
16913 quarterly beginning in the next quarter after the violation occurred.
16914
- 16915 i) Reduction of Quarterly Monitoring
16916
- 16917 1) The Agency must issue a SEP that reduces the monitoring frequency to
16918 that specified by subsection (a) if it determines that the sampling point is
16919 reliably and consistently below the MCL.
16920
- 16921 2) The request must, at a minimum, include the following information:
16922
- 16923 A) For a GWS: two quarterly samples.
16924

- 16925 B) For an SWS or mixed system: four quarterly samples.
- 16926
- 16927 3) In issuing a SEP, the Agency must specify the level of the contaminant
- 16928 upon which the "reliably and consistently" determination was based. All
- 16929 SEPs that allow less frequent monitoring based on an Agency "reliably
- 16930 and consistently" determination must include a condition requiring the
- 16931 supplier to resume quarterly monitoring under subsection (h) if it violates
- 16932 the MCL specified by Section 611.609.
- 16933
- 16934 j) This subsection (j) corresponds with 40 CFR 141.23(b)(10), which pertains to a
- 16935 compliance period long since expired. This statement maintains structural
- 16936 consistency with the federal regulations.
- 16937

16938 BOARD NOTE: Derived from 40 CFR 141.23(b).

16939 (Source: Amended at 50 Ill. Reg. _____, effective _____)

16941 **Section 611.603 Inorganic Monitoring Frequency**

16942 The frequency of monitoring conducted to determine compliance with the revised MCLs in

16943 Section 611.301 for antimony, arsenic, barium, beryllium, cadmium, chromium, cyanide,

16944 fluoride, mercury, nickel, selenium, and thallium is as follows:

- 16945 a) Suppliers must take samples at each sampling point, beginning in the initial
- 16946 compliance period, as follows:
- 16947
- 16948 1) For a GWS supplier: at least one sample during each compliance period;
- 16949
- 16950 2) For an SWS or a mixed system supplier: at least one sample each year.

16951 BOARD NOTE: Derived from 40 CFR 141.23(c)(1).

- 16952 b) SEP Application
- 16953
- 16954 1) The supplier may apply to the Agency for a SEP that allows reduction
- 16955 from the monitoring frequencies specified in subsection (a) under
- 16956 subsections (d) through (f) and 35 Ill. Adm. Code 602.600.
- 16957
- 16958 2) The supplier may apply to the Agency for a SEP that relieves it of the
- 16959 requirement for monitoring cyanide under subsections (d) through (f) and
- 16960 35 Ill. Adm. Code 602.600 if it can demonstrate that its system is not
- 16961 vulnerable due to a lack of any industrial source of cyanide.
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BOARD NOTE: Derived from 40 CFR 141.23(c)(2) and (c)(6).

- c) SEP Procedures. The Agency must review the request under the SEP procedures of 35 Ill. Adm. Code 602.600 based on consideration of the factors in subsection (e).

BOARD NOTE: Derived from 40 CFR 141.23(c)(6).

- d) Standard for SEP Reduction in Monitoring. The Agency must grant a SEP that allows a reduction in the monitoring frequency if the supplier demonstrates that all previous analytical results were less than the MCL ~~if, provided~~ the supplier meets the following minimum data requirements:

- 1) For GWS suppliers: a minimum of three rounds of monitoring.
- 2) For an SWS or mixed system supplier: annual monitoring for at least three years.
- 3) A supplier that uses a new water source is not eligible for a SEP until it completes three rounds of monitoring from the new source.

BOARD NOTE: Derived from 40 CFR 141.23(c)(4).

- e) Standard for SEP Monitoring Conditions. As a condition of any SEP, the Agency must require that the supplier take a minimum of one sample during the term of the SEP. In determining the appropriate reduced monitoring frequency, the Agency must consider the following:

- 1) Reported concentrations from all previous monitoring;
- 2) The degree of variation in reported concentrations; and
- 3) Other factors that may affect contaminant concentrations, such as changes in groundwater pumping rates, changes in the CWS's configuration, the CWS's operating procedures, or changes in stream flows or characteristics.

BOARD NOTE: Derived from 40 CFR 141.23(c)(3) and (c)(5).

- f) SEP Conditions and Revision

- 1) A SEP will expire at the end of the compliance cycle for which it was issued.

17011 BOARD NOTE: Derived from 40 CFR 141.23(c)(3).

17012

17013 2) In issuing a SEP, the Agency must specify the level of the contaminant
17014 upon which the "reliably and consistently" determination was based. A
17015 SEP must provide that the Agency will review and, ~~if~~where appropriate,
17016 revise its determination of the appropriate monitoring frequency when the
17017 supplier submits new monitoring data or when other data relevant to the
17018 supplier's appropriate monitoring frequency become available.

17019

17020 BOARD NOTE: Derived from 40 CFR 141.23(c)(6).

17021

17022 g) A supplier that exceeds the MCL as determined in Section 611.609, must monitor
17023 quarterly for that contaminant, beginning in the next quarter after the violation
17024 occurred.

17025

17026 BOARD NOTE: Derived from 40 CFR 141.23(c)(7).

17027

17028 h) Reduction of Quarterly Monitoring

17029

17030 1) The Agency must grant a SEP that reduces the monitoring frequency to
17031 that specified by subsection (a) if it determines that the sampling point is
17032 reliably and consistently below the MCL.

17033

17034 2) A request for a SEP must include the following minimal information:

17035

17036 A) For a GWS: two quarterly samples.

17037

17038 B) For an SWS or mixed system supplier: four quarterly samples.

17039

17040 3) In issuing the SEP, the Agency must specify the level of the contaminant
17041 upon which the "reliably and consistently" determination was based. Any
17042 SEP that allows less frequent monitoring based on an Agency "reliably
17043 and consistently" determination must include a condition requiring the
17044 supplier to resume quarterly monitoring for any contaminant under
17045 subsection (g) if it violates the MCL specified by Section 611.609 for that
17046 contaminant.

17047

17048 BOARD NOTE: Derived from 40 CFR 141.23(c)(8).

17049

17050 i) A new system supplier or a supplier whose system uses a new source of water
17051 must demonstrate compliance with the MCL within a period of time specified by
17052 a permit issued the Agency. The supplier must also comply with the initial
17053 sampling frequencies specified by the Agency to ensure a system can demonstrate

17054 compliance with the MCL. Routine and increased monitoring frequencies must
17055 be conducted in compliance~~accordance~~ with ~~the requirements in~~ this Section.

17056
17057 BOARD NOTE: Derived from 40 CFR 141.23(c)(9).

17058
17059 (Source: Amended at 50 Ill. Reg. _____, effective _____)

17060
17061 **Section 611.606 Confirmation Samples**

17062
17063 a) If~~Where~~ the results of sampling for antimony, arsenic, asbestos, barium,
17064 beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, or
17065 thallium indicate a level in excess of the MCL, the supplier must collect one
17066 additional sample as soon as possible after the initial sample was taken (but not to
17067 exceed two weeks) at the same sampling point.

17068
17069 b) If~~Where~~ nitrate or nitrite sampling results indicate a level in excess of the MCL,
17070 the supplier must take a confirmation sample within 24 hours after the supplier's
17071 receipt of notification of the analytical results of the first sample.

17072
17073 1) Suppliers unable to comply with the 24-hour sampling requirement must
17074 immediately notify the persons served in compliance~~accordance~~ with
17075 Section 611.902 and meet other Tier 1 public notification requirements
17076 under Subpart V of this Part.

17077
17078 2) Suppliers exercising this option must take and analyze a confirmation
17079 sample within two weeks after notification of the analytical results of the
17080 first sample.

17081
17082 c) Averaging rules are specified in Section 611.609. The Agency must delete the
17083 original or confirmation sample if it determines that a sampling error occurred, in
17084 which case the confirmation sample will replace the original sample.

17085
17086 BOARD NOTE: Derived from 40 CFR 141.23(f)~~(2002)~~.

17087
17088 (Source: Amended at 50 Ill. Reg. _____, effective _____)

17089
17090 **Section 611.608 Additional Optional Monitoring**

17091
17092 Suppliers may conduct additional, more frequent monitoring than the minimum frequencies
17093 specified in this Subpart N, without prior approval from the Agency. The supplier must report
17094 the results of all its~~such~~ monitoring to the Agency.

17095
17096 BOARD NOTE: Derived from 40 CFR 141.23(h)~~(2002)~~.

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(Source: Amended at 50 Ill. Reg. _____, effective _____)

Section 611.609 Determining Compliance

Compliance with the MCLs of Section 611.300 or 611.301 (as appropriate) must be determined based on the analytical results obtained at each sampling point.

a) For suppliers that monitor at a frequency greater than annual, compliance with the MCLs for antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, or thallium is determined by a running annual average at each sampling point.

1) If the average at any sampling point is greater than the MCL, then the supplier is out of compliance.

2) If any one sample would cause the annual average to be exceeded, then the supplier is out of compliance immediately.

3) Any sample below the method detection limit must be calculated at zero for the purpose of determining the annual average.

BOARD NOTE: The "method detection limit" is different from the "detection limit," ~~as set forth~~ in Section 611.600. The "method detection limit" is the level of contaminant that can be determined by a particular method with a 95 percent degree of confidence, as determined by the method outlined in appendix B to 40 CFR 136, incorporated by reference at Section 611.102.

4) If a system fails to collect the required number of samples, compliance (average concentration) will be based on the total number of samples collected.

b) For suppliers that monitor annually or less frequently, compliance with the MCLs for antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel, selenium, or thallium is determined by the level of the contaminant at any sampling point. If confirmation samples are required by the Agency, the determination of compliance will be based on the average of the annual average of the initial MCL exceedance and any Agency-required confirmation samples. If a supplier fails to collect the required number of samples, compliance (average concentration) will be based on the total number of samples collected.

c) Compliance with the MCLs for nitrate and nitrite is determined based on one

17140 sample if the levels of these contaminants are below the MCLs. If the levels of
 17141 nitrate or nitrite in the initial sample exceed the MCLs, Section 611.606 requires
 17142 confirmation sampling, and compliance is determined based on the average of the
 17143 initial and confirmation samples.

17144
 17145 d) Arsenic sampling results must be reported to the nearest 0.001 mg/ℓ.

17146
 17147 BOARD NOTE: Derived from 40 CFR 141.23(i)-(2014).

17148
 17149 (Source: Amended at 50 Ill. Reg. _____, effective _____)

17150
 17151 **Section 611.611 Inorganic Analysis**

17152
 17153 Analytical methods are from documents incorporated by reference in Section 611.102. The
 17154 substantive rules mostly reference these by a short name Section 611.102(a) defines. Section
 17155 611.101 defines other abbreviations.

17156
 17157 a) A certified laboratory must conduct analyses for contaminants in this Section
 17158 using the indicated methods or an alternative method the Agency approved under
 17159 Section 611.480. USEPA Technical Notes, incorporated by reference in Section
 17160 611.102, includes criteria for analyzing arsenic, barium, beryllium, cadmium,
 17161 calcium, chloride, chromium, copper, lead, nickel, selenium, sodium, sulfate, and
 17162 thallium with digestion or directly without digestion, and other analytical
 17163 procedures.

17164
 17165 BOARD NOTE: Because a laboratory determines MDLs it reports under USEPA
 17166 200.7 (94) and USEPA 200.9 (94) using a 2× preconcentration step during sample
 17167 digestion, MDLs the laboratory determines analyzing samples by direct analysis
 17168 (i.e., no sample digestion) are higher. For direct analysis of cadmium and arsenic
 17169 using USEPA 200.7 (94) and arsenic using SM 3120 B (89), SM 3120 B (93), or
 17170 SM 3120 B (99), it may be necessary to engage in sample preconcentration using
 17171 pneumatic nebulization to achieve lower detection limits. Direct analysis of
 17172 antimony, lead, and thallium using USEPA 200.9 (94); antimony and lead using
 17173 SM 3113 B (89), SM 3113 B (99), or SM 3113 B (10); and lead using ASTM
 17174 D3559-96 D, ASTM D3559-03 D, ASTM D3559-08 D, or ASTM D3559-15 D
 17175 may require preconcentration, unless the laboratory makes multiple in-furnace
 17176 depositions.

17177
 17178 1) Alkalinity

17179
 17180 A) Titrimetric. ASTM D1067-92 B, ASTM D1067-02 B, ASTM
 17181 D1067-06 B, ASTM D1067-11 B, ASTM D1067-16 B, SM 2320
 17182 B (91), or SM 2320 B (97).

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- B) Electrometric Titration. USGS I-1030-85.
- 2) Antimony
- A) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
 - B) Atomic Absorption, Hydride Technique. ASTM D3697-92, ASTM D3697-02, ASTM D3697-07, ASTM D3697-12, or ASTM D3697-17.
 - C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
 - D) Atomic Absorption, Furnace Technique. SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), or SM 3113 B (10).
 - E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 3) Arsenic
- BOARD NOTE: If the laboratory uses ultrasonic nebulization in determining arsenic using USEPA 200.8 (94), the arsenic must be in the pentavalent state to provide uniform signal response. For direct analysis of arsenic with USEPA 200.8 (94) using ultrasonic nebulization, samples and standards must contain one mg/L of sodium hypochlorite.
- A) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
 - B) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
 - C) Atomic Absorption, Furnace Technique. ASTM D2972-97 C, ASTM D2972-03 C, ASTM D2972-08 C, ASTM D2972-15 C, SM 3113 B (89), SM 3113 B (93), 3113 B (99), 3113 B (04), or 3113 B (10).
 - D) Atomic Absorption, Hydride Technique. ASTM D2972-97 B, ASTM D2972-03 B, ASTM D2972-08 B, ASTM D2972-15 B, SM

- 17226 3114 B (89), SM 3114 B (93), SM 3114 B (97), ~~SM 3114 B (04)~~,
17227 or SM 3114 B (09).
17228
17229 E) Axially Viewed Inductively Coupled Plasma-Atomic Emission
17230 Spectrometry (AVICP-AES). USEPA 200.5 (94).
17231
17232 4) Asbestos. Transmission Electron Microscopy. USEPA 100.1 (83) or
17233 USEPA 100.2 (94).
17234
17235 5) Barium
17236
17237 A) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (83),
17238 SM 3120 B (93), or SM 3120 B (99).
17239
17240 B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8
17241 (94).
17242
17243 C) Atomic Absorption, Direct Aspiration Technique. SM 3111 D
17244 (89), SM 3111 D (93), or SM 3111 D (99).
17245
17246 D) Atomic Absorption, Furnace Technique. SM 3113 B (89), SM
17247 3113 B (93), SM 3113 B (99), SM 3113 B (04), and SM 3113 B
17248 (10).
17249
17250 E) Axially Viewed Inductively Coupled Plasma-Atomic Emission
17251 Spectrometry (AVICP-AES). USEPA 200.5 (03).
17252
17253 6) Beryllium
17254
17255 A) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (83),
17256 SM 3120 B (93), or SM 3120 B (99).
17257
17258 B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8
17259 (94).
17260
17261 C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9
17262 (94).
17263
17264 D) Atomic Absorption, Furnace Technique. ASTM D3645-97 B,
17265 ASTM D3645-03 B, ASTM D3645-08 B, ASTM D3645-15 B, SM
17266 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04),
17267 or SM 3113 B (10).
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- 17269 E) Axially Viewed Inductively Coupled Plasma-Atomic Emission
17270 Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 17271
- 17272 7) Cadmium
- 17273
- 17274 A) Inductively Coupled Plasma Arc Furnace. USEPA 200.7 (94).
- 17275
- 17276 B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8
17277 (94).
- 17278
- 17279 C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9
17280 (94).
- 17281
- 17282 D) Atomic Absorption, Furnace Technique. SM 3113 B (89), SM
17283 3113 B (93), SM 3113 B (99), SM 3113 B (04), and SM 3113 B
17284 (10).
- 17285
- 17286 E) Axially Viewed Inductively Coupled Plasma-Atomic Emission
17287 Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 17288
- 17289 8) Calcium
- 17290
- 17291 A) EDTA Titrimetric. ASTM D511-93 A, ASTM D511-03 A, ASTM
17292 D511-09 A, ASTM D511-14 A, SM 3500-Ca B (97), or 3500-Ca
17293 D (91).
- 17294
- 17295 B) Atomic Absorption, Direct Aspiration. ASTM D511-93 B, ASTM
17296 D511-03 B, ASTM D511-09 B, ASTM D511-14 B, SM 3111 B
17297 (89), SM 3111 B (93), or SM 3111 B (99).
- 17298
- 17299 C) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (83),
17300 SM 3120 B (93), or SM 3120 B (99).
- 17301
- 17302 D) Ion Chromatography. ASTM D6919-03, ASTM D6919-09, or
17303 ASTM D6919-17.
- 17304
- 17305 E) Axially Viewed Inductively Coupled Plasma-Atomic Emission
17306 Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 17307
- 17308 9) Chloride. Ion Chromatography. ASTM D4327-17.
- 17309
- 17310 10) Chromium
- 17311

- 17312 A) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (83),
 17313 SM 3120 B (93), or SM 3120 B (99).
 17314
 17315 B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8
 17316 (94).
 17317
 17318 C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9
 17319 (94).
 17320
 17321 D) Atomic Absorption, Furnace Technique. SM 3113 B (89), SM
 17322 3113 B (93), SM 3113 B (99), SM 3113 B (04), and SM 3113 B
 17323 (10).
 17324
 17325 E) Axially Viewed Inductively Coupled Plasma-Atomic Emission
 17326 Spectrometry (AVICP-AES). USEPA 200.5 (03).
 17327
 17328 11) Copper
 17329
 17330 A) Atomic Absorption, Furnace Technique. ASTM D1688-95 C,
 17331 ASTM D1688-02 C, ASTM D1688-07 C, ASTM D1688-12 C,
 17332 ASTM D1688-17 C, SM 3113 B (89), SM 3113 B (93), SM 3113
 17333 B (99), SM 3113 B (04), and SM 3113 B (10).
 17334
 17335 B) Atomic Absorption, Direct Aspiration. ASTM D1688-95 A,
 17336 ASTM D1688-02 A, ASTM D1688-07 A, ASTM D1688-12 A,
 17337 ASTM D1688-17 A, SM 3111 B (89), SM 3111 B (93), or SM
 17338 3111 B (99).
 17339
 17340 C) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (83),
 17341 SM 3120 B (93), or SM 3120 B (99).
 17342
 17343 D) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8
 17344 (94).
 17345
 17346 E) Atomic Absorption, Platform Furnace Technique. USEPA 200.9
 17347 (94).
 17348
 17349 F) Axially Viewed Inductively Coupled Plasma-Atomic Emission
 17350 Spectrometry (AVICP-AES). USEPA 200.5 (03).
 17351
 17352 G) Colorimetric. Hach 8026 (15) or Hach 10272 (15).
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- 12) Conductivity; Conductance. ASTM D1125-95 (1999) A, ASTM D1125-14 A, SM 2510 B (91), or SM 2510 B (97).
- 13) Cyanide
- A) Manual Distillation with MgCl₂. (ASTM D2036-98 A, ASTM D2036-06 A, SM 4500-CN⁻ C (90), SM 4500-CN⁻ C (97), SM 4500-CN⁻ C (99), or SM 4500-CN⁻ C (16)), followed by spectrophotometric, amenable (ASTM D2036-98 B, ASTM D2036-06 B, SM 4500-CN⁻ G (90), SM 4500-CN⁻ G (97), SM 4500-CN⁻ G (99), or SM 4500-CN⁻ G (16)).
- B) Manual Distillation with MgCl₂. Distillation (ASTM D2036-98 A or ASTM D2036-06 A or SM 4500-CN⁻ C (90), SM 4500-CN⁻ C (97), SM 4500-CN⁻ C (99), or SM 4500-CN⁻ C (16)), followed by Spectrophotometric, Manual (ASTM D2036-98 A, ASTM D2036-06 A, SM 4500-CN⁻ E (90), 4500-CN⁻ E (97), 4500-CN⁻ E (99), 4500-CN⁻ E (16), or USGS I-3300-85).
- C) Spectrophotometric, Semiautomated. USEPA 335.4 (93).
- D) Selective Electrode. SM 4500-CN⁻ F (90), SM 4500-CN⁻ F (97), SM 4500-CN⁻ F (99), or SM 4500-CN⁻ F (16).
- E) UV/Distillation/Spectrophotometric. Kelada 01 (01).
- F) Microdistillation/Flow Injection/Spectrophotometric. QuikChem 10-204-00-1-X (00).
- G) Ligand Exchange and Amperometry. ASTM D6888-04 or OIA-1677 DW (04).
- H) Gas Chromatography-Mass Spectrometry Headspace. ME355.01 (09).
- 14) Fluoride
- A) Ion Chromatography. USEPA 300.0 (93), USEPA 300.1 (97), ASTM D4327-97, ASTM D4327-03, ASTM D4327-11, ASTM D4327-17, SM 4110 B (90), SM 4110 B (91), SM 4110 B (97), or SM 4110 B (00).

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- B) Manual Distillation, Colorimetric SPADNS. SM 4500-F⁻ B (88), SM 4500-F⁻ B (94), SM 4500-F⁻ B (97), SM 4500-F⁻ D (88), [SM 4500-F⁻ D \(94\)](#), ~~SM 4500-F⁻ B (94)~~, or [SM 4500-F⁻ D \(97\)](#) ~~SM 4500-F⁻ B (97)~~.
- C) Manual Electrode. ASTM D1179-93 B, ASTM D1179-99 B, ASTM D1179-04 B, ASTM D1179-10 B, ASTM D1179-16 B, SM 4500-F⁻ C (88), SM 4500-F⁻ C (94), or SM 4500-F⁻ C (97).
- D) Automated Electrode. Technicon # 380-75WE (76).
- E) Automated Alizarin. SM 4500-F⁻ E (88), SM 4500-F⁻ E (94), SM 4500-F⁻ E (97), or Technicon #129-71W.
- F) Arsenite-Free Colorimetric SPADNS. Hach 10225 (11) (SPADNS 2). [Hach 10312 \(22\)](#)
- G) Capillary Ion Electrophoresis. ASTM D6508-00.
- BOARD NOTE: On March 12, 2007 (at 72 Fed. Reg. 11200), USEPA amended the entry for fluoride to add capillary ion electrophoresis in the table at corresponding 40 CFR 141.23(k)(1) to allow the use of "Waters Method D6508, Rev. 2". The Board cited the ASTM Method D6508-00 (2005). On May 2, 2012 (at 77 Fed. Reg. 26072, 26096-97; in corrections to UCMR 3), USEPA changed the entries for nitrate, nitrite, and orthophosphate to ASTM D6508-00.
- 15) Lead
- A) Atomic Absorption, Furnace Technique. ASTM D3559-96 D, ASTM D3559-03 D, ASTM D3559-08 D, ASTM D3559-15 D, SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), or SM 3113 B (10).
- B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
- C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
- D) Differential Pulse Anodic Stripping Voltammetry. Palintest 1001 (99). [Palintest 1001 \(20\)](#).

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- E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
 - ~~F) Differential Pulse Anode Stripping Voltametry. Palintest 1001 (20).~~
- 16) Magnesium
- A) Atomic Absorption. ASTM D511-93 B, ASTM D511-03 B, ASTM D511-09 B, ASTM D511-14 B, SM 3111 B (89), SM 3111 B (93), or SM 3111 B (99).
 - B) Inductively Coupled Plasma. USEPA 200.7 (94), SM 3120 B (89), SM 3120 B (93), or SM 3120 B (99).
 - C) Complexation Titrimetric. ASTM D511-93 A, ASTM D511-03 A, ASTM D511-09 A, ASTM D511-14 A, SM 3500-Mg B (97), SM 3500-Mg E (90), or SM 3500-Mg E (91).
 - D) Ion Chromatography. ASTM D6919-03, ASTM D6919-09, or ASTM D6919-17.
 - E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 17) Mercury
- A) Manual Cold Vapor Technique. ASTM D3223-97, ASTM D3223-02, ASTM D3223-12, ASTM D3223-17, SM 3112 B (88), SM 3112 B (93), SM 3112 B (99), SM 3112 B (09), or USEPA 245.1 (91).
 - B) Automated Cold Vapor Technique. USEPA 245.2 (74).
 - C) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
- 18) Nickel
- A) Inductively Coupled Plasma. SM 3120 B (89), SM 3120 B (93), SM 3120 B (99), or USEPA 200.7 (94).

- 17482 B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8
 17483 (94).
 17484
 17485 C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9
 17486 (94).
 17487
 17488 D) Atomic Absorption, Direct Aspiration Technique. SM 3111 B
 17489 (89), 3111 B (93), or 3111 B (99).
 17490
 17491 E) Atomic Absorption, Furnace Technique. SM 3113 B (89), SM
 17492 3113 B (93), SM 3113 B (99), SM 3113 B (04), or SM 3113 B
 17493 (10).
 17494
 17495 F) Axially Viewed Inductively Coupled Plasma-Atomic Emission
 17496 Spectrometry (AVICP-AES). USEPA 200.5 (03).
 17497
 17498 19) Nitrate
 17499
 17500 A) Ion Chromatography. ASTM D4327-97, ASTM D4327-03,
 17501 ASTM D4327-11, ASTM D4327-17, SM 4110 B (90), SM 4110 B
 17502 (97), SM 4110 B (00), USEPA 300.0 (93), USEPA 300.1 (97), or
 17503 Waters B-1011 (87).
 17504
 17505 B) Automated Cadmium Reduction. ASTM D3867-90 A; SM 4500-
 17506 NO₃⁻ F (88), 4500-NO₃⁻ F (93), 4500-NO₃⁻ F (97), 4500-NO₃⁻ F
 17507 (00), 4500-NO₃⁻ F (16), or USEPA 353.2 (93).
 17508
 17509 C) Ion Selective Electrode. ATI Orion Technical Bulletin 601 (94),
 17510 SM 4500-NO₃⁻ D (88), SM 4500-NO₃⁻ D (93), SM 4500-NO₃⁻ D
 17511 (97), SM 4500-NO₃⁻ D (00), or SM 4500-NO₃⁻ D (16).
 17512
 17513 D) Manual Cadmium Reduction. ASTM D3867-90 B, SM 4500-NO₃⁻
 17514 E (88), SM 4500-NO₃⁻ E (93), SM 4500-NO₃⁻ E (97), SM 4500-
 17515 NO₃⁻ E (00), or SM 4500-NO₃⁻ E (16).
 17516
 17517 E) Capillary Ion Electrophoresis. ASTM D6508-00 or ASTM
 17518 D6508-15.
 17519
 17520 F) Reduction-Colorimetric. Systea Easy (1-Reagent) (09) or NECi
 17521 Nitrate-Reductase (06).
 17522
 17523 G) Direct Colorimetric. Hach 10206 (TNTplus 835/836).
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- 20) Nitrite
- A) Ion Chromatography. ASTM D4327-97, ASTM D4327-03, ASTM D4327-11, ASTM D4327-17, SM 4110 B (90), SM 4110 B (97), SM 4110 B (00), USEPA 300.0 (93), USEPA 300.1 (97), or Waters B-1011 (87).
 - B) Automated Cadmium Reduction. ASTM D3867-90 A, SM 4500-NO₃⁻ F (93), 4500-NO₃⁻ F (97), 4500-NO₃⁻ F (00), 4500-NO₃⁻ F (16), or USEPA 353.2 (93).
 - C) Manual Cadmium Reduction. ASTM D3867-90 B, SM 4500-NO₃⁻ E (93), 4500-NO₃⁻ E (97), 4500-NO₃⁻ E (00), or 4500-NO₃⁻ E (16).
 - D) Spectrophotometric. SM 4500-NO₂⁻ B (88), 4500-NO₂⁻ B (93), or 4500-NO₂⁻ B (00).
 - E) Capillary Ion Electrophoresis. ASTM D6508-00 or ASTM D6508-15.
 - F) Reduction-Colorimetric. Systea Easy (1-Reagent) (09) or NECi Nitrate-Reductase (06).
- 21) Orthophosphate (unfiltered, without digestion or hydrolysis)
- A) Automated Colorimetric, Ascorbic Acid. SM 4500-P F (88), SM 4500-P F (93), SM 4500-P F (97), SM 4500-P F (99), SM 4500-P F (05), Thermo-Fisher Discrete Analyzer (16), or USEPA 365.1 (93).
 - B) Single-Reagent Colorimetric, Ascorbic Acid. ASTM D515-88 A, SM 4500-P E (88), 4500-P E (93), 4500-P E (97), or 4500-P E (99), or 4500-P E (05).
 - C) Colorimetric, Phosphomolybdate. USGS I-1601-85.
 - D) Phosphorus, Orthophosphate, Colorimetry, Phosphomolybdate, Automated-Segmented Flow. USGS I-2601-90.
 - E) Colorimetric, Phosphomolybdate, Automated Discrete. USGS I-2598-85.

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- F) Ion Chromatography. ASTM D4327-97, ASTM D4327-03, ASTM D4327-11, ASTM D4327-17, SM 4110 B (90), SM 4110 B (91), SM 4110 B (97), SM 4110 B (00), USEPA 300.0 (93), or USEPA 300.1 (97).
 - G) Capillary Ion Electrophoresis. ASTM D6508-00 or ASTM D6508-15.
- 22) pH, Electrometric. ASTM D1293-95, ASTM D1293-99, ASTM D1293-12, ASTM D1293-18, SM 4500-H⁺ B (90), SM 4500-H⁺ B (96), SM 4500-H⁺ B (00), USEPA 150.1 (71), USEPA 150.2 (82), or USEPA 150.3 (13).
- 23) Selenium
- A) Atomic Absorption, Hydride. ASTM D3859-98 A, ASTM D3859-03 A, ASTM D3859-08 A, ASTM D3859-15 A, SM 3114 B (89), SM 3114 (93), SM 3114 (97), or SM 3114 (09).
 - B) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
 - C) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
 - D) Atomic Absorption, Furnace Technique. ASTM D3859-98 B, ASTM D3859-03 B, ASTM D3859-08 B, ASTM D3859-15 B, SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), or SM 3113 B (10).
 - E) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 24) Silica
- A) Colorimetric, Molybdate Blue. USGS I-1700-85.
 - B) Colorimetric, Molybdate Blue, Automated-Segmented Flow. USGS I-2700-85.
 - C) Colorimetric. ASTM D859-94, ASTM D859-00, ASTM D859-05, ASTM D859-10, or ASTM D859-16.

- 17611 D) Molybdsilicate. SM 4500-Si D (88), SM 4500-Si D (93), or SM
- 17612 4500-SiO₂ C (97).
- 17613
- 17614 E) Heteropoly Blue. SM 4500-Si E (88), SM 4500-Si E (93), or SM
- 17615 4500-SiO₂ D (97).
- 17616
- 17617 F) Automated Method for Molybdate-Reactive Silica. SM 4500-Si F
- 17618 (88), SM 4500-Si F (93), or SM 4500-SiO₂ E (97).
- 17619
- 17620 G) Inductively Coupled Plasma. SM 3120 B (89), SM 3120 B (93),
- 17621 SM 3120 B (99), or USEPA 200.7 (94).
- 17622
- 17623 H) Axially Viewed Inductively Coupled Plasma-Atomic Emission
- 17624 Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 17625

25) Sodium

- 17626
- 17627
- 17628 A) Inductively Coupled Plasma. USEPA 200.7 (94).
- 17629
- 17630 B) Atomic Absorption, Direct Aspiration. SM 3111 B (89), SM 3111
- 17631 B (93), or SM 3111 B (99).
- 17632
- 17633 C) Ion Chromatography. ASTM D6919-03, ASTM D6919-09, or
- 17634 ASTM D6919-17.
- 17635
- 17636 D) Axially Viewed Inductively Coupled Plasma-Atomic Emission
- 17637 Spectrometry (AVICP-AES). USEPA 200.5 (03).
- 17638

26) Sulfate. Ion Chromatography. ASTM D4327-17.

27) Temperature; Thermometric. SM 2550 (88), SM 2550 (93), SM 2550 (00), or SM 2550 (10).

28) Thallium

- 17645
- 17646 A) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8
- 17647 (94).
- 17648
- 17649 B) Atomic Absorption, Platform Furnace Technique. USEPA 200.9
- 17650 (94).
- 17651

b) The supplier must use specific sample preservation, container, and maximum holding time procedures when collecting samples for antimony, arsenic, asbestos,

17652
17653

17654 barium, beryllium, cadmium, chromium, cyanide, fluoride, mercury, nickel,
17655 nitrate, nitrite, selenium, and thallium under Sections 611.600 through 611.604:
17656

17657 BOARD NOTE: For cyanide determinations, the supplier must adjust samples to
17658 pH 12 with sodium hydroxide to pH 12 when collecting them. When a sample
17659 needs chilling, the supplier must ship and store the sample at 4° C or less. The
17660 supplier may acidify nitrate or metals samples using a concentrated acid or a
17661 dilute (50% by volume) solution of the concentrated acid. USEPA encourages
17662 acidifying samples for metals analysis and that the laboratory acidify, rather than
17663 at the time of sampling ~~if, provided~~ the supplier follows the shipping time and
17664 other instructions in Section 8.3 of USEPA 200.7 (94), USEPA 200.8 (94), or
17665 USEPA 200.9 (94).
17666

- 17667 1) Antimony
17668
17669 A) Preservative: Concentrated nitric acid to pH less than 2.
17670
17671 B) Plastic or glass (hard or soft).
17672
17673 C) Holding Time. Samples must be analyzed as soon after collection
17674 as possible, but in any event within six months.
17675
- 17676 2) Arsenic
17677
17678 A) Preservative: Concentrated nitric acid to pH less than 2.
17679
17680 B) Plastic or glass (hard or soft).
17681
17682 C) Holding Time. Samples must be analyzed as soon after collection
17683 as possible, but in any event within six months.
17684
- 17685 3) Asbestos
17686
17687 A) Preservative: Cool to 4° C.
17688
17689 B) Plastic or glass (hard or soft).
17690
17691 C) Holding Time. Samples must be analyzed as soon after collection
17692 as possible, but in any event within 48 hours.
17693
- 17694 4) Barium
17695
17696 A) Preservative: Concentrated nitric acid to pH less than 2.

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17739
- B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.
- 5) Beryllium
- A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.
- 6) Cadmium
- A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.
- 7) Chromium
- A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.
- 8) Cyanide
- A) Preservative: Cool to 4° C. Add sodium hydroxide to pH greater than 12. See the analytical methods for information on sample preservation.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within 14 days.

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 - 17782
- 9) Fluoride
- A) Preservative: None.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within one month.
- 10) Mercury
- A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within 28 days.
- 11) Nickel
- A) Preservative: Concentrated nitric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within six months.
- 12) Nitrate, Chlorinated
- A) Preservative: Cool to 4° C.
 - B) Plastic or glass (hard or soft).
 - C) Holding Time. Samples must be analyzed as soon after collection as possible, but in any event within 14 days.
- 13) Nitrate, Non-Chlorinated
- A) Preservative: Concentrated sulfuric acid to pH less than 2.
 - B) Plastic or glass (hard or soft).

- 17783 C) Holding Time. Samples must be analyzed as soon after collection
17784 as possible, but in any event within 14 days.
17785
- 17786 14) Nitrite
17787
17788 A) Preservative: Cool to 4° C.
17789
17790 B) Plastic or glass (hard or soft).
17791
17792 C) Holding Time. Samples must be analyzed as soon after collection
17793 as possible, but in any event within 48 hours.
17794
- 17795 15) Selenium
17796
17797 A) Preservative: Concentrated nitric acid to pH less than 2.
17798
17799 B) Plastic or glass (hard or soft).
17800
17801 C) Holding Time. Samples must be analyzed as soon after collection
17802 as possible, but in any event within six months.
17803
- 17804 16) Thallium
17805
17806 A) Preservative: Concentrated nitric acid to pH less than 2.
17807
17808 B) Plastic or glass (hard or soft).
17809
17810 C) Holding Time. Samples must be analyzed as soon after collection
17811 as possible, but in any event within six months.
17812
- 17813 c) A certified laboratory in one of the categories in Section 611.490(a) must conduct
17814 analyses under this Subpart N. The Agency must certify laboratories to conduct
17815 analyses for antimony, arsenic, asbestos, barium, beryllium, cadmium, chromium,
17816 cyanide, fluoride, mercury, nickel, nitrate, nitrite, selenium, and thallium if the
17817 laboratory fulfills certain conditions:
17818
17819 1) The laboratory analyzes performance evaluation (PE) samples the Agency
17820 provides under 35 Ill. Adm. Code 186 including those substances at levels
17821 not exceeding reasonably expected levels in drinking water; and
17822
17823 2) The laboratory achieves quantitative results on the analyses within
17824 specified acceptance limits:
17825

- 17826 A) Antimony: $\pm 30\%$ at greater than or equal to 0.006 mg/L.
- 17827
- 17828 B) Arsenic: $\pm 30\%$ at greater than or equal to 0.003 mg/L.
- 17829
- 17830 C) Asbestos: 2 standard deviations based on study statistics.
- 17831
- 17832 D) Barium: $\pm 15\%$ at greater than or equal to 0.15 mg/L.
- 17833
- 17834 E) Beryllium: $\pm 15\%$ at greater than or equal to 0.001 mg/L.
- 17835
- 17836 F) Cadmium: $\pm 20\%$ at greater than or equal to 0.002 mg/L.
- 17837
- 17838 G) Chromium: $\pm 15\%$ at greater than or equal to 0.01 mg/L.
- 17839
- 17840 H) Cyanide: $\pm 25\%$ at greater than or equal to 0.1 mg/L.
- 17841
- 17842 I) Fluoride: $\pm 10\%$ at 1 to 10 mg/L.
- 17843
- 17844 J) Mercury: $\pm 30\%$ at greater than or equal to 0.0005 mg/L.
- 17845
- 17846 K) Nickel: $\pm 15\%$ at greater than or equal to 0.01 mg/L.
- 17847
- 17848 L) Nitrate: $\pm 10\%$ at greater than or equal to 0.4 mg/L.
- 17849
- 17850 M) Nitrite: $\pm 15\%$ at greater than or equal to 0.4 mg/L.
- 17851
- 17852 N) Selenium: $\pm 20\%$ at greater than or equal to 0.01 mg/L.
- 17853
- 17854 O) Thallium: $\pm 30\%$ at greater than or equal to 0.002 mg/L.
- 17855

17856 BOARD NOTE: This Section derives from 40 CFR 141.23(k) and appendix A to subpart C of
 17857 40 CFR 141. The Board did not separately list approved alternative methods from Standard
 17858 Methods Online that are the same version as a method appearing in a printed edition of Standard
 17859 Methods. Using the Standard Methods Online copy is acceptable.

17860
 17861 Standard Methods Online, Method 2320 B-97 appears in the 21st, 22nd, ~~and 23rd~~, and 24th
 17862 editions as Method 2320 B. This appears in this Section as SM 2320 B (97).

17863
 17864 Standard Methods Online, Method 2510 B-97 appears in the 20th, 21st, 22nd, ~~and 23rd~~, and
 17865 24th editions as Method 2510 B. This appears in this Section as SM 2510 B (97).

17866
 17867 Standard Methods Online, Method 2550-00 appears in the 21st edition as Method 2550.
 17868 This appears in this Section as SM 2550 (00).

17869
 17870 Standard Methods Online, Method 2550-10 appears in the 22nd, 23rd, and 24th edition as
 17871 Method 2550. This appears in this Section as SM 2550 (10).
 17872

17873 Standard Methods Online, Methods 3111 B-99 and 3111 D-99 appear in the 21st, 22nd,
 17874 ~~and~~ 23rd, and 24th editions as Methods 3111 B and 3111 D. These appear in this Section
 17875 as SM 3111 B (99) and SM 3111 D (99).
 17876

17877 Standard Methods Online, Method 3112 B-09 appears in the 22nd, ~~and~~ 23rd, and 24th
 17878 editions as Method 3112 B. This appears in this Section as SM 3112 B (09).
 17879

17880 Standard Methods Online, Method 3113 B-99 appears in the 21st edition as Method 3113
 17881 B. This appears in this Section as SM 3113 B (99).
 17882

Standard Methods Online, Method 3113 B-04 appears in the 21st edition as Method 3113
 17883 B. This appears in this Section as SM 3113 B (04).
 17884

17885 Standard Methods Online, Method 3113 B-10 appears in the 22nd, ~~and~~ 23rd, and 24th
 17886 editions as Method 3113 B. This appears in this Section as SM 3113 B (10).
 17887
 17888

17889 Standard Methods Online, Method 3114 B-97 appears in the 21st edition as Method 3114
 17890 B. This appears in this Section as SM 3114 B (97).
 17891

17892 Standard Methods Online, Method 3114 B-09 appears in the 22nd, ~~and~~ 23rd, and 24th
 17893 editions as Method 3114 B. This appears in this Section as SM 3114 B (09).
 17894

17895 Standard Methods Online, Method 3120 B-99 appears in the 21st edition as Method 3120
 17896 B. This appears in this Section as SM 3120 B (99).
 17897

17898 Standard Methods Online, Methods 3500-Ca B-97 and 3500-Ca D-97 appear in the 20th,
 17899 21st, 22nd, ~~and~~ 23rd, and 24th editions as Methods 3500-Ca B and 3500-Ca D. These
 17900 appear in this Section as SM 3500-Ca B (97) and SM 3500-Ca D (97).
 17901

17902 Standard Methods Online, Method 3500-Mg B-97 appears in the 20th, 21st, 22nd, ~~and~~ 23rd,
 17903 and 24th editions as Method 3500-Mg B. This appears in this Section as SM 3500-Mg B
 17904 (97).
 17905

17906 Standard Methods Online, Method 4110 B-00 appears in the 21st, 22nd, ~~and~~ 23rd, and 24th
 17907 editions as Method 4110 B. This appears in this Section as SM 4110 B (00).
 17908

17909 Standard Methods Online, Methods 4500-CN⁻ C-90, 4500-CN⁻ E-90, 4500-CN⁻ F-90,
 17910 and 4500-CN⁻ G-90 appear in the 18th and 19th editions as Methods 4500-CN⁻ C, 4500-

17911 CN⁻ E, 4500-CN⁻ F, and 4500-CN⁻ G. These appear in this Section as SM 4500-CN⁻ C
 17912 (90), SM 4500-CN⁻ E (90), SM 4500-CN⁻ F (90), and SM 4500-CN⁻ G (90).

17913
 17914 Standard Methods Online, Methods 4500-CN⁻ C-99, 4500-CN⁻ E-99, 4500-CN⁻ F-99,
 17915 and 4500-CN⁻ G-99 appear in the 21st and 22nd editions as Methods 4500-CN⁻ C, 4500-
 17916 CN⁻ E, 4500-CN⁻ F, and 4500-CN⁻ G. These appear in this Section as SM 4500-CN⁻ C
 17917 (99), SM 4500-CN⁻ E (99), SM 4500-CN⁻ F (99), and SM 4500-CN⁻ G (99).

17918
 17919 Standard Methods Online, Methods 4500-CN⁻ C-16, 4500-CN⁻ E-16, 4500-CN⁻ F-16,
 17920 and 4500-CN⁻ G-16 appear in the 23rd and 24th editions as Methods 4500-CN⁻ C, 4500-
 17921 CN⁻ E, 4500-CN⁻ F, and 4500-CN⁻ G. These appear in this Section as SM 4500-CN⁻ C
 17922 (16), SM 4500-CN⁻ E (16), SM 4500-CN⁻ F (16), and SM 4500-CN⁻ G (16).

17923
 17924 Standard Methods Online, Methods 4500-F⁻ B-97, 4500-F⁻ C-97, 4500-F⁻ D-97, and
 17925 4500-F⁻ E-97 appear in the 20th, 21st, 22nd, ~~and 23rd~~, and 24th editions as Methods 4500-F⁻
 17926 B, 4500-F⁻ C, 4500-F⁻ D, and 4500-F⁻ E. These appear in this Section as SM 4500-F⁻ B
 17927 (97), SM 4500-F⁻ C (97), SM 4500-F⁻ D (97), and SM 4500-F⁻ E (97).

17928
 17929 Standard Methods Online, Methods 4500-NO₃⁻ D-00, 4500-NO₃⁻ E-00, and 4500-NO₃⁻
 17930 F-00 appear in the 21st, 22nd, and 23rd editions as Methods 4500-NO₃⁻ D, 4500-NO₃⁻ E,
 17931 and 4500-NO₃⁻ F. These appear in this Section as SM 4500-NO₃⁻ D (00), SM 4500-NO₃⁻
 17932 E (00), and SM 4500-NO₃⁻ F (00).

17933
 17934 Standard Methods Online, Methods 4500-NO₃⁻ D-16, 4500-NO₃⁻ E-16, and 4500-NO₃⁻
 17935 F-0 16 appear in the 23rd and 24th editions as Methods 4500-NO₃⁻ D, 4500-NO₃⁻ E, and
 17936 4500-NO₃⁻ F. These appear in this Section as SM 4500-NO₃⁻ D (16), SM 4500-NO₃⁻ E
 17937 (16), and SM 4500-NO₃⁻ F (16).

17938
 17939 Standard Methods Online, Methods 4500-NO₂⁻ B-00 appears in the 21st, 22nd, ~~and 23rd~~,
 17940 and 24th editions as Method 4500-NO₂⁻ B. This appears in this Section as SM 4500-NO₂⁻
 17941 B (00).

17942
 17943 Standard Methods Online, Method 4500-H⁺ B-90 appears in the 18th and 19th editions as
 17944 Method 4500-H⁺ B. This appears in this Section as SM 4500-H⁺ B (90).

17945
 17946 Standard Methods Online, Method 4500-H⁺ B-00 appears in the 21st, 22nd, ~~and 23rd~~, and
 17947 24th editions as Method 4500-H⁺ B. This appears in this Section as SM 4500-H⁺ B (00).

17948
 17949 Standard Methods Online, Methods 4500-P E-99 and 4500-P F-99 appear in the 21st and
 17950 22nd editions as Methods 4500-P E and 4500-P F. These appear in this Section as SM
 17951 4500-P E (97) and SM 4500-P F (97).

17952

17953 Standard Methods Online, Methods 4500-P E-05 and 4500-P F-05 appear in the 23rd and
17954 24th editions as Methods 4500-P E and 4500-P F. These appear in this Section as SM
17955 4500-P E (05) and SM 4500-P F (05).

17956
17957 Standard Methods Online, Methods 4500-SiO₂ C-97, 4500-SiO₂ D-97, and 4500-SiO₂ E-
17958 97 appear in the 20th, 21st, 22nd, ~~and 23rd~~, and 24th editions as Methods 4500-SiO₂ C,
17959 4500-SiO₂ D, and 4500-SiO₂ E. These appear in this Section as SM 4500-SiO₂ C (97),
17960 SM 4500-SiO₂ D (97), and SM 4500-SiO₂ E (97).

17961
17962 Standard Methods Online, Method 6251 B-07 appears in the 22nd, ~~and 23rd~~, and 24th
17963 editions as Method 6251 B. This appears in this Section as SM 6251 B (07).

17964
17965 (Source: Amended at 50 Ill. Reg. _____, effective _____)

17966
17967 **Section 611.612 Monitoring Requirements for Old Inorganic MCLs**

17968
17969 a) Analyses for the purpose of determining compliance with the old inorganic MCLs
17970 of Section 611.300 are required as follows:

17971
17972 1) Analyses for all CWSs utilizing surface water sources must be repeated at
17973 yearly intervals.

17974
17975 2) Analyses for all CWSs utilizing only groundwater sources must be
17976 repeated at three-year intervals.

17977
17978 3) This subsection (a)(3) corresponds with 40 CFR 141.23(1)(3), which
17979 requires monitoring for the repealed old MCL for nitrate at a frequency
17980 specified by the state. The Board has followed the USEPA lead and
17981 repealed that old MCL. This statement maintains structural consistency
17982 with USEPA rules.

17983
17984 4) This subsection (a)(4) corresponds with 40 CFR 141.23(1)(4), which
17985 authorizes the state to determine compliance and initiate enforcement
17986 action. This statement maintains structural consistency with USEPA
17987 rules.

17988
17989 b) If the result of an analysis made under subsection (a) indicates that the level of
17990 any contaminant listed in Section 611.300 exceeds the old MCL, the supplier
17991 must report to the Agency within seven days and initiate three additional analyses
17992 at the same sampling point within one month.

17993
17994 c) When the average of four analyses made under subsection (b), rounded to the
17995 same number of significant figures as the old MCL for the substance in question,

17996 exceeds the old MCL, the supplier must notify the Agency and give notice to the
 17997 public under Subpart V. Monitoring after public notification must be at a
 17998 frequency designated by the Agency by a SEP and must continue until the old
 17999 MCL has not been exceeded in two successive samples or until a different
 18000 monitoring schedule becomes effective as a condition to a variance, an adjusted
 18001 standard, a site specific rule, an enforcement action, or another SEP.

18002
 18003 d) This subsection (d) corresponds with 40 CFR 141.23(o), which pertains to
 18004 monitoring for the repealed old MCL for nitrate. This statement maintains
 18005 structural consistency with USEPA rules.
 18006

18007 e) This subsection (e) corresponds with 40 CFR 141.23(p), which pertains to the use
 18008 of existing data up until a date long since expired. This statement maintains
 18009 structural consistency with USEPA rules.
 18010

18011 f) Analyses conducted to determine compliance with the old MCLs of Section
 18012 611.300 must be made in ~~compliance~~ ~~accordance~~ with the following methods,
 18013 incorporated by reference in Section 611.102, or alternative methods approved by
 18014 the Agency under Section 611.480. Criteria for analyzing iron, manganese, and
 18015 zinc samples with digestion or directly without digestion, and other analytical test
 18016 procedures are contained in USEPA Technical Notes (94), incorporated by
 18017 reference in Section 611.102.
 18018

18019 1) Fluoride. The methods specified in Section 611.611(c) must apply for the
 18020 purposes of this Section.
 18021

18022 2) Iron
 18023

18024 A) Atomic Absorption, Direct Aspiration Technique. SM 3111 B
 18025 (89), SM 3111 B (93), or SM 3111 B (99).
 18026

18027 B) Atomic Absorption, Graphite Furnace Technique. SM 3113 B
 18028 (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), or SM
 18029 3113 B (10).
 18030

18031 C) Atomic Absorption, Inductively Coupled Plasma Technique. SM
 18032 3120 B (89), SM 3120 B (93), or SM 3120 B (99).
 18033

18034 D) Inductively Coupled Plasma Arc Furnace Technique. USEPA
 18035 200.7 (94).
 18036

18037 E) Atomic Absorption, Platform Furnace Technique. USEPA 200.9
 18038 (94).

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18080
- F) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
 - 3) Manganese
 - A) Atomic Absorption, Direct Aspiration Technique. SM 3111 B (89), SM 3111 B (93), or SM 3111 B (99).
 - B) Atomic Absorption, Graphite Furnace Technique. SM 3113 B (89), SM 3113 B (93), SM 3113 B (99), SM 3113 B (04), or SM 3113 B (10).
 - C) Atomic Absorption, Inductively Coupled Plasma Technique. SM 3120 B (89), SM 3120 B (93), or SM 3120 B (99).
 - D) Inductively Coupled Plasma Arc Furnace Technique. USEPA 200.7 (94).
 - E) Inductively Coupled Plasma-Mass Spectrometry. USEPA 200.8 (94).
 - F) Atomic Absorption, Platform Furnace Technique. USEPA 200.9 (94).
 - G) Axially Viewed Inductively Coupled Plasma-Atomic Emission Spectrometry (AVICP-AES). USEPA 200.5 (03).
 - 4) Zinc
 - A) Atomic Absorption, Direct Aspiration Technique. SM 3111 B (89), SM 3111 B (93), or SM 3111 B (99).
 - B) Atomic Absorption, Inductively Coupled Plasma Technique. SM 3120 B (89), SM 3120 B (93), or SM 3120 B (99).
 - C) Inductively Coupled Plasma Arc Furnace Technique. USEPA 200.7 (94).
 - D) Atomic Absorption, Platform Furnace Technique. USEPA 200.8 (94).

18081 E) Axially Viewed Inductively Coupled Plasma-Atomic Emission
18082 Spectrometry (AVICP-AES). USEPA 200.5 (03).
18083

18084 BOARD NOTE: The provisions of subsections (a) through (e) derive from 40 CFR 141.23(l)
18085 through (p). Subsections (f)(2) through (f)(4) relate exclusively to additional State requirements.
18086 The Board retained subsection (f) to set forth methods for the inorganic contaminants for which
18087 there is a State-only MCL. The methods specified are those ~~set forth~~ in 40 CFR 143.4(b) and
18088 appendix A to subpart C of 40 CFR 141, for secondary MCLs. The Board has not separately
18089 listed the following approved alternative methods from Standard Methods Online that are the
18090 same version as a method that appears in a printed edition of Standard Methods. Use of the
18091 Standard Methods Online copy is acceptable.

18092
18093 Standard Methods Online, Method 3111 B-99 appears in the 21st, 22nd, ~~and~~ 23rd, and 24th
18094 editions as Method 3111 B. In this Section, this appears as SM 3111 B (99).
18095

18096 Standard Methods Online, Method 3113 B-99 appears in the 21st edition as Method 3113
18097 B. In this Section, this appears as SM 3113 B (99).
18098

18099 Standard Methods Online, Method 3113 B-10 appears in the 22nd, ~~and~~ 23rd, and 24th
18100 editions as Method 3113 B. In this Section, this appears as SM 3113 B (10).
18101

18102 Standard Methods Online, Method 3120 B-99 appears in the 21st edition as Method 3120
18103 B. In this Section, this appears as SM 3120 B (99).
18104

18105 (Source: Amended at 50 Ill. Reg. _____, effective _____)
18106

18107 **SUBPART O: ORGANIC MONITORING AND ANALYTICAL REQUIREMENTS**
18108

18109 **Section 611.641 State-Only MCLs**
18110

18111 a) An analysis of substances for the purpose of determining compliance with the
18112 State-only MCLs of Section 611.310 must be made as follows:
18113

18114 1) The Agency must issue a SEP requiring CWS suppliers utilizing surface
18115 water sources to collect samples during the period of the year when
18116 contamination by pesticides is most likely to occur. The Agency must
18117 require the supplier to repeat these analyses at least annually.
18118

18119 2) The Agency must issue a SEP requiring CWS suppliers utilizing only
18120 groundwater sources to collect samples at least once every three years.
18121

18122 b) If the result of an analysis made under subsection (a) indicates that the level of
18123 any contaminant exceeds its State-only MCL, the CWS supplier must report to the

18124 Agency within seven days and initiate three additional analyses within one month.

18125

18126 c) When the average of four analyses made under subsection (a), rounded to the
18127 same number of significant figures as the MCL for the substance in question,
18128 exceeds the State-only MCL, the CWS supplier must report to the Agency and
18129 give notice to the public under Subpart T of this Part. Monitoring after public
18130 notification must be at a frequency designated by the Agency and must continue
18131 until the MCL has not been exceeded in two successive samples or until a
18132 monitoring schedule as a condition to a variance, adjusted standard, or
18133 enforcement action becomes effective.

18134

18135 d) Analysis made to determine compliance with the State-only MCLs of Section
18136 611.310 must be made in ~~compliance~~ ~~accordance~~ with the appropriate methods
18137 specified in Section 611.645.

18138

18139 BOARD NOTE: This provision now applies only to State-only MCLs. This Section originally
18140 derived from 40 CFR 141.24(a) through (e), which USEPA removed and reserved.

18141

18142 (Source: Amended at 50 Ill. Reg. _____, effective _____)

18143

18144 **Section 611.646 Phase I, Phase II, and Phase V Volatile Organic Contaminants**

18145

18146 Monitoring of the Phase I, Phase II, and Phase V VOCs for the purpose of determining
18147 compliance with the MCL must be conducted as follows:

18148

18149 a) Definitions. As used in this Section the following have the given meanings:

18150

18151 "Detect" and "detection" mean that the contaminant of interest is present at
18152 a level greater than or equal to the "detection limit".

18153

18154 "Detection limit" means 0.0005 mg/l.

18155

18156 BOARD NOTE: Derived from 40 CFR 141.24(f)(7), (f)(11), (f)(14)(i),
18157 and (f)(20). This is a "trigger level" for Phase I, Phase II, and Phase V
18158 VOCs inasmuch as it prompts further action. The use of the term "detect"
18159 in this Section is not intended to include any analytical capability of
18160 quantifying lower levels of any contaminant, or the "method detection
18161 limit". Note, however, that certain language at the end of federal
18162 paragraph (f)(20) is capable of meaning that the "method detection limit"
18163 is used to derive the "detection limit". The Board has chosen to disregard
18164 that language at the end of paragraph (f)(20) in favor of the more direct
18165 language of paragraphs (f)(7) and (f)(11).

18166

18167 "Method detection limit", as used in subsections (q) and (t) means the
18168 minimum concentration of a substance that can be measured and reported
18169 with 99 percent confidence that the analyte concentration is greater than
18170 zero and is determined from analysis of a sample in a given matrix
18171 containing the analyte.

18172
18173 BOARD NOTE: Derived from appendix B to 40 CFR 136. The method
18174 detection limit is determined by the procedure ~~set forth~~ in appendix B to
18175 40 CFR 136, incorporated by reference in Section 611.102(c). See
18176 subsection (t).

- 18177
18178 b) Required Sampling. Each supplier must take a minimum of one sample at each
18179 sampling point at the times required in subsection (u).
18180
18181 c) Sampling Points
18182
18183 1) Sampling Points for a GWS. Unless otherwise provided by a SEP granted
18184 by the Agency, a GWS supplier must take at least one sample from each
18185 of the following points: each entry point that is representative of each
18186 well after treatment.
18187
18188 2) Sampling Points for an SWS or Mixed System Supplier. Unless otherwise
18189 provided by a SEP granted by the Agency, an SWS or mixed system
18190 supplier must sample from each of the following points:
18191
18192 A) Each entry point after treatment; or
18193
18194 B) Points in the distribution system that are representative of each
18195 source.
18196
18197 3) The supplier must take each sample at the same sampling point unless the
18198 Agency has granted a SEP that designates another location as more
18199 representative of each source, treatment plant, or within the distribution
18200 system.
18201
18202 4) If a system draws water from more than one source, and the sources are
18203 combined before distribution, the supplier must sample at an entry point
18204 during periods of normal operating conditions when water is
18205 representative of all sources being used.
18206

18207 BOARD NOTE: Subsections (b) and (c) derived from 40 CFR 141.24(f)(1)
18208 through (f)(3).
18209

- 18210 d) Each CWS and NTNCWS supplier must take four consecutive quarterly samples
 18211 for each of the Phase I VOCs, excluding vinyl chloride, and Phase II VOCs
 18212 during each compliance period, beginning in the compliance period starting in the
 18213 initial compliance period.
 18214
- 18215 e) This subsection (e) corresponds with 40 CFR 141.24(f)(5), which no longer has
 18216 operative effect. This statement maintains structural consistency with the federal
 18217 regulations.
 18218
- 18219 f) GWS Reduction to Triennial Monitoring Frequency. After a minimum of three
 18220 years of annual sampling, GWS suppliers that have not previously detected any of
 18221 the Phase I VOCs, including vinyl chloride; Phase II VOCs; or Phase V VOCs
 18222 must take one sample during each three-year compliance period.
 18223
- 18224 g) A CWS or NTNCWS supplier that has completed the initial round of monitoring
 18225 required by subsection (d) and ~~that~~which did not detect any of the Phase I VOCs,
 18226 including vinyl chloride; Phase II VOCs; and Phase V VOCs may apply to the
 18227 Agency for a SEP that releases it from the requirements of subsection (f). A
 18228 supplier that serves fewer than 3300 service connections may apply to the Agency
 18229 for a SEP that releases it from the requirements of subsection (d) as to 1,2,4-
 18230 trichlorobenzene.
 18231
- 18232 BOARD NOTE: Derived from 40 CFR 141.24(f)(7) and (f)(10), and the
 18233 discussion at 57 Fed. Reg. 31825 (July 17, 1992). Provisions concerning the term
 18234 of the waiver appear in subsections (i) and (j). The definition of "detect",
 18235 parenthetically added to the federal counterpart paragraph, is in subsection (a).
 18236
- 18237 h) Vulnerability Assessment. The Agency must consider the factors of Section
 18238 611.110(a) in granting a SEP from the requirements of subsection (d), (e), or (f)
 18239 under subsection (g).
 18240
- 18241 i) A SEP issued to a GWS under subsection (g) is for a maximum of six years,
 18242 except that a SEP as to the subsection (d) monitoring for 1,2,4-trichlorobenzene
 18243 must apply only to the initial round of monitoring. As a condition of a SEP,
 18244 except as to a SEP from the initial round of subsection (d) monitoring for 1,2,4-
 18245 trichlorobenzene, the supplier ~~must~~shall, within 30 months after the beginning of
 18246 the period for which the waiver was issued, reconfirm its vulnerability assessment
 18247 required by subsection (h) and submitted under subsection (g), by taking one
 18248 sample at each sampling point and reapplying for a SEP under subsection (g).
 18249 Based on this application, the Agency must do either of the following:
 18250
- 18251 1) If it determines that the PWS meets the standard of Section 611.610(e),
 18252 issue a SEP that reconfirms the prior SEP for the remaining three-year

18253 compliance period of the six-year maximum term; or

18254
18255 2) Issue a new SEP requiring the supplier to sample annually.

18256
18257 BOARD NOTE: Subsection (i) does not apply to an SWS or mixed system
18258 supplier.

18259
18260 j) Special Considerations for a SEP for an SWS or Mixed-System Supplier

18261
18262 1) The Agency must determine that an SWS is not vulnerable before issuing
18263 a SEP to an SWS supplier. A SEP issued to an SWS or mixed system
18264 supplier under subsection (g) is for a maximum of one compliance period;
18265 and

18266
18267 2) The Agency may require, as a condition to a SEP issued to an SWS or
18268 mixed supplier, that the supplier take ~~the~~ such samples for Phase I, Phase
18269 II, and Phase V VOCs at such a frequency as the Agency determines are
18270 necessary, based on the vulnerability assessment.

18271
18272 BOARD NOTE: There is a great degree of similarity between 40 CFR
18273 141.24(f)(7), the provision applicable to GWSs, and 40 CFR 141.24(f)(10), the
18274 provision for SWSs. The Board has consolidated the common requirements of
18275 both paragraphs into subsection (g). Subsection (j) represents the elements unique
18276 to an SWSs or mixed system, and subsection (i) relates to a GWS supplier.
18277 Although 40 CFR 141.24(f)(7) and (f)(10) are silent as to a mixed system
18278 supplier, the Board has included a mixed system supplier with an SWS supplier
18279 because this best follows the federal scheme for all other contaminants.

18280
18281 k) If one of the Phase I VOCs, excluding vinyl chloride; a Phase II VOC; or a Phase
18282 V VOC is detected in any sample, then the following must occur:

18283
18284 1) The supplier must monitor quarterly for that contaminant at each sampling
18285 point that resulted in a detection.

18286
18287 2) Annual Monitoring
18288
18289 A) The Agency must grant a SEP that allows a supplier to reduce the
18290 monitoring frequency to annual at a sampling point if it determines
18291 that the sampling point is reliably and consistently below the MCL.

18292
18293 B) A request for a SEP must include the following minimal
18294 information:
18295

- 18296 i) For a GWS, two quarterly samples.
- 18297
- 18298 ii) For an SWS or mixed system supplier, four quarterly
- 18299 samples.
- 18300
- 18301 C) In issuing a SEP, the Agency must specify the level of the
- 18302 contaminant upon which the "reliably and consistently"
- 18303 determination was based. Any SEP that allows less frequent
- 18304 monitoring based on an Agency "reliably and consistently"
- 18305 determination must include a condition requiring the supplier to
- 18306 resume quarterly monitoring under subsection (k)(1) if it violates
- 18307 the MCL specified by Section 611.311.
- 18308
- 18309 3) Suppliers that monitor annually must monitor during the quarters that
- 18310 previously yielded the highest analytical result.
- 18311
- 18312 4) Suppliers that do not detect a contaminant at a sampling point in three
- 18313 consecutive annual samples may apply to the Agency for a SEP that
- 18314 allows it to discontinue monitoring for that contaminant at that point, as
- 18315 specified in subsection (g).
- 18316
- 18317 5) A GWS supplier that has detected one or more of the two-carbon
- 18318 contaminants listed in subsection (k)(5)(A) must monitor quarterly for
- 18319 vinyl chloride as described in subsection (k)(5)(B), subject to the
- 18320 limitation of subsection (k)(5)(C).
- 18321
- 18322 A) "Two-carbon contaminants" (Phase I or II VOC) are the following:
- 18323
- 18324 1,2-Dichloroethane (Phase I)
- 18325
- 18326 1,1-Dichloroethylene (Phase I)
- 18327
- 18328 cis-1,2-Dichloroethylene (Phase II)
- 18329
- 18330 trans-1,2-Dichloroethylene (Phase II)
- 18331
- 18332 Tetrachloroethylene (Phase II)
- 18333
- 18334 1,1,1-Trichloroethylene (Phase I)
- 18335
- 18336 Trichloroethylene (Phase I)
- 18337
- 18338 B) The supplier must sample quarterly for vinyl chloride at each

18339 sampling point at which it detected one or more of the two-carbon
18340 contaminants listed in subsection (k)(5)(A).

18341
18342 C) The Agency must grant a SEP that allows the supplier to reduce
18343 the monitoring frequency for vinyl chloride at any sampling point
18344 to once in each three-year compliance period if it determines that
18345 the supplier has not detected vinyl chloride in the first sample
18346 required by subsection (k)(5)(B).

18347
18348 1) Quarterly Monitoring Following MCL Violations
18349

18350 1) Suppliers that violate an MCL for one of the Phase I VOCs, including
18351 vinyl chloride; Phase II VOCs; or Phase V VOCs, as determined by
18352 subsection (o), must monitor quarterly for that contaminant, at the
18353 sampling point where the violation occurred, beginning the next quarter
18354 after the violation.

18355
18356 2) Annual Monitoring
18357

18358 A) The Agency must grant a SEP that allows a supplier to reduce the
18359 monitoring frequency to annually if it determines that the sampling
18360 point is reliably and consistently below the MCL.

18361 B) A request for a SEP must include the following minimal
18362 information: four quarterly samples.

18363 C) In issuing a SEP, the Agency must specify the level of the
18364 contaminant upon which the "reliably and consistently"
18365 determination was based. Any SEP that allows less frequent
18366 monitoring based on an Agency "reliably and consistently"
18367 determination must include a condition requiring the supplier to
18368 resume quarterly monitoring under subsection (l)(1) if it violates
18369 the MCL specified by Section 611.311.

18370 D) The supplier must monitor during the quarters that previously
18371 yielded the highest analytical result.

18372
18373 m) Confirmation Samples. The Agency may issue a SEP to require a supplier to use
18374 a confirmation sample for results that it finds dubious for whatever reason. The
18375 Agency must state its reasons for issuing the SEP if the SEP is Agency-initiated.

18376
18377 1) If a supplier detects any of the Phase I, Phase II, or Phase V VOCs in a
18378 sample, the supplier must take a confirmation sample as soon as possible,
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18381

- 18382 but no later than 14 days after the supplier receives notice of the detection.
18383
- 18384 2) Averaging is as specified in subsection (o).
18385
- 18386 3) The Agency must delete the original or confirmation sample if it
18387 determines that a sampling error occurred, in which case the confirmation
18388 sample will replace the original or confirmation sample.
18389
- 18390 n) This subsection (n) corresponds with 40 CFR 141.24(f)(14), an optional USEPA
18391 provision relating to compositing of samples that USEPA does not require for
18392 state programs. This statement maintains structural consistency with USEPA
18393 rules.
18394
- 18395 o) Compliance with the MCLs for the Phase I, Phase II, and Phase V VOCs must be
18396 determined based on the analytical results obtained at each sampling point. If one
18397 sampling point is in violation of an MCL, the system is in violation of the MCL.
18398
- 18399 1) For a supplier that monitors more than once per year, compliance with the
18400 MCL is determined by a running annual average at each sampling point.
18401
- 18402 2) A supplier that monitors annually or less frequently whose sample result
18403 exceeds the MCL must begin quarterly sampling. The system will not be
18404 considered in violation of the MCL until it has completed one year of
18405 quarterly sampling.
18406
- 18407 3) If any sample result will cause the running annual average to exceed the
18408 MCL at any sampling point, the supplier is out of compliance with the
18409 MCL immediately.
18410
- 18411 4) If a supplier fails to collect the required number of samples, compliance
18412 will be based on the total number of samples collected.
18413
- 18414 5) If a sample result is less than the detection limit, zero will be used to
18415 calculate the annual average.
18416
- 18417 p) This subsection (p) corresponds with 40 CFR 141.24(f)(16), which USEPA
18418 removed and reserved. This statement maintains structural consistency with the
18419 federal regulations.
18420
- 18421 q) Analysis under this Section must only be conducted by a laboratory in one of the
18422 categories listed in Section 611.490(a) that has been certified according to the
18423 following conditions:
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- 1) To receive certification to conduct analyses for the Phase I VOCs, excluding vinyl chloride; Phase II VOCs; and Phase V VOCs, the laboratory must do the following:
 - A) It must analyze performance evaluation (PE) samples that include these substances provided by the Agency under 35 Ill. Adm. Code 186.170;
 - B) It must achieve the quantitative acceptance limits under subsections (q)(1)(C) and (q)(1)(D) for at least 80 percent of the regulated organic contaminants in the PE sample;
 - C) It must achieve quantitative results on the analyses performed under subsection (q)(1)(A) that are within ± 20 percent of the actual amount of the substances in the PE sample when the actual amount is greater than or equal to 0.010 mg/l;
 - D) It must achieve quantitative results on the analyses performed under subsection (q)(1)(A) that are within ± 40 percent of the actual amount of the substances in the PE sample when the actual amount is less than 0.010 mg/l; and
 - E) It must achieve a method detection limit of 0.0005 mg/l, according to the procedures in appendix B to 40 CFR 136, incorporated by reference in Section 611.102.
 - 2) To receive certification to conduct analyses for vinyl chloride the laboratory must do the following:
 - A) It must analyze PE samples provided by the Agency under 35 Ill. Adm. Code 186.170;
 - B) It must achieve quantitative results on the analyses performed under subsection (q)(2)(A) that are within ± 40 percent of the actual amount of vinyl chloride in the PE sample;
 - C) It must achieve a method detection limit of 0.0005 mg/l, according to the procedures in appendix B to 40 CFR 136, incorporated by reference in Section 611.102; and
 - D) It must obtain certification under subsection (q)(1) for Phase I VOCs, excluding vinyl chloride; Phase II VOCs; and Phase V VOCs.

- 18468
18469 r) This subsection (r) corresponds with 40 CFR 141.24(f)(18), an obsolete provision
18470 that relates to the initial compliance period from 1993 through 1995. This
18471 statement maintains consistency with the federal regulations.
18472
18473 s) The Agency must, by a SEP, increase the number of sampling points or the
18474 frequency of monitoring if it determines that it is necessary to detect variations
18475 within the PWS.
18476
18477 t) Each laboratory certified for the analysis of Phase I, Phase II, or Phase V VOCs
18478 under subsection (q)(1) or (q)(2) must do the following:
18479
18480 1) Determine the method detection limit (MDL), as defined in appendix B to
18481 40 CFR 136, incorporated by reference in Section 611.102, at which it is
18482 capable of detecting the Phase I, Phase II, and Phase V VOCs; and,
18483
18484 2) Achieve an MDL for each Phase I, Phase II, and Phase V VOC that is less
18485 than or equal to 0.0005 mg/ℓ.
18486
18487 u) Each supplier must monitor, within each compliance period, at the time
18488 designated by the Agency by SEP.
18489
18490 v) A new system supplier or a supplier that uses a new source of water must
18491 demonstrate compliance with the MCL within a period of time specified by a
18492 permit issued by the Agency. The supplier must also comply with the initial
18493 sampling frequencies specified by the Agency to ensure the supplier can
18494 demonstrate compliance with the MCL. Routine and increased monitoring
18495 frequencies must be conducted in compliance~~accordance~~ with ~~the requirements in~~
18496 this Section.
18497

18498 BOARD NOTE: Derived from 40 CFR 141.24(f).

18499 (Source: Amended at 50 Ill. Reg. _____, effective _____)
18500

18501
18502 **Section 611.648 Phase II, Phase IIB, and Phase V Synthetic Organic Contaminants**
18503

18504 Analysis of the Phase II, Phase IIB, and Phase V SOCs for the purposes of determining
18505 compliance with the MCL must be conducted as follows:
18506

18507 BOARD NOTE: This Section does not apply to regulated PFAS see Section 611.7902 and no
18508 monitoring is required for aldicarb, aldicarb sulfoxide, or aldicarb sulfone):
18509

- 18510 a) Definitions. As used in this Section, the following terms will have the following

18511 meanings:

18512

18513 "Detect" or "detection" means that the contaminant of interest is present at
18514 a level greater than or equal to the "detection limit".

18515

18516 "Detection limit" means the level of the contaminant of interest that is
18517 specified in subsection (r).

18518

18519 BOARD NOTE: This is a "trigger level" for Phase II, Phase IIB, and
18520 Phase V SOCs ~~since inasmuch as~~ it prompts further action. The use of the
18521 term "detect" or "detection" in this Section is not intended to include any
18522 analytical capability of quantifying lower levels of any contaminant, or the
18523 "method detection limit".

18524

18525 b) Required Sampling. Each supplier must take a minimum of one sample at each
18526 sampling point at the times required in subsection (q).

18527

18528 BOARD NOTE: See the Board note appended to Section 611.311(c) for
18529 information relating to implementation of requirements relating to aldicarb,
18530 aldicarb sulfone, and aldicarb sulfoxide.

18531

18532 c) Sampling Points

18533

18534 1) Sampling Points for GWSs. Unless otherwise provided in a SEP, a GWS
18535 supplier must take at least one sample from each of the following points:
18536 each entry point that is representative of each well after treatment.

18537

18538 2) Sampling Points for an SWS or Mixed System Supplier. Unless otherwise
18539 provided in a SEP, an SWS or mixed system supplier must sample from
18540 each of the following points:

18541

18542 A) Each entry point after treatment; or

18543

18544 B) Points in the distribution system that are representative of each
18545 source.

18546

18547 3) The supplier must take each sample at the same sampling point unless the
18548 Agency issues a SEP that designates another location as more
18549 representative of each source, treatment plant, or within the distribution
18550 system.

18551

18552 4) If a system draws water from more than one source, and the sources are
18553 combined before distribution, the supplier must sample at an entry point

18554 during periods of normal operating conditions when water is
18555 representative of all sources being used.

18556
18557 BOARD NOTE: Subsections (b) and (c) derive from 40 CFR 141.24(h)(1)
18558 through (h)(3).

18559
18560 d) Monitoring Frequency

18561
18562 1) Each CWS and NTNCWS supplier must take four consecutive quarterly
18563 samples for each of the Phase II, Phase IIB, and Phase V SOCs during
18564 each compliance period, beginning in the three-year compliance period
18565 starting in the initial compliance period.

18566
18567 2) Suppliers serving more than 3,300 persons that do not detect a
18568 contaminant in the initial compliance period must take a minimum of two
18569 quarterly samples in one year of each subsequent three-year compliance
18570 period.

18571
18572 3) Suppliers serving fewer than or equal to 3,300 persons that do not detect a
18573 contaminant in the initial compliance period must take a minimum of one
18574 sample during each subsequent three-year compliance period.

18575
18576 e) Reduction to Annual Monitoring Frequency. A CWS or NTNCWS supplier may
18577 apply to the Agency for a SEP releasing the supplier from the requirements of
18578 subsection (d). A SEP from the requirement of subsection (d) may last for only a
18579 single three-year compliance period.

18580
18581 f) Vulnerability Assessment. The Agency must issue a SEP from the requirements
18582 of subsection (d) based on consideration of the factors ~~inset forth at~~ Section
18583 611.110(a).

18584
18585 g) If one of the Phase II, Phase IIB, or Phase V SOCs is detected in any sample, then
18586 the following must occur:

18587
18588 1) The supplier must monitor quarterly for the contaminant at each sampling
18589 point that resulted in a detection.

18590
18591 2) Annual Monitoring

18592
18593 A) A supplier may request that the Agency issue a SEP reducing the
18594 monitoring frequency to annual.

18595
18596 B) A request for a SEP must include the following minimal

information:

- i) For a GWS, two quarterly samples.
- ii) For an SWS or mixed system supplier, four quarterly samples.

C) The Agency must issue a SEP allowing annual monitoring at a sampling point if it determines that the sampling point is reliably and consistently below the MCL.

D) When issuing the SEP, the Agency must specify the level of the contaminant upon which the "reliably and consistently below the MCL" determination was based. Any SEP allowing less frequent monitoring based on an Agency "reliably and consistently below the MCL" determination must include a condition requiring the supplier to resume quarterly monitoring under subsection (g)(1) if it detects any Phase II SOC.

3) Suppliers that monitor annually must monitor during the quarters that previously yielded the highest analytical result.

4) Suppliers that have three consecutive annual samples with no detection of a contaminant at a sampling point may apply to the Agency for a SEP with respect to that point, as specified in subsections (e) and (f).

5) Monitoring for Related Contaminants

A) If monitoring results in detection of one or more of the related contaminants listed in subsection (g)(5)(B), subsequent monitoring must analyze for all the related compounds in the respective group.

B) Related Contaminants

i) First Group

aldicarb

aldicarb sulfone

aldicarb sulfoxide

BOARD NOTE: See the Board note appended to Section

18640 611.311(c) for information relating to implementation of
18641 requirements relating to aldicarb, aldicarb sulfone, and
18642 aldicarb sulfoxide.

18643
18644 ii) Second Group
18645
18646 heptachlor
18647
18648 heptachlor epoxide.
18649

18650 h) Quarterly Monitoring Following MCL Violations
18651

18652 1) Suppliers that violate an MCL for one of the Phase II, Phase IIB, or Phase
18653 V SOCs, as determined by subsection (k), must monitor quarterly for that
18654 contaminant at the sampling point where the violation occurred, beginning
18655 the next quarter after the violation.
18656

18657 2) Annual Monitoring
18658

18659 A) A supplier may request that the Agency issue a SEP reducing the
18660 monitoring frequency to annual.

18661 B) A request for a SEP must include, at a minimum, the results from
18662 four quarterly samples.
18663

18664 C) The Agency must issue a SEP allowing annual monitoring at a
18665 sampling point if it determines that the sampling point is reliably
18666 and consistently below the MCL.
18667

18668 D) When issuing the SEP, the Agency must specify the level of the
18669 contaminant upon which the "reliably and consistently below the
18670 MCL" determination was based. Any SEP allowing less frequent
18671 monitoring based on an Agency "reliably and consistently below
18672 the MCL" determination must include a condition requiring the
18673 supplier to resume quarterly monitoring under subsection (h)(1) if
18674 it detects any Phase II SOC.
18675

18676 E) The supplier must monitor during the quarters that previously
18677 yielded the highest analytical result.
18678

18679 i) Confirmation Samples
18680

18681 1) If any of the Phase II, Phase IIB, or Phase V SOCs are detected in a
18682

- 18683 sample, the supplier must take a confirmation sample as soon as possible,
18684 but no later than 14 days after the supplier receives notice of the detection.
18685
- 18686 2) Averaging is as specified in subsection (k).
18687
- 18688 3) The Agency must delete the original or confirmation sample if it
18689 determines that a sampling error occurred, in which case the confirmation
18690 sample will replace the original or confirmation sample.
18691
- 18692 j) This subsection (j) corresponds with 40 CFR 141.24(h)(10), an optional USEPA
18693 provision relating to compositing of samples that USEPA does not require for
18694 state programs. This statement maintains structural consistency with USEPA
18695 rules.
18696
- 18697 k) Compliance with the MCLs for the Phase II, Phase IIB, and Phase V SOCs must
18698 be determined based on the analytical results obtained at each sampling point. If
18699 one sampling point is in violation of an MCL, the supplier is in violation of the
18700 MCL.
18701
- 18702 1) For a supplier that monitors more than once per year, compliance with the
18703 MCL is determined by a running annual average at each sampling point.
18704
- 18705 2) A supplier that monitors annually or less frequently whose sample result
18706 exceeds the regulatory detection level as defined by subsection (r) must
18707 begin quarterly sampling. The system will not be considered in violation
18708 of the MCL until it has completed one year of quarterly sampling.
18709
- 18710 3) If any sample result will cause the running annual average to exceed the
18711 MCL at any sampling point, the supplier is out of compliance with the
18712 MCL immediately.
18713
- 18714 4) If a supplier fails to collect the required number of samples, compliance
18715 will be based on the total number of samples collected.
18716
- 18717 5) If a sample result is less than the detection limit, zero will be used to
18718 calculate the annual average.
18719
- 18720 l) This subsection (l) corresponds with 40 CFR 141.24(h)(12), which USEPA
18721 removed and reserved. This statement maintains structural consistency with the
18722 federal regulations.
18723
- 18724 m) Analysis for PCBs must be conducted as follows using the methods in Section
18725 611.645:

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- 1) Each supplier that monitors for PCBs must analyze each sample using either USEPA 505 (95) or USEPA 508 (95).
- 2) If PCBs are detected in any sample analyzed using USEPA 505 (95) or USEPA 508 (95), the supplier must reanalyze the sample using USEPA 508A (89) to quantitate the individual Aroclors (as decachlorobiphenyl).
- 3) Compliance with the PCB MCL must be determined based upon the quantitative results of analyses using USEPA 508A (89).

n) This subsection (n) corresponds with 40 CFR 141.24(h)(14), an obsolete provision that relates to the initial compliance period from 1993 through 1995. This statement maintains consistency with the federal regulations.

o) The Agency must issue a SEP increasing the number of sampling points or the frequency of monitoring if it determines that this is necessary to detect variations within the PWS due to such factors as fluctuations in contaminant concentration due to seasonal use or changes in the water source.

BOARD NOTE: At 40 CFR 141.24(h)(15), the factors are non-limiting examples of circumstances making additional monitoring necessary.

p) This subsection (p) corresponds with 40 CFR 141.24(h)(16), a USEPA provision relating to reserving enforcement authority to the State that would serve no useful function as part of the State's rules. This statement maintains structural consistency with USEPA rules.

q) Each supplier must monitor, within each compliance period, at the time designated by the Agency in a SEP.

r) "Detection" means greater than or equal to the following concentrations for each contaminant:

- 1) For PCBs (Aroclors), the following:

Aroclor	Detection Limit (mg/L)
1016	0.00008
1221	0.02
1232	0.0005
1242	0.0003
1248	0.0001

1254 0.0001
 1260 0.0002

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2) For other Phase II, Phase IIB, and Phase V SOCs, the following:

Contaminant	Detection Limit (mg/L)
Alachlor	0.0002
Aldicarb	0.0005
Aldicarb sulfoxide	0.0005
Aldicarb sulfone	0.0008
Atrazine	0.0001
Benzo(a)pyrene	0.00002
Carbofuran	0.0009
Chlordane	0.0002
2,4-D	0.0001
Dalapon	0.001
1,2-Dibromo-3-chloropropane (DBCP)	0.00002
Di(2-ethylhexyl)adipate	0.0006
Di(2-ethylhexyl)phthalate	0.0006
Dinoseb	0.0002
Diquat	0.0004
Endothall	0.009
Endrin	0.00001
Ethylene dibromide (EDB)	0.00001
Glyphosate	0.006
Heptachlor	0.00004
Heptachlor epoxide	0.00002
Hexachlorobenzene	0.0001
Hexachlorocyclopentadiene	0.0001
Lindane	0.00002
Methoxychlor	0.0001
Oxamyl	0.002
Picloram	0.0001
Polychlorinated biphenyls (PCBs) (as decachlorobiphenyl)	0.0001
Pentachlorophenol	0.00004
Simazine	0.00007
Toxaphene	0.001
2,3,7,8-TCDD (dioxin)	0.000000005
2,4,5-TP (silvex)	0.0002

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BOARD NOTE: See the Board note appended to Section 611.311(c) for information relating to implementation of requirements relating to aldicarb, aldicarb sulfone, and aldicarb sulfoxide.

s) Laboratory Certification

- 1) Analyses under this Section must only be conducted by a laboratory in one of the categories listed in Section 611.490(a) that has been certified according to the conditions of subsection (s)(2).
- 2) To receive certification to conduct analyses for the Phase II, Phase IIB, and Phase V SOCs, the laboratory must do the following:
 - A) Analyze PE samples provided by the Agency under 35 Ill. Adm. Code 183.125(c) that include these substances; and
 - B) Achieve quantitative results on the analyses performed under subsection (s)(2)(A) that are within the following acceptance limits:

SOC	Acceptance Limits
Alachlor	± 45%
Aldicarb	2 standard deviations
Aldicarb sulfone	2 standard deviations
Aldicarb sulfoxide	2 standard deviations
Atrazine	± 45%
Benzo(a)pyrene	2 standard deviations
Carbofuran	± 45%
Chlordane	± 45%
Dalapon	2 standard deviations
Di(2-ethylhexyl)adipate	2 standard deviations
Di(2-ethylhexyl)phthalate	2 standard deviations
Dinoseb	2 standard deviations
Diquat	2 standard deviations
Endothall	2 standard deviations
Endrin	± 30%
Glyphosate	2 standard deviations
Dibromochloropropane (DBCP)	± 40%
Ethylene dibromide (EDB)	± 40%
Heptachlor	± 45%
Heptachlor epoxide	± 45%
Hexachlorobenzene	2 standard deviations

Hexachlorocyclopentadiene	2 standard deviations
Lindane	± 45%
Methoxychlor	± 45%
Oxamyl	2 standard deviations
PCBs (as decachlorobiphenyl)	0-200%
Pentachlorophenol	± 50%
Picloram	2 standard deviations
Simazine	2 standard deviations
Toxaphene	± 45%
2,4-D	± 50%
2,3,7,8-TCDD (dioxin)	2 standard deviations
2,4,5-TP (silvex)	± 50%

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BOARD NOTE: See the Board note appended to Section 611.311(c) for information relating to implementation of requirements relating to aldicarb, aldicarb sulfone, and aldicarb sulfoxide.

- t) A new system supplier or a supplier using a new source of water must demonstrate compliance with the MCL within a period of time specified by a permit issued by the Agency. The supplier must also comply with the initial sampling frequencies specified by the Agency to ensure the supplier can demonstrate compliance with the MCL. Routine and increased monitoring frequencies must be conducted in compliance ~~accordance~~ with ~~the requirements in~~ this Section.

BOARD NOTE: This Section derives from 40 CFR 141.24(h).

(Source: Amended at 50 Ill. Reg. _____, effective _____)

SUBPART Q: RADIOLOGICAL MONITORING AND ANALYTICAL REQUIREMENTS

Section 611.720 Analytical Methods

- a) A certified laboratory must use specific methods or alternative methods the Agency approved under Section 611.480 to determine whether the supplier complies with Section 611.330.
 - 1) Gross Alpha and Beta
 - A) Evaporation Methods. SM 302 (71); SM 7110 B (85); SM 7110 B (91); SM 7110 B (96); SM 7110 B (00); SM 7110 B (21); USEPA

- 18816 900.0 (80); USEPA 900.0 (18); USEPA 00-01 (84); USEPA IRM
 18817 (76), pages 1-3; USEPA RCA (79), pages 1-5; or USGS R1120-76.
 18818
 18819 B) Liquid Scintillation Methods. ASTM D7283-17, ~~or~~ SM 7110 D
 18820 (17), or SM 7110 D (21).
 18821
 18822 2) Gross Alpha. Coprecipitation Methods. SM 7110 C (91), SM 7110 C (96),
 18823 SM 7110 C (00), SM 7110 C (21) or USEPA 00-02 (84).
 18824
 18825 3) Radium-226
 18826
 18827 A) Radiochemical Methods. ASTM D2460-97; ASTM D2460-07;
 18828 Georgia Radium (04); New York Radium (82); SM 304 (71); SM
 18829 7500-Ra B (88); SM 7500-Ra B (93); SM 7500-Ra B (01); USEPA
 18830 903.0 (80); USEPA 903.0(21); USEPA Ra-03 (84); USEPA IRM
 18831 (76), pages 13-15; USEPA RCA (79), pages 19-32; or USGS R-
 18832 1140-76.
 18833
 18834 B) Radon Emanation Methods. ASTM D3454-97; ASTM D3454-05;
 18835 ASTM D3454-18; ASTM D3454-21; EML (97) Ra-04; EML (90)
 18836 Ra-05; SM 305 (71); SM 7500-Ra C (88); SM 7500-Ra C (93);
 18837 SM 7500-Ra C (01); USEPA 903.1 (80); USEPA 903.1 (21);
 18838 USEPA Ra-04 (84); USEPA IRM (76), pages 16-23; or USGS R-
 18839 1141-76.
 18840
 18841 C) Gamma Spectrometry. SM 7500-Ra E (01) or SM 7500-Ra E (07).
 18842
 18843 4) Radium-228
 18844
 18845 A) Radiochemical Methods. Georgia Radium (04); New Jersey
 18846 Radium (90); New York Radium (82); SM 7500-Ra D (88); SM
 18847 7500-Ra D (93); SM 7500-Ra D (01); USEPA 904.0 (80);
 18848 USEPA904.0 (22); USEPA Ra-05 (90); USEPA IRM (76), pages
 18849 24-28; USEPA RCA (79), pages 19-32; or USGS R-1142-76.
 18850
 18851 B) Gamma Spectrometry. SM 7500-Ra E (01) or SM 7500-Ra E (07).
 18852
 18853 5) Uranium
 18854
 18855 A) Radiochemical Methods. SM 7500-U B (88), SM 7500-U B (91),
 18856 SM 7500-U B (96), SM 7500-U B (00), or USEPA 908.0 (80).
 18857

- 18858 B) Fluorometric Methods. ASTM D2907-97, EML (90) U-04, EML
 18859 (97) U-04, SM 7500-U C (88), SM 7500-U C (91), SM 7500-U C
 18860 (96), SM 7500-U C (00), USEPA 908.1 (80), USGS R-1180-76, or
 18861 USGS R-1181-76.
 18862
 18863 C) ICP-MS Methods. ASTM D5673-03, ASTM D5673-05, ASTM
 18864 D5673-10, ASTM D5673-16; SM 3125 (97); or USEPA 200.8
 18865 (94).
 18866
 18867 D) Alpha Spectrometry. ASTM D3972-97; ASTM D3972-02; ASTM
 18868 D3972-09; EML (90) U-02; EML (97) U-02; USEPA 00-07 (84);
 18869 USEPA RCA (79), pages 33-48; or USGS R-1182-76; [7500-U C](#)
 18870 [\(00\)](#).
 18871
 18872 E) Laser Spectrometry. ASTM D5174-97, ASTM D5174-02, or
 18873 ASTM D5174-07.
 18874
 18875 F) Alpha Liquid Scintillation Spectrometry. ASTM D6239-09.
 18876

18877 BOARD NOTE: If the laboratory determines uranium (U) by mass, it
 18878 must use a conversion factor of 0.67 pCi/μg U. This conversion factor
 18879 reflects the characteristic 1:1 activity ratio of ²³⁴U and ²³⁸U of naturally
 18880 occurring uranium.
 18881

18882 6) Radioactive Cesium
 18883

- 18884 A) Radiochemical Methods. ASTM D2459-72; SM 7500-Cs B (88),
 18885 SM 7500-Cs B (93); SM 7500-Cs B (00); USEPA 901.0 (80);
 18886 USEPA IRM (76), pages 4-5; or USGS R-1111-76.
 18887
 18888 B) Gamma Ray Spectrometry. ASTM D3649-91; ASTM D3649-98a;
 18889 ASTM D3649-06; EML (90) Ga-01; EML (97) Ga-01-R; SM 7120
 18890 (94); SM 7120 (97); [SM 7120 \(21\)](#); USEPA 901.1 (80); USEPA
 18891 RCA (79), pages 92-95; or USGS R-1110-76.
 18892

18893 7) Radioactive Iodine
 18894

- 18895 A) Radiochemical Methods. ASTM D3649-91; ASTM D3649-98a;
 18896 ASTM D3649-06; SM 7500-I B (88); SM 7500-I B (93); SM
 18897 7500-I B (00); SM 7500-I C (88); SM 7500-I C (93); SM 7500-I C
 18898 (00); SM 7500-I D (88); SM 7500-I D (93); SM 7500-I D (00);
 18899 USEPA 902.0 (80); USEPA IRM (76), pages 6-8; or USEPA IRM
 18900 (76), pages 9-12.

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- B) Gamma Ray Spectrometry. ASTM D4785-93; ASTM D4785-00a; ASTM D4785-08; ASTM D4785-20; EML (90) Ga-01; EML (97) Ga-01-R; SM 7120 (94); SM 7120 (97); [SM 7120 \(21\)](#); USEPA 901.1 (80); or USEPA RCA (79), pages 92-95.
 - 8) Radioactive Strontium-89 and -90. Radiochemical Methods. EML (90) Sr-01; EML (97) Sr-01; EML (90) Sr-02; EML (97) Sr-02; SM 303 (71); SM 7500-Sr B (88); SM 7500-Sr B (93); SM 7500-Sr B (01); USEPA 905.0 (80); USEPA Sr-04 (84); USEPA IRM (76), pages 29-33; USEPA RCA (79), pages 65-73; or USGS R-1160-76.
 - 9) Tritium. Liquid Scintillation. ASTM D4107-91; ASTM D4107-98; ASTM D4107-08; ASTM D4107-20; SM 306 (71); SM 7500-3H B (88); SM 7500-3H B (93); SM 7500-3H B (00); [SM 7500-³H B \(22\)](#); USEPA 906.0 (80); USEPA H-02 (84); USEPA IRM (76), pages 34-37; USEPA RCA (79), pages 87-91; or USGS R-1171-76.
 - 10) Gamma Emitters. Gamma Ray Spectrometry. ASTM D3649-91; ASTM D3649-98a; ASTM D3649-06; ASTM D4785-93; ASTM D4785-00a; ASTM D4785-08; ASTM D4785-20; EML (90) Ga-01; EML (97) Ga-01-R; SM 7120 (94); SM 7120 (97); [SM 7120 \(21\)](#); SM 7500-Cs B (88); SM 7500-Cs B (93); SM 7500-Cs B (00); SM 7500-I B (88); SM 7500-I B (93); SM 7500-I B (00); USEPA 901.0 (80); USEPA 901.1 (80); USEPA 902.0 (80); USEPA RCA (79), pages 92-95; or USGS R-1110-76.
 - b) When the laboratory must identify and measure radionuclides other than those in subsection (a), it must use methods from either of two sources, incorporated by reference in Section 611.102, except if the Agency approves alternative methods under Section 611.480:
 - 1) USEPA ARP (73).
 - 2) EML (90) or EML (97).
 - c) For monitoring radioactivity concentrations in drinking water, a detection limit defines the required sensitivity of the radio analysis. The detection limit is the concentration a laboratory can measure with a precision of plus or minus 100 percent at the 95 percent confidence level (1.96σ , where σ is the standard deviation of the net counting rate of the sample).
 - 1) When determining compliance with Section 611.330(b), (c), and (e), the detection limit must not exceed certain concentrations:

18944

Contaminant	Detection Limit
Gross alpha particle activity	3 pCi/L
Radium-226	1 pCi/L
Radium-228	1 pCi/L
Uranium	1 µg/L

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18946

BOARD NOTE: This subsection (c)(1) derives from 40 CFR 141.25(c) Table B.

18947

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18949

- 2) When determining compliance with Section 611.330(d), the detection limits must not exceed certain concentrations:

18950

18951

Radionuclide	Detection Limit
Tritium	1,000 pCi/L
Strontium-89	10 pCi/L
Strontium-90	2 pCi/L
Iodine-131	1 pCi/L
Cesium-134	10 pCi/L
Gross beta	4 pCi/L
Other radionuclides	1/10 of applicable limit

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18953

BOARD NOTE: This subsection (c)(2) derives from 40 CFR 141.25(c) Table C.

18954

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- d) When determining compliance with the MCLs in Section 611.330, the laboratory must use averages of data and round results to the same number of significant figures as the MCL.

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BOARD NOTE: This Section derives from 40 CFR 141.25 and appendix A to subpart C of 40 CFR 141. The Board did not separately list approved alternative methods from Standard

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18962 Methods Online that are the same version as a method appearing in a printed edition of Standard
 18963 Methods. Using the Standard Methods Online copy is acceptable.

18964
 18965 Standard Methods Online, Methods 7110 B-91 and 7110 C-91 appear in the 18th and 19th
 18966 editions as Methods 7110 B and 7110 C. These appear in this Section as SM 7110 B (91)
 18967 and SM 7110 C (91).

18968
 18969 Standard Methods Online, Methods 7110 B-00 and 7110 C-00 appear in the 21st, 22nd,
 18970 and 23rd editions as Methods 7110 B and 7110 C. These appear in this Section as SM
 18971 7110 B (00) and SM 7110 C (00).

18972
 18973 Standard Methods Online, Methods 7110 D-17 appears in the 21st, 22nd, and 23rd editions
 18974 as Methods 7110 D. This appears in this Section as SM 7110 D (00) and SM 7110 D
 18975 (00).

18976
 18977 Standard Methods Online, Method 7120-97 appears in the 20th, 21st, 22nd, and 23rd
 18978 editions as Method 7120. This appears in this Section as SM 7120 (97).

18979
 18980 Standard Methods Online, Method 7500-Cs B-00 appears in the 21st, 22nd, ~~and 23rd~~, and
 18981 24th editions as Method 7500-Cs B. This appears in ~~in~~ this Section, ~~thus appears~~ as SM
 18982 7500-Cs B (00).

18983
 18984 Standard Methods Online, Methods 7500-I B-00, 7500-I C-00, and 7500-I D-00 appear in
 18985 the 21st, 22nd, ~~and 23rd~~, and 24th editions as Methods 7500-I B, 7500-I C, and 7500-I D.
 18986 These appear in this Section as SM 7500-I B (00), SM 7500-I C (00), and SM 7500-I D
 18987 (00).

18988
 18989 Standard Methods Online, Methods 7500-Ra B-01, 7500-Ra C-01, and 7500-Ra D-01
 18990 appears in the 21st, ~~and 22nd~~, 23rd, and 24th editions as Methods 7500-Ra B, 7500-Ra C,
 18991 and 7500-Ra D. These appear in this Section as SM 7500-Ra B (01), SM 7500-Ra C
 18992 (01), and SM 7500-Ra D (01).

18993
 18994 Standard Methods Online, Methods ~~7500-Ra B-07, 7500-Ra C-07, 7500-Ra D-07, and~~
 18995 ~~7500-Ra E-07~~ appears in the 22nd, 23rd, and 24th editions ~~edition~~ as ~~Method~~ Methods 7500-
 18996 ~~Ra B, 7500-Ra C, 7500-Ra D, and~~ 7500-Ra E. This appears ~~These appear~~ in this Section
 18997 as ~~SM 7500-Ra B (07), SM 7500-Ra C (07), SM 7500-Ra D (07), and~~ SM 7500-Ra E
 18998 (07).

18999
 19000 Standard Methods Online, Method 7500-Sr B-01 appears in the 21st, 22nd, ~~and 23rd~~, and
 19001 24th editions as Method 7500-Sr B. This appears in this Section as SM 7500-Sr B (01).

19002
 19003 Standard Methods Online, Method 7500-3H B-00 appears in the 21st, 22nd, and 23rd
 19004 editions as Method 7500-3H B. This appears in this Section as SM 7500-3H B (00)

19005
19006 Standard Methods Online, Methods 7500-U B and 7500-U C-00 appear in the 21st, 22nd,
19007 ~~and 23rd~~, and 24th editions as Methods 7500-U B and 7500-U C. These appear in this
19008 Section as SM 7500-U B (00) and SM 7500-U C (00).

19009
19010 (Source: Amended at 50 Ill. Reg. _____, effective _____)

19011
19012 **Section 611.731 Gross Alpha**

19013
19014 Monitoring for Gross Alpha Particle Activity, Radium-226, Radium-228, and Uranium

19015
19016 a) A CWS supplier must monitor to determine whether it complies with Section
19017 611.330(b), (c), and (e). For monitoring gross alpha particle activity, radium-226,
19018 radium-228, uranium, and beta particle and photon radioactivity in drinking
19019 water, "detection limit" is defined as in Section 611.720(c).

19020
19021 1) Applicability and Sampling Location for an Existing CWS Supplier. An
19022 existing CWS supplier using groundwater, surface water, or both
19023 groundwater and surface water must sample at every entry point to the
19024 distribution system representing all sources the supplier uses (a sampling
19025 point) under normal operating conditions. The supplier must take each
19026 sample at the same sampling point, unless conditions make another
19027 sampling point more representative of each source or the Agency
19028 designates a distribution system location under subsection (b)(2)(C).

19029
19030 2) Applicability and Sampling Location for a New CWS Supplier. A new
19031 CWS supplier or a CWS supplier using a new source of water must begin
19032 initial monitoring for the new source within the first quarter after
19033 beginning to use the source. A CWS supplier must conduct more frequent
19034 monitoring as directed by the Agency in a SEP due to possible
19035 contamination or changes in the distribution system or treatment processes
19036 that may increase the concentration of radioactivity in the supplier's
19037 finished water.

19038
19039 b) Initial Monitoring. The Agency may issue a SEP directing a CWS supplier to
19040 monitor for gross alpha particle activity, radium-226, radium-228, and uranium
19041 for four consecutive quarters at all sampling points. The Agency may revise the
19042 SEP waiving the final two quarters of initial monitoring for a sampling point if the
19043 results of the samples from the previous two quarters are below the detection
19044 limit. For gross alpha particle activity, uranium, radium-226, and radium-228
19045 monitoring, the Agency may issue a SEP waiving the final two quarters of initial
19046 monitoring for a sampling point if the results of the samples from the previous
19047 two quarters are below the detection limit. If the average of the initial monitoring

- 19048 results for a sampling point is above the MCL, the supplier must collect and
 19049 analyze quarterly samples at that sampling point until its results from four
 19050 consecutive quarters are at or below the MCL, unless the Agency issues a SEP
 19051 requiring another schedule as part of a formal compliance agreement.
 19052
- 19053 c) Reduced Monitoring. The Agency may allow a CWS supplier to reduce the
 19054 future frequency of monitoring from once every three years to once every six or
 19055 nine years at each sampling point, based on certain criteria:
 19056
- 19057 1) If the average of the initial monitoring results for each contaminant (i.e.,
 19058 gross alpha particle activity, uranium, radium-226, or radium-228) is
 19059 below the detection limit Section 611.720(c)(1) specifies, the supplier
 19060 must collect and analyze for that contaminant using at least one sample at
 19061 that sampling point every nine years.
 19062
 - 19063 2) For gross alpha particle activity and uranium, if the average of the initial
 19064 monitoring results for each contaminant is at or above the detection limit
 19065 but at or below one-half the MCL, the supplier must collect and analyze
 19066 for that contaminant using at least one sample at that sampling point every
 19067 six years. For combined radium-226 and radium-228, the supplier must
 19068 combine the analytical results. If the average of the combined initial
 19069 monitoring results for radium-226 and radium-228 is at or above the
 19070 detection limit but at or below one-half the MCL, the supplier must collect
 19071 and analyze for that contaminant using at least one sample at that sampling
 19072 point every six years.
 19073
 - 19074 3) For gross alpha particle activity and uranium, if the average of the initial
 19075 monitoring results for each contaminant is above one-half the MCL but at
 19076 or below the MCL, the supplier must collect and analyze at least one
 19077 sample at that sampling point every three years. For combined radium-
 19078 226 and radium-228, the supplier must combine the analytical results. If
 19079 the average of the combined initial monitoring results for radium-226 and
 19080 radium-228 is above one-half the MCL but at or below the MCL, the
 19081 supplier must collect and analyze at least one sample at that sampling
 19082 point every three years.
 19083
 - 19084 4) A supplier must use the samples it collected during the reduced
 19085 monitoring period to determine the monitoring frequency for subsequent
 19086 monitoring periods (e.g., if a supplier's sampling point is on a nine year
 19087 monitoring period, and the sample result is above one-half the MCL, then
 19088 the next monitoring period for that sampling point is three years).
 19089
 - 19090 5) If a supplier has a monitoring result exceeding the MCL while on reduced

19091 monitoring, the supplier must collect and analyze quarterly samples at that
19092 sampling point until the supplier has results from four consecutive quarters
19093 below the MCL, unless the supplier enters into another schedule as part of
19094 a formal compliance agreement with the Agency.
19095

19096 d) Compositing. To fulfill quarterly monitoring requirements for gross alpha
19097 particle activity, radium-226, radium-228, or uranium, a supplier may composite
19098 up to four consecutive quarterly samples from a single entry point if analysis is
19099 done within a year after collecting the first sample. The supplier must treat
19100 analytical results from the composited sample as the average analytical result to
19101 determine whether the supplier complies with the MCLs and the future
19102 monitoring frequency. If the analytical result from the composited sample is
19103 greater than one-half the MCL, the Agency may issue a SEP directing the supplier
19104 to take additional quarterly samples before allowing the supplier to sample under
19105 a reduced monitoring schedule.
19106

19107 e) A supplier may substitute a gross alpha particle activity measurement for the
19108 required radium-226 measurement ~~if, provided~~ the measured gross alpha particle
19109 activity does not exceed 5 pCi/L. A supplier may substitute a gross alpha particle
19110 activity measurement for the required uranium measurement ~~if, provided~~ the
19111 measured gross alpha particle activity does not exceed 15 pCi/L.
19112

19113 1) The gross alpha measurement must have a confidence interval of 95%
19114 (1.65 σ , where σ is the standard deviation of the net counting rate of the
19115 sample) for radium-226 and uranium.
19116

19117 2) When a supplier uses a gross alpha particle activity measurement in lieu of
19118 a radium-226 or uranium measurement, the supplier must use the gross
19119 alpha particle activity analytical result to determine the future monitoring
19120 frequency for radium-226 or uranium.
19121

19122 3) If the laboratory does not detect gross alpha particle activity, the supplier
19123 must use one-half the detection limit to determine whether it complies and
19124 its future monitoring frequency.
19125

19126 BOARD NOTE: This Section derives from 40 CFR 141.26(a).
19127

19128 (Source: Amended at 50 Ill. Reg. _____, effective _____)
19129

19130 SUBPART S: GROUNDWATER RULE
19131

19132 **Section 611.801 Sanitary Surveys for GWS Suppliers**
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- a) A GWS supplier must provide the Agency, at the Agency's request, any existing information that will enable the Agency to conduct a sanitary survey.
 - b) For the purposes of this Subpart S, a "sanitary survey", as conducted by the Agency, includes an onsite review of the delineated WHPAs (identifying sources of contamination within the WHPAs and evaluations of the hydrogeologic sensitivity of the delineated WHPAs conducted under source water assessments or utilizing other relevant information if available), facilities, equipment, operation, maintenance, and monitoring compliance of a PWS to evaluate the adequacy of the system, its sources and operations and the distribution of safe drinking water.
 - c) The sanitary survey must include an evaluation of the applicable components listed in subsections (c)(1) through (c)(8):
 - 1) Source;
 - 2) Treatment including any corrosion control treatment and water quality parameters;
 - 3) Distribution system;
 - 4) Finished water storage;
 - 5) Pumps, pump facilities, and controls;
 - 6) Monitoring, reporting, and data verification;
 - 7) System management and operation; and
 - 8) Operator compliance with Agency requirements.
 - d) The Agency must repeat the sanitary survey as follows:
 - 1) The Agency must conduct a sanitary survey that addresses the eight sanitary survey components listed in subsection (c) no less frequently than every three years for a CWS supplier, except as provided in subsection (d)(3), and every five years for a non-CWS supplier. The Agency may conduct more frequent sanitary surveys for any supplier. The sanitary survey must include an evaluation of each of the elements ~~set forth~~ in subsection (c), as applicable.

- 19175 2) The Agency may use a phased review process to meet the requirements of
19176 subsection (d)(1) if all the applicable elements of subsection (c) are
19177 evaluated within the required interval.
19178
- 19179 3) The Agency may conduct sanitary surveys once every five years for
19180 CWSs under any of the following circumstances:
19181
- 19182 A) If the system either provides at least 4-log treatment of viruses
19183 (using inactivation, removal, or an Agency-approved combination
19184 of 4-log inactivation and removal) before or at the first customer
19185 for all its groundwater sources; or
19186
- 19187 B) If the supplier has an outstanding performance record, as
19188 determined by the Agency and documented in previous sanitary
19189 surveys, and the supplier had no history of total coliform MCL or
19190 monitoring violations under former Sections 611.521 through
19191 611.527 since the last sanitary survey.
19192
- 19193 4) This subsection (d)(4) corresponds with 40 CFR 142.16(o)(2)(iv), which
19194 imposes requirements for describing the elements of the State's regulatory
19195 system. This statement maintains structural consistency with the
19196 corresponding federal provision.
19197
- 19198 5) The Agency must provide a GWS supplier with written notice in a SEP
19199 that describes any significant deficiency that it has found no later than 30
19200 days after the Agency has identified the significant deficiency. The notice
19201 may specify corrective actions and deadlines for completion of corrective
19202 actions. The Agency may provide the written notice at the time of the
19203 sanitary survey.
19204

19205 BOARD NOTE: Subsections (a) through (c) derive from 40 CFR 141.401. Subsection
19206 (d) derives from 40 CFR 142.16(o)(2).
19207

19208 (Source: Amended at 50 Ill. Reg. _____, effective _____)
19209

19210 **Section 611.802 Groundwater Source Microbial Monitoring and Analytical Methods**
19211

- 19212 a) Triggered Source Water Monitoring
19213
- 19214 1) General Requirements. A GWS supplier must conduct triggered source
19215 water monitoring if the following conditions exist.
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- A) The supplier does not provide at least 4-log treatment of viruses (using inactivation, removal, or an Agency-approved combination of 4-log virus inactivation and removal) before or at the first customer for each groundwater source.
 - B) This subsection (a)(1)(B) corresponds with 40 CFR 141.802(a)(1)(ii), which has no operative effect after a past implementation date. This statement maintains structural consistency with the federal regulations.
 - C) The system is notified that a sample collected under Sections 611.1054 through 611.1057 is total coliform-positive and the sample is not invalidated under Section 611.1053(c).
- 2) Sampling Requirements. A GWS supplier must collect, within 24 hours after notification of the total coliform-positive sample, at least one groundwater source sample from each groundwater source in use at the time the total coliform-positive sample was collected under Sections 611.1054 through 611.1057, except as provided in subsection (a)(2)(B).
- A) The Agency may issue a SEP extending the 24-hour time limit on a case-by-case basis if it determines that the supplier cannot collect the groundwater source water sample within 24 hours due to circumstances beyond the supplier's control. In the case of an extension, the Agency must specify how much time the supplier has to collect the sample.
 - B) If approved by the Agency, a supplier with more than one groundwater source may meet the requirements of this subsection (a)(2) by sampling a representative groundwater source or sources. If directed by the Agency in a SEP, the supplier must submit for Agency approval a triggered source water monitoring plan that identifies one or more groundwater sources that are representative of each monitoring site in the system's sample siting plan under Section 611.1053 and that the system intends to use for representative sampling under this subsection (a).
 - C) This subsection (a)(2)(C) corresponds with 40 CFR 141.802(a)(1)(ii), a now-obsolete implementing provision. This statement maintains structural consistency with the federal regulations.
 - D) A GWS supplier serving 1,000 or fewer people may use a repeat sample collected from a groundwater source to meet both the

- 19261 requirements of Subpart AA and to satisfy the monitoring
19262 requirements of subsection (a)(2) for that groundwater source only
19263 if the Agency issues a SEP approving the use of E. coli as a fecal
19264 indicator for source water monitoring under this subsection (a) and
19265 approves the use of a single sample for meeting both the triggered
19266 source water monitoring requirements in this subsection (a) and the
19267 repeat monitoring requirements in Section 611.1058. If the repeat
19268 sample collected from the groundwater source is E. coli-positive,
19269 the system must comply with subsection (a)(3).
19270
- 19271 3) Additional Requirements. If the Agency does not require corrective action
19272 under Section 611.803(a)(2) for a fecal indicator-positive source water
19273 sample collected under subsection (a)(2) that is not invalidated under
19274 subsection (d), the supplier must collect five additional source water
19275 samples from the same source within 24 hours after being notified of the
19276 fecal indicator-positive sample.
19277
- 19278 4) Consecutive and Wholesale Systems
19279
- 19280 A) In addition to the other requirements of this subsection (a), a
19281 consecutive GWS supplier that has a total coliform-positive sample
19282 collected under Sections 611.1054 through 611.1057, must notify
19283 the wholesale systems within 24 hours after being notified of the
19284 total coliform-positive sample.
19285
- 19286 B) In addition to the other requirements of this subsection (a), a
19287 wholesale GWS supplier must comply with the following
19288 requirements:
19289
- 19290 i) A wholesale GWS supplier that receives notice from a
19291 consecutive system it serves that a sample collected under
19292 Sections 611.1054 through 611.1057 is total coliform-
19293 positive must, within 24 hours after being notified, collect a
19294 sample from its groundwater sources under subsection
19295 (a)(2) and analyze it for a fecal indicator under subsection
19296 (c).
19297
- 19298 ii) If the sample collected under subsection (a)(4)(B)(i) is fecal
19299 indicator-positive, the wholesale GWS supplier must notify
19300 all consecutive systems served by that groundwater source
19301 of the fecal indicator source water positive within 24 hours
19302 after being notified of the groundwater source sample

- 19303 monitoring result and must meet the requirements of
19304 subsection (a)(3).
19305
- 19306 5) Exceptions to the Triggered Source Water Monitoring Requirements. A
19307 GWS supplier is not required to comply with the source water monitoring
19308 requirements of subsection (a) if either of the following conditions exists:
19309
- 19310 A) The Agency issues a SEP determining and documenting that a
19311 distribution system deficiency caused the total coliform-positive
19312 sample collected under Sections 611.1054 through 611.1057; or
19313
- 19314 B) The total coliform-positive sample collected under Sections
19315 611.1054 through 611.1057 is collected at a location that meets
19316 Agency criteria for distribution system conditions that will cause
19317 total coliform-positive samples.
19318
- 19319 b) Assessment Source Water Monitoring. If the Agency directs in a SEP, a GWS
19320 supplier must conduct assessment source water monitoring that meets Agency-
19321 determined requirements for such monitoring. A GWS supplier conducting
19322 assessment source water monitoring may use a triggered source water sample
19323 collected under subsection (a)(2) to meet the requirements of subsection (b).
19324 Agency-determined assessment source water monitoring requirements may
19325 include the following:
19326
- 19327 1) Collection of a total of 12 groundwater source samples that represent each
19328 month the system provides groundwater to the public;
19329
- 19330 2) Collection of samples from each well, unless the system obtains written
19331 Agency approval to conduct monitoring at one or more wells within the
19332 GWS that are representative of multiple wells used by that system and that
19333 draw water from the same hydrogeologic setting;
19334
- 19335 3) Collection of a standard sample volume of at least 100 mL for fecal
19336 indicator analysis, regardless of the fecal indicator or analytical method
19337 used;
19338
- 19339 4) Analysis of all groundwater source samples using one of the analytical
19340 methods listed in subsection (c)(2) for the presence of E. coli, enterococci,
19341 or coliphage;
19342
- 19343 5) Collection of groundwater source samples at a location prior to any
19344 treatment of the groundwater source unless the Agency approves a
19345 sampling location after treatment; and

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6) Collection of groundwater source samples at the well itself, unless the system's configuration does not allow for sampling at the well itself and the Agency approves in a SEP an alternate sampling location that is representative of the water quality of that well.

c) Analytical Methods

1) A GWS supplier subject to the source water monitoring requirements of subsection (a) must collect a standard sample volume of at least 100 mL for fecal indicator analysis, regardless of the fecal indicator or analytical method used.

2) A GWS supplier must analyze all groundwater source samples collected under subsection (a) using one of the analytical methods listed in subsections (c)(2)(A) through (c)(2)(C), each incorporated by reference in Section 611.102, or alternative methods approved by the Agency under Section 611.480, subject to the limitations of subsection (c)(2)(D), for the presence of E. coli, enterococci, or coliphage:

A) E. coli. Enzyme Substrate Technique

- i) Colilert[®]. SM 9223 B (97), SM 9223 B (04), or SM 9223 B (16).
- ii) Colisure[®]. SM 9223 B (97), SM 9223 B (04), or SM 9223 B (16).
- iii) Membrane Filter Method with MI Agar. USEPA 1604 (02).
- iv) E*Colite (98).
- v) EC-MUG. SM 9221 F (94), SM 9221 F (06), or SM 9221 F (14).
- vi) NA-MUG. SM 9222 G (97) (20th ed. only) or SM 9222 I (15), [SM 9222 I \(22\)](#).
- vii) Colilert[®]-18. SM 9223 B (97), SM 9223 B (04), or SM 9223 B (16).
- viii) ReadyCult[®] (07).

- 19389 ix) Modified Colitag™ (09) or Modified Colitag™ (20).
- 19390
- 19391 x) Chromocult® (00).
- 19392
- 19393 xi) Tecta (14) or Tecta (17).
- 19394
- 19395 xii) RAPID'E. coli (20).
- 19396
- 19397 BOARD NOTE: EC-MUG (SM 9221 F (94) (20th ed. only)) or
- 19398 NA-MUG (SM 9222 G (97) (20th ed. only)), both incorporated by
- 19399 reference in Section 611.102, can be used for E. coli testing step,
- 19400 as described in 40 CFR 141.21(f)(6)(i) or (f)(6)(ii), incorporated by
- 19401 reference in Section 611.102, after use of SM 9221 B (93), SM
- 19402 9221 B (94), SM 9221 B (99), SM 9221 B (06), SM 9221 D (93),
- 19403 SM 9221 D (94), SM 9221 D (99), SM 9221 D (06), SM 9222 B
- 19404 (91), SM 9222 B (94), SM 9222 B (97), SM 9222 C (91), SM 9222
- 19405 C (94), or SM 9222 C (97).
- 19406

B) E. coli. Fermentation Technique

- 19407
- 19408
- 19409 i) Hach 10029 (99) (m-ColiBlue24®).
- 19410
- 19411 ii) SM 9222 J (15), [SM 9222 J \(22\)](#).
- 19412

C) Enterococci

- 19413
- 19414
- 19415 i) Multiple-Tube Technique. SM 9230 B (93) (20th ed. only),
- 19416 SM 9230 B (04), [SM 9230 B \(13\)](#), [SM 9230 B \(22\)](#), SM
- 19417 9230 C (93) (20th ed. only), SM 9230 C (13), [SM 9230 C](#)
- 19418 [\(22\)](#), or USEPA 1600 (02).
- 19419

19420 BOARD NOTE: The holding time and temperature for

19421 groundwater samples are specified in subsection (c)(2)(D),

19422 rather than as specified in Section 8 of USEPA 1600 (02).

19423

- 19424 ii) Fluorogenic Substrate Enterococcus Test (using Enterolert).
- 19425 Enterolert (96), ~~or~~ SM 9230 D (13), [or SM 9230 D \(22\)](#).
- 19426

19427 BOARD NOTE: Medium is available through IDEXX

19428 Laboratories, Inc., at the address ~~set forth~~ in Section

19429 611.102(b). Preparation and use of the medium must be as

19430 [stated](#) ~~set forth~~ in the article that embodies the method as

19431 incorporated by reference in Section 611.102(b).

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- D) Coliphage
 - i) Two-Step Enrichment Presence-Absence Procedure. USEPA 1601 (01) or Charm Fast Phage (12).
 - ii) Single Agar Layer Procedure. USEPA 1602 (01).
- E) Limitation on Methods Use. The time from sample collection to initiation of analysis may not exceed 30 hours. The GWS supplier is encouraged but is not required to hold samples below 10° C during transit.

d) Invalidation of a Fecal Indicator-Positive Groundwater Source Sample

- 1) A GWS supplier may obtain Agency invalidation of a fecal indicator-positive groundwater source sample collected under subsection (a) only under either of the following conditions:
 - A) The supplier provides the Agency with written notice from the laboratory that improper sample analysis occurred; or
 - B) The Agency issues a SEP determining and documenting that substantial evidence that a fecal indicator-positive groundwater source sample is not related to source water quality.
- 2) If the Agency invalidates a fecal indicator-positive groundwater source sample, the GWS supplier must collect another source water sample under subsection (a) within 24 hours after being notified by the Agency of its invalidation decision, and the supplier must have it analyzed for the same fecal indicator using the analytical methods in subsection (c). The Agency may extend the 24-hour time limit on a case-by-case basis if the supplier cannot collect the source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the Agency must specify how much time the system has to collect the sample.

e) Sampling Location

- 1) Any groundwater source sample required under subsection (a) must be collected at a location prior to any treatment of the groundwater source unless the Agency approves a sampling location after treatment.

- 19474 2) If the supplier's system configuration does not allow for sampling at the
- 19475 well itself, it may collect a sample at an Agency-approved location to meet
- 19476 the requirements of subsection (a) if the sample is representative of the
- 19477 water quality of that well.
- 19478
- 19479 f) New Sources. If the Agency directs in a SEP, a GWS supplier placing a new
- 19480 groundwater source into service must conduct assessment source water
- 19481 monitoring under subsection (b). If the SEP directs, the supplier must begin
- 19482 monitoring before the groundwater source is used to provide water to the public.
- 19483
- 19484 g) Public Notification. A GWS supplier with a groundwater source sample collected
- 19485 under subsection (a) or (b) that is fecal indicator-positive and that is not
- 19486 invalidated under subsection (d), including a consecutive system supplier served
- 19487 by the groundwater source, must conduct public notification under Section
- 19488 611.902.
- 19489
- 19490 h) Monitoring Violations. A failure to meet the requirements of subsections (a)
- 19491 through (f) is a monitoring violation that requires the GWS supplier to provide
- 19492 public notification under Section 611.904.
- 19493

19494 BOARD NOTE: This Section derives from 40 CFR 141.402 and appendix A to subpart C
 19495 of 40 CFR 141. The Board did not separately list approved alternative methods from
 19496 Standard Methods Online that are the same version as a method appearing in a printed
 19497 edition of Standard Methods. Using the Standard Methods Online copy is acceptable.

19498
 19499 Standard Methods Online, Method 9221 F-06 appears in the 22nd edition as
 19500 Method 9221 F. This appears in this Section as SM 9221 F (06).

19501
 19502 Standard Methods Online, Method 9222 G-97 appears in the 20th and 21st editions
 19503 as Method 9222 G. This appears in this Section as SM 9222 G (97).

19504
 19505 Standard Methods Online, Method 9223 B-97 appears in the 20th and 21st editions
 19506 as Method 9223 B. This appears in this Section as SM 9223 B (97).

19507
 19508 Standard Methods Online, Method 9223 B-04 appears in the 22nd edition as
 19509 Method 9223 B. This appears in this Section as SM 9223 B (04).

19510
 19511 (Source: Amended at 50 Ill. Reg. _____, effective _____)

19512
 19513 **Section 611.803 Treatment Technique Requirements for GWS Suppliers**

- 19514
- 19515 a) GWS Suppliers with Significant Deficiencies or Source Water Fecal
- 19516 Contamination

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- 1) The treatment technique requirements of this Section must be met by GWS suppliers when a significant deficiency is identified or when a groundwater source sample collected under Section 611.802(a)(3) is fecal indicator-positive.
 - 2) If directed by the Agency by a SEP, a GWS supplier with a groundwater source sample collected under Section 611.802(a)(2), (a)(4), or (b) that is fecal indicator-positive must comply with the treatment technique requirements of this Section.
 - 3) When a significant deficiency is identified at a Subpart B PWS that uses both groundwater and surface water or groundwater under the direct influence of surface water, the system must comply with provisions of this subsection (a) except ~~if in cases where~~ the Agency determines that the significant deficiency is in a portion of the distribution system that is served solely by surface water or groundwater under the direct influence of surface water.
 - 4) Unless the Agency, by a SEP, directs the GWS supplier to implement a specific corrective action, the GWS supplier must consult with the Agency regarding the appropriate corrective action within 30 days after receiving written notice from the Agency of a significant deficiency, written notice from a laboratory that a groundwater source sample collected under Section 611.802(a)(3) was found to be fecal indicator-positive, or direction from the Agency that a fecal indicator-positive collected under Section 611.802(a)(2), (a)(4), or (b) requires corrective action. For the purposes of this Subpart S, significant deficiencies include defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the Agency determines to be causing, or have potential for causing, the introduction of contamination into the water delivered to consumers.
 - 5) Within 120 days (or earlier if directed by the Agency) after receiving written notification from the Agency of a significant deficiency, written notice from a laboratory that a groundwater source sample collected under Section 611.802(a)(3) was found to be fecal indicator-positive, or written notice from the Agency that a fecal indicator-positive sample collected under Section 611.802(a)(2), (a)(4), or (b) requires corrective action, the GWS supplier must do either of the following:
 - A) It must have completed corrective action in ~~compliance~~ accordance with any applicable plan review processes adopted by the Agency

19560 or with any SEP issued by the Agency, if any, including Agency-
19561 specified interim measures; or
19562

19563 B) It must be in compliance with an Agency-approved corrective
19564 action plan and schedule, subject to the following conditions:
19565

19566 i) Any subsequent modifications to an Agency-approved
19567 corrective action plan and schedule must also be approved
19568 by the Agency; and
19569

19570 ii) If the Agency specifies interim measures for protection of
19571 the public health pending Agency approval of the
19572 corrective action plan and schedule or pending completion
19573 of the corrective action plan, the supplier must comply with
19574 those interim measures, as well as with any schedule
19575 specified by the Agency.
19576

19577 6) Corrective Action Alternatives. A GWS supplier that meets the conditions
19578 of subsection (a)(1) or (a)(2) must implement one or more of the following
19579 corrective action alternatives:
19580

19581 A) It must correct all significant deficiencies;

19582 B) It must provide an alternate source of water;

19583 C) It must eliminate the source of contamination; or
19584

19585 D) It must provide treatment that reliably achieves at least 4-log
19586 treatment of viruses (using inactivation, removal, or an Agency-
19587 approved combination of 4-log virus inactivation and removal)
19588 before or at the first customer for the groundwater source.
19589
19590

19591 7) Special Notice to the Public of Significant Deficiencies or Source Water
19592 Fecal Contamination
19593
19594

19595 A) In addition to the applicable public notification requirements of
19596 Section 611.902, a community GWS supplier that receives notice
19597 from the Agency of a significant deficiency or notification of a
19598 fecal indicator-positive groundwater source sample that is not
19599 invalidated by the Agency under Section 611.802(d) must inform
19600 the public served by the water system under Section 611.883(h)(6)
19601 of the fecal indicator-positive source sample or of any significant
19602 deficiency that has not been corrected. The supplier must continue
19603 to inform the public annually until the significant deficiency is

19604 corrected or the fecal contamination in the groundwater source is
19605 determined by the Agency to be corrected under subsection (a)(5).
19606

19607 B) In addition to the applicable public notification requirements of
19608 Section 611.902, a non-community GWS supplier that receives
19609 notice from the Agency of a significant deficiency must inform the
19610 public served by the water system in a manner approved by the
19611 Agency of any significant deficiency that has not been corrected
19612 within 12 months after being notified by the Agency, or earlier if
19613 directed by the Agency. The supplier must continue to inform the
19614 public annually until the significant deficiency is corrected. The
19615 information must include the following information:
19616

19617 i) The nature of the significant deficiency and the date the
19618 significant deficiency was identified by the Agency;
19619

19620 ii) The Agency-approved plan and schedule for correction of
19621 the significant deficiency, including interim measures,
19622 progress to date, and any interim measures completed; and
19623

19624 iii) For a supplier with a large proportion of non-English
19625 speaking consumers, as determined by the Agency,
19626 information in the appropriate languages regarding the
19627 importance of the notice or a telephone number or address
19628 where consumers may contact the system to obtain a
19629 translated copy of the notice or assistance in the appropriate
19630 language.
19631

19632 C) If directed by the Agency, a non-CWS supplier with significant
19633 deficiencies that have been corrected must inform its customers of
19634 the significant deficiencies, how the deficiencies were corrected,
19635 and the dates of correction under subsection (a)(7)(B).
19636

19637 b) Compliance Monitoring
19638

19639 1) Existing Groundwater Sources. A GWS supplier that is not required by
19640 Section 611.802(a)(1) to meet the source water monitoring requirements
19641 of this Subpart S for any groundwater source must notify the Agency in
19642 writing that it provides at least 4-log treatment of viruses (using
19643 inactivation, removal, or an Agency-approved combination of 4-log virus
19644 inactivation and removal) before or at the first customer for the specified
19645 groundwater source and begin compliance monitoring in
19646 compliance ~~accordance~~ with subsection (b)(3). Notification to the Agency

19647 must include engineering, operational, or other information that the
19648 Agency requests to evaluate the submission. If the supplier subsequently
19649 discontinues 4-log treatment of viruses (using inactivation, removal, or an
19650 Agency-approved combination of 4-log virus inactivation and removal)
19651 before or at the first customer for a groundwater source, the supplier must
19652 conduct groundwater source monitoring, as required under Section
19653 611.802.

19654
19655 2) New Groundwater Sources. A GWS supplier that places a groundwater
19656 source in service ~~that~~which is not required by Section 611.802(a)(1) to
19657 meet the source water monitoring requirements of this Subpart S must
19658 comply with the requirements of subsections (b)(2)(A), (b)(2)(B), and
19659 (b)(2)(C).

19660
19661 A) The supplier must notify the Agency in writing that it provides at
19662 least 4-log treatment of viruses (using inactivation, removal, or an
19663 Agency-approved combination of 4-log virus inactivation and
19664 removal) before or at the first customer for the groundwater
19665 source. Notification to the Agency must include engineering,
19666 operational, or other information that the Agency requests by a
19667 SEP to evaluate the submission.

19668
19669 B) The supplier must conduct compliance monitoring, as required
19670 under Section 611.803(b)(3), within 30 days after placing the
19671 source in service.

19672
19673 C) The supplier must conduct groundwater source monitoring under
19674 Section 611.802 if it subsequently discontinues 4-log treatment of
19675 viruses (using inactivation, removal, or an Agency-approved
19676 combination of 4-log virus inactivation and removal) before or at
19677 the first customer for the groundwater source.

19678
19679 3) Monitoring Requirements. A GWS supplier subject to the requirements of
19680 subsection (a), (b)(1), or (b)(2) must monitor the effectiveness and
19681 reliability of treatment for that groundwater source before or at the first
19682 customer as follows:

19683
19684 A) Chemical Disinfection

19685
19686 i) GWS Suppliers Serving More Than 3,300 People. A GWS
19687 supplier that serves more than 3,300 people must
19688 continuously monitor the residual disinfectant
19689 concentration using analytical methods specified in Section

19690 611.531(b) at a location approved by the Agency and must
19691 record the lowest residual disinfectant concentration each
19692 day that water from the groundwater source is served to the
19693 public. The GWS supplier must maintain the Agency-
19694 approved residual disinfectant concentration every day it
19695 serves water from the groundwater source to the public. If
19696 there is a failure in the continuous monitoring equipment,
19697 the GWS supplier must conduct grab sampling every four
19698 hours until the continuous monitoring equipment is
19699 returned to service. The supplier must resume continuous
19700 residual disinfectant monitoring within 14 days.

19701
19702 ii) GWS Suppliers Serving 3,300 or Fewer People. A GWS
19703 supplier that serves 3,300 or fewer people must monitor the
19704 residual disinfectant concentration using analytical methods
19705 specified in Section 611.531(b) at a location approved by
19706 the Agency and record the residual disinfection
19707 concentration each day that water from the groundwater
19708 source is served to the public. The GWS supplier must
19709 determine and maintain the Agency-approved residual
19710 disinfectant concentration every day that it serves water
19711 from the groundwater source to the public. The GWS
19712 supplier must take a daily grab sample during the hour of
19713 peak flow or at another time specified by the Agency. If
19714 any daily grab sample measurement falls below the
19715 Agency-approved residual disinfectant concentration, the
19716 GWS supplier must take follow-up samples every four
19717 hours until the residual disinfectant concentration is
19718 restored to the Agency-approved level. Alternatively, a
19719 GWS supplier that serves 3,300 or fewer people may
19720 monitor continuously and meet the requirements of
19721 subsection (b)(3)(A)(i).

19722
19723 B) Membrane Filtration. A GWS supplier that uses membrane
19724 filtration to meet the requirements of this Subpart S must monitor
19725 the membrane filtration process in compliance ~~accordance~~ with all
19726 Agency-specified monitoring requirements and must operate the
19727 membrane filtration in compliance ~~accordance~~ with all Agency-
19728 specified compliance requirements. A GWS supplier that uses
19729 membrane filtration is in compliance with the requirement to
19730 achieve at least 4-log removal of viruses when it fulfills the
19731 following conditions:
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- i) The membrane has an absolute molecular weight cut-off, or an alternative parameter that describes the exclusion characteristics of the membrane, that can reliably achieve at least 4-log removal of viruses;
 - ii) The membrane process is operated in ~~compliance~~ ~~accordance~~ with Agency-specified compliance requirements; and
 - iii) The integrity of the membrane is intact.
- C) Alternative Treatment. A GWS supplier that uses an Agency-approved alternative treatment to meet the requirements of this Subpart S by providing at least 4-log treatment of viruses (using inactivation, removal, or an Agency-approved combination of 4-log virus inactivation and removal) before or at the first customer must do both of the following:
- i) It must monitor the alternative treatment in ~~compliance~~ ~~accordance~~ with all Agency-specified monitoring requirements; and
 - ii) It must operate the alternative treatment in ~~compliance~~ ~~accordance~~ with all operational requirements determined by the supplier that the Agency has approved as necessary to achieve at least 4-log treatment of viruses.
- c) Discontinuing Treatment. A GWS supplier may discontinue 4-log treatment of viruses (using inactivation, removal, or an Agency-approved combination of 4-log virus inactivation and removal) before or at the first customer for a groundwater source if the supplier determines and documents and the Agency approves in writing that 4-log treatment of viruses is no longer necessary for that groundwater source. A system that discontinues 4-log treatment of viruses is subject to the source water monitoring and analytical methods requirements of Section 611.802 of this Subpart S.
- d) A failure to meet the monitoring requirements of subsection (b) is a monitoring violation and requires the GWS supplier to provide public notification under Section 611.904.

19773 BOARD NOTE: Derived from 40 CFR 141.403.

19774 (Source: Amended at 50 Ill. Reg. _____, effective _____)

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Section 611.804 Treatment Technique Violations for GWS Suppliers

- a) A GWS supplier with a significant deficiency is in violation of the treatment technique requirement if, within 120 days (or earlier if directed by the Agency by a SEP) after receiving written notice from the Agency of the significant deficiency, the system does not do either of the following:
 - 1) It does not complete corrective action in compliance~~accordance~~ with any applicable Agency plan review processes or other Agency guidance and direction, including Agency specified interim actions and measures; or
 - 2) It is not in compliance with an Agency-approved corrective action plan and schedule.

- b) Unless the Agency invalidates a fecal indicator-positive groundwater source sample under Section 611.802(d), a GWS supplier is in violation of the treatment technique requirement if, within 120 days (or earlier if directed by the Agency) after meeting the conditions of Section 611.803(a)(1) or (a)(2), the supplier does not do either of the following:
 - 1) It does not complete corrective action in compliance~~accordance~~ with any applicable Agency plan review processes or other Agency guidance and direction, including Agency-specified interim measures; or
 - 2) It is not in compliance with an Agency-approved corrective action plan and schedule.

- c) A GWS supplier subject to the requirements of Section 611.803(b)(3) that fails to maintain at least 4-log treatment of viruses (using inactivation, removal, or an Agency-approved combination of 4-log virus inactivation and removal) before or at the first customer for a groundwater source is in violation of the treatment technique requirement if the failure is not corrected within four hours after determining the supplier is not maintaining at least 4-log treatment of viruses before or at the first customer.

- d) A GWS supplier must give public notification under Section 611.903 for the treatment technique violations specified in subsections (a), (b), and (c).

BOARD NOTE: Derived from 40 CFR 141.404.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

19819 **Section 611.805 Reporting and Recordkeeping for GWS Suppliers**

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- a) Reporting. In addition to the requirements of Section 611.840, a GWS supplier regulated under this Subpart S must provide the following information to the Agency:
 - 1) A GWS supplier conducting compliance monitoring under Section 611.803(b) must notify the Agency any time the supplier fails to meet any Agency-specified requirements including minimum residual disinfectant concentration, membrane operating criteria or membrane integrity, and alternative treatment operating criteria, if operation in compliance~~accordance~~ with the criteria or requirements is not restored within four hours. The GWS supplier must notify the Agency as soon as possible, but in no case later than the end of the next business day.
 - 2) After completing any corrective action under Section 611.803(a), a GWS supplier must notify the Agency within 30 days after completion of the corrective action.
 - 3) If a GWS supplier subject to the requirements of Section 611.802(a) does not conduct source water monitoring under Section 611.802(a)(5)(B), the supplier must provide documentation to the Agency within 30 days after the total coliform-positive sample that it met the Agency criteria.

- b) Recordkeeping. In addition to the requirements of Section 611.860, a GWS supplier regulated under this Subpart S must maintain the following information in its records:
 - 1) Documentation of corrective actions. Documentation must be kept for at least ten years.
 - 2) Documentation of notice to the public as required under Section 611.803(a)(7). Documentation must be kept for at least three years.
 - 3) Records of decisions under Section 611.802(a)(5)(B) and records of invalidation of fecal indicator-positive groundwater source samples under Section 611.802(d). Documentation must be kept for at least five years.
 - 4) For a consecutive system supplier, documentation of notification to the wholesale systems of total coliform-positive samples that are not invalidated under Section 611.1053. Documentation must be kept for at least five years.

- 19862 5) For a supplier, including a wholesale system supplier, that is required to
19863 perform compliance monitoring under Section 611.803(b), the following
19864 information:
19865
19866 A) Records of the supplier-specified, Agency-approved minimum
19867 disinfectant residual. Documentation must be kept for at least ten
19868 years;
19869
19870 B) Records of the lowest daily residual disinfectant concentration and
19871 records of the date and duration of any failure to maintain the
19872 Agency-prescribed minimum residual disinfectant concentration
19873 for a period of more than four hours. Documentation must be kept
19874 for at least five years; and
19875
19876 C) Records of supplier-specified, Agency-approved compliance
19877 requirements for membrane filtration and of parameters specified
19878 by the supplier for Agency-approved alternative treatment and
19879 records of the date and duration of any failure to meet the
19880 membrane operating, membrane integrity, or alternative treatment
19881 operating requirements for more than four hours. Documentation
19882 must be kept for at least five years.
19883

19884 BOARD NOTE: Derived from 40 CFR 141.405.

19885 (Source: Amended at 50 Ill. Reg. _____, effective _____)
19886
19887

19888 **SUBPART T: REPORTING AND RECORDKEEPING**
19889

19890 **Section 611.840 Reporting**
19891

- 19892 a) Except when this Part specifies a shorter period, a supplier must report to the
19893 Agency the results of any test measurement or analysis this Part requires within
19894 the earlier of the following timeframes:
19895
19896 1) The ten days after the month when the supplier receives the result; or
19897
19898 2) The ten days after the end of the monitoring period the Agency specifies
19899 in a SEP.
19900
19901 b) Except as this Part specifies a different reporting period, a supplier must report to
19902 the Agency within 48 hours any failure to comply with any provision (including
19903 failure to comply with monitoring requirements) of this Part.
19904

- 19905 c) The supplier needs not report analytical results to the Agency if an Agency
19906 laboratory performs the analysis.
- 19907
- 19908 d) Notice to the Agency
- 19909
- 19910 1) Within ten days after completing the public notification requirements
19911 under Subpart V for the initial public notice and any repeat public notices,
19912 the PWS must certify to the Agency that it has fully complied with the
19913 public notification rules under subpart V. ~~The For Tier 2 and 3 public~~
19914 ~~notices, the~~ PWS must include with this certification a representative copy
19915 of each type of notice that the PWS distributed, published, posted, or made
19916 available to the persons served and to the media.
- 19917
- 19918 2) For a Tier 1 public notice for exceeding the lead action level, the PWS
19919 must provide a copy of ~~the any~~ Tier 1 public notice to USEPA and the
19920 Agency as soon as practicable but no later than 24 hours after the supplier
19921 learns of the exceedance.
- 19922
- 19923 e) The supplier must submit to the Agency within the time the Agency states in a
19924 request copies of any records Section 611.860 requires or copies of any existing
19925 documents that Section 4 of the Act [415 ILCS 5/4] entitles the Agency to
19926 inspect.
- 19927

19928 BOARD NOTE: This Section derives from 40 CFR 141.31.

19929
19930 (Source: Amended at 50 Ill. Reg. _____, effective _____)

19931 **Section 611.860 Record Maintenance**

19932 A supplier must ~~keep~~retain on its premises or at a convenient location near its premises the
19933 following records:

- 19934 a) Records of bacteriological analyses and turbidity analyses made under~~pursuant to~~
19935 this Part must be kept for not less than five years. Records of chemical analyses
19936 made under~~pursuant to~~ this Part must be kept for not less than ten years. Actual
19937 laboratory reports may be kept, or data may be transferred to tabular summaries
19938 if~~, provided that~~ the following information is included:
- 19939 1) The date, place, and time of sampling, and the name of the person who
19940 collected the sample;
- 19941 2) Identification of the sample as to whether it was a routine distribution
19942 system sample, check sample, raw or process water sample, or other
- 19943
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- 19948 special purpose sample;
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- 19950 3) The date of analysis;
- 19951
- 19952 4) The laboratory and person responsible for performing analysis;
- 19953
- 19954 5) The analytical technique or method used; and
- 19955
- 19956 6) The results of the analysis.
- 19957
- 19958 b) Records of action taken by the supplier to correct violations of this Part must be
- 19959 kept for a period not less than three years after the last action taken with respect to
- 19960 the particular violation involved.
- 19961
- 19962 c) Copies of any written reports, summaries, or communications relating to sanitary
- 19963 surveys of the system conducted by the supplier itself, by a private consultant, by
- 19964 USEPA, the Agency, or a unit of local government delegated ~~underpursuant to~~
- 19965 Section 611.108, must be kept for a period not less than ten years after completion
- 19966 of the sanitary survey involved.
- 19967
- 19968 d) Records concerning a variance or adjusted standard granted to the supplier must
- 19969 be kept for a period ending not less than five years following the expiration of
- 19970 ~~thesuch~~ variance or adjusted standard.
- 19971
- 19972 e) Copies of public notices issued ~~underpursuant to~~ Subpart V and certifications
- 19973 made to the Agency ~~underpursuant to~~ Section 611.840 must be kept for three
- 19974 years after issuance.
- 19975
- 19976 f) Copies of monitoring plans developed ~~underpursuant to~~ this Part must be kept for
- 19977 the same period of not less than five years that applies to the records of analyses
- 19978 taken under the plan ~~underpursuant to~~ subsection (a), except as specified
- 19979 otherwise elsewhere in this Part.
- 19980

19981 BOARD NOTE: Derived from 40 CFR 141.33 ~~(2016)~~.

19982 (Source: Amended at 50 Ill. Reg. _____, effective _____)

19983
19984
19985 SUBPART U: CONSUMER CONFIDENCE REPORTS

19986
19987 **Section 611.881 Purpose and Applicability**

- 19988
- 19989 a) This Subpart U establishes the minimum requirements for the content of ~~annual~~
- 19990 reports that community water systems (CWSs) must deliver to their customers.

19991 These reports must contain information on the quality of the water delivered by
19992 the systems and characterize the risks (if any) from exposure to contaminants
19993 detected in the drinking water in an accurate and understandable manner. This
19994 subpart also includes requirements for suppliers serving more than 100,000 persons
19995 to develop and annually update a plan for providing assistance to consumers with
19996 limited English proficiency.

19997
19998 b) ~~Despite~~Notwithstanding the provisions of Section 611.100(d), this Subpart U only
19999 applies to CWSs.

20000
20001 c) For the purpose of this Subpart U, "customers" are defined as billing units or
20002 service connections to which water is delivered by a CWS. For purposes of this
20003 subpart consumers are defined as people served by the water system, including
20004 customers and people that do not receive a bill.

20005
20006 d) For the purpose of this Subpart U, "detected" means the following: at or above
20007 the detection limit levels prescribed by Section 611.600(d) for inorganic
20008 contaminants; at or above the levels prescribed by Section 611.646(a) for Phase I,
20009 II, and V VOCs; at or above the levels prescribed by Section 611.648(r) for Phase
20010 II, IIB, and V SOCs (except for PFAS) at or above the levels prescribed by
20011 Section 611.381(b)(2)(D) for the disinfection byproducts listed in Section
20012 611.312; ~~and~~ at or above the levels prescribed by Section 611.720(c)(2)~~Section~~
20013 ~~611.720(e)(3)~~ for radioactive contaminants; and at or above the levels prescribed
20014 by Section 611.7902(a)(5) for PFAS listed in Section 611.311(c)(2).

20015
20016 BOARD NOTE: Derived from 40 CFR 141.151 ~~(2006)~~.

20017
20018 (Source: Amended at 50 Ill. Reg. _____, effective _____)

20019
20020 **Section 611.882 Compliance Dates**

20021
20022 a) Between June 24, 2024 and December 31, 2026, CWS suppliers must comply with
20023 Sections 611.881 through 611.885 (except Section 611.883(d)(4)(G)), as codified in
20024 Subpart AH. Beginning January 1, 2027, CWS suppliers must comply with Section
20025 611.881 through 611.886 (except Section 611.883(h)(8)(A)) as codified in this
20026 subpart G. Beginning November 1, 2027, CWS suppliers must comply with
20027 Sections 611.881 through 611.886, as codified in this subpart G.

20028
20029 b) Each existing CWS supplier must deliver its reports in compliance with 611.885
20030 by July 1 each year~~annually~~. Each report delivered by July 1 must contain data
20031 collected during ~~, or prior to,~~ the previous calendar year, or the most recent
20032 calendar year before the previous calendar year ~~as prescribed in Section~~
20033 ~~661.883(d)(3).~~

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- cb) A new CWS must deliver its first report by July 1 of the year after its first full calendar year in operation ~~and annually thereafter~~.
- de) A CWS supplier~~community water system~~ that sells water to another CWS supplier~~community water system~~ must deliver the applicable information required in Section 611.883 to the buyer supplier~~system~~ as follows:
 - 1) By ~~no later than~~ April 1, 2027 and annually thereafter; or
 - 2) On a date mutually agreed upon by the seller and the purchaser, and specifically included in a contract between the parties: and.
 - 3) A CWS supplier that sells water to another CWS supplier that is required to provide reports biannually in compliance with Section 611.885(i) must provide the applicable information required in 611.855(j) by October 1, 2027, to the buyer system, and annually thereafter, or a date mutually agreed upon by the seller and the purchaser, included in a contract between the parties.

BOARD NOTE: Derived from 40 CFR 141.152 ~~(2016)~~.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

Section 611.883 Content of the Reports

- a) Each CWS supplier must provide to its customers a report(s)~~an annual report~~ containing the information specified in this Section~~and Section 611.884, and include a summary as specified in Section 611.886.~~~~specify~~.
- b) Information on the Source of the Water the Supplier Delivers
 - 1) Each report must identify the sources of the water the CWS delivers providing certain information:
 - A) The type of the water (i.e., surface water, groundwater, or groundwater under the direct influence of surface water); and
 - B) The commonly used name (if any) and location of the source body (or bodies) of water.
 - 2) If the supplier has a complete source water assessment, the report must notify consumers of the availability of this assessment, the year it was

20077 completed or most recently updated, and how to obtain it. In addition, the
20078 supplier should highlight in the report significant sources of contamination
20079 in the source water area if the supplier readily has that information. If the
20080 supplier received the source water assessment from the Agency, the report
20081 must include a brief summary of the system's susceptibility to potential
20082 sources of contamination, using language the Agency provides or as the
20083 supplier writes.

20084
20085 c) Definitions

20086
20087 1) Each report must include two definitions:

- 20088
20089 A) Maximum Contaminant Level Goal or MCLG: The level of a
20090 contaminant in drinking water below which USEPA determines no
20091 known or expected risk to health exists. MCLGs allow for a
20092 margin of safety.

20093
20094 BOARD NOTE: Although an MCLG is not an NPDWR that the
20095 Board must include in the Illinois SDWA regulations, USEPA
20096 mandates using this definition.

- 20097
20098 B) Maximum Contaminant Level or MCL: The highest level of a
20099 contaminant that USEPA allows in drinking water. USEPA sets
20100 MCLs as close to the MCLGs as feasible using the best available
20101 treatment technology.

20102
20103 C) Contaminant: Any physical chemical, biological, or radiological
20104 substance or matter in the water.

- 20105
20106 2) A CWS operating under relief from an NPDWR issued under Section
20107 611.111, 611.112, 611.130, or 611.131 must include the following
20108 definition in its report: "Variances, Adjusted Standards, and Site-specific
20109 Rules: State permission not to meet an MCL or a treatment technique
20110 under certain conditions."

- 20111
20112 3) A report containing data on contaminants that USEPA regulates using any
20113 of certain terms must include the applicable definitions:

20114
20115 A) Treatment technique: A required process for reducing the
20116 concentration of a contaminant in drinking water.

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20118 B) Action level: The concentration of a contaminant above which a
20119 supplier must follow treatment or other requirements.

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C) Maximum residual disinfectant level goal or MRDLG: The concentration of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of using disinfectants to control microbial contaminants.

BOARD NOTE: Although an MRDLG is not an NPDWR that the Board must include in the Illinois SDWA regulations, USEPA mandates using this definition if the report uses the term "MRDLG".

D) Maximum residual disinfectant level or MRDL: The highest concentration of a disinfectant USEPA allows in drinking water. There is convincing evidence that adding a disinfectant is necessary to control microbial contaminants.

E) Hazard Index or HI. The Hazard Index is an approach that determines the health concerns associated with mixtures of certain PFAS in finished drinking water. Low levels of multiple PFAS that individually would not likely result in adverse health effects may pose health concerns when combined in a mixture. The Hazard Index MCL represents the maximum level for mixtures of PFHxS, PFNA, HFPO-DA, and/or PFBS allowed in water delivered by a public water supplier. A Hazard Index greater than 1 requires a supplier to take action.

4) A report containing information about a Level 1 or Level 2 assessment under Subpart AA requires must include the applicable definition:

A) "Level 1 assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system."

B) "Level 2 assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation occurred or why monitoring found total coliform bacteria in our water system on multiple occasions."

5) Suppliers must use the following definitions for the terms listed below if the terms are used in the report unless the supplier obtains written approval from the Agency to use an alternate definition:

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- A) Pesticide: Generally, any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest.
- B) Herbicide: Any chemical(s) used to control undesirable vegetation.

d) Information on Detected Contaminants

- 1) This subsection (d) specifies the information a supplier must include in each report for contaminants subject to mandatory monitoring (except *Cryptosporidium*):
 - A) Contaminants subject to an MCL, action level, MRDL, or treatment technique (regulated contaminants); and
 - B) Contaminants for which monitoring is required by USEPA under 40 CFR 141.40 (unregulated contaminants).
- 2) The data relating to these contaminants must be presented in the reports~~report must display these contaminants~~ in a manner that is clear and understandable for consumers. For example, the data may be displayed in one table or in several adjacent tables. The CWS must separately display any additional monitoring results it chooses to include in its report.
- 3) The supplier must derive the data in the report from data it collected to comply with monitoring and analytical requirements during the previous~~each~~ calendar year or the most recent calendar year before the previous calendar year except that.~~If the Agency allows a supplier to monitor for regulated contaminants less frequently than annually, the tables must include the date and results of the most recent sampling, and the report must include a brief statement indicating that the data in the report is from the most recent testing done under the regulations. The supplier must not include data older than five years.~~
 - A) Where a supplier is allowed to monitor for regulated contaminants less often than once a year, the contaminant data section must include the date and results of the most recent sampling and the report must include a brief statement indicating that the data presented in the report are from the most recent testing done in compliance with the regulations. No data older than 5 years need by included.

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- B) This subsection (d)(3)(B) corresponds with 40 CFR 141.553(d)(3)(ii), which USEPA has designated as "reserved". This statement maintains structural correspondence with the corresponding federal regulation.

- 4) For each detected regulated contaminant (listed in Appendix A to this subpart), data sections (s) must contain~~the tables must contain specific information:~~
 - A) The MCL for the contaminant expressed as a number equal to or greater than 1.0 (as Appendix A provides);

 - B) The federal Maximum Contaminant Level Goal (MCLG) for that contaminant expressed in the same units as the MCL;

 - C) If there is no MCL for a detected contaminant, the contaminant data section(s)~~table~~ must indicate that there is a treatment technique or specify the action level for the contaminant, and the report must include the applicable of the definitions for treatment technique or action level that subsection (c)(3) specifies;

 - D) For contaminants subject to an MCL, except turbidity, ~~total coliforms, fecal coliforms,~~ and E. coli, the contaminant data sections must contain the highest contaminant level the supplier used to determine compliance with the applicable NPDWR and the range of detected levels as follows:
 - i) When the supplier determines compliance with the MCL annually or less frequently: the highest detected level at any sampling point and the range of detected levels expressed in the same units as the MCL.

 - ii) When the supplier determines compliance with the MCL by calculating a running annual average of all samples taken at a monitoring location: the highest average of all monitoring locations and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. For TTHM and HAA5 MCLs in Section 611.312(b), the supplier must include the highest locational running annual average for TTHM and HAA5 and the range of individual sample results for all monitoring locations expressed in the same units as the MCL. If results from more than one location exceed the TTHM or

20249 HAA5 MCL, the supplier must include the locational
20250 running annual average for each location having results
20251 exceeding the MCL.
20252

20253 ~~iii) When the supplier determines compliance with the MCL on~~
20254 ~~a system-wide basis by calculating a running annual~~
20255 ~~average of all samples at all monitoring locations: the~~
20256 ~~average and range of detected concentrations expressed in~~
20257 ~~the same units as the MCL. The supplier must include~~
20258 ~~individual sample results for the IDSE the supplier~~
20259 ~~conducted under Subpart W when determining the range of~~
20260 ~~TTHM and HAA5 results to report in its annual consumer~~
20261 ~~confidence report for the calendar year when the supplier~~
20262 ~~took the IDSE samples;~~
20263

20264 BOARD NOTE: If a rule allows rounding results to determine
20265 compliance with an MCL, the supplier should round before
20266 multiplying the results by the applicable factor in Appendix A.
20267

20268 E) For turbidity:
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20270 i) Corresponding 40 CFR 141.153(d)(4)(v)(A) relates to an
20271 MCL for turbidity applicable to unfiltered systems, which do
20272 not exist in Illinois. This statement maintains structural
20273 consistency with the federal rules.
20274

20275 ii) If the supplier reports under Section 611.211(b): the
20276 highest monthly value. The report must explain the reasons
20277 for measuring turbidity.
20278

20279 iii) If the supplier reports under Section 611.250, 611.743, or
20280 611.955(b): the highest single measurement and the lowest
20281 monthly percentage of samples meeting the turbidity limits
20282 Section 611.250, 611.743, or 611.955(b) specifies for the
20283 filtration technology the supplier uses. The report must
20284 explain the reasons for measuring turbidity;
20285

20286 F) For lead and copper: the 90th percentile concentration of the most
20287 recent rounds of sampling, the number of sampling sites exceeding
20288 the action level, and the range of tap sampling results;
20289

20290 G) This subsection (d)(4)(G) corresponds with 40 CFR
20291 141.153(d)(4)(vii), which has no operative effect after a past

- 20292 implementation date. This statement maintains structural
 20293 consistency with the federal regulations;
 20294
 20295 H) This subsection (d)(4)(H) corresponds with 40 CFR
 20296 141.153(d)(4)(viii), a now-obsolete implementing provision. This
 20297 statement maintains structural consistency with the federal
 20298 regulations;
 20299
 20300 I) The likely sources of detected contaminants to the best of the
 20301 supplier's knowledge. Specific information regarding
 20302 contaminants may be available in sanitary surveys and source
 20303 water assessments and must be used when available to the supplier.
 20304 If the supplier lacks specific information on the likely source, the
 20305 report must include one or more of the typical sources for that
 20306 contaminant listed in Appendix G that are most applicable to the
 20307 CWS; and
 20308
 20309 J) For E. coli analytical results under Subpart AA, the total number of
 20310 E. coli positive samples;
 20311
 20312 ~~K) The report must state that the supplier inventoried its service lines~~
 20313 ~~(including if only a statement that the supplier serves no lead~~
 20314 ~~service lines) and instruct how to access the service line inventory;~~
 20315 ~~and~~
 20316
 20317 ~~L) The report must notify consumers that complete lead tap sampling~~
 20318 ~~data are available for review and must inform how to access the~~
 20319 ~~data.~~
 20320
 20321 5) If a CWS distributes water to its customers from multiple hydraulically
 20322 independent distribution systems fed by different raw water sources, the
 20323 contaminant data section(s) should differentiate contaminant data~~table must~~
 20324 ~~contain a separate column~~ for each service area, and the report must
 20325 identify each separate distribution system. For example, if displayed in a
 20326 table, it should contain a separate column for each service area.
 20327 Alternatively, a CWS may produce separate reports tailored to include
 20328 data for each service area.
 20329
 20330 6) The detected contaminant data section(s) tables must clearly identify any
 20331 data indicating violations of MCLs, MRDLs, or treatment techniques, and
 20332 the report must contain a clear and readily understandable explanation of
 20333 the violation, including specific information: the length of the violation,
 20334 the potential adverse health effects, and actions the CWS took to address

20335 the violation. To describe the potential health effects, the CWS must use
20336 the relevant language from Appendix A.

20337
20338 7) For detected unregulated contaminants for which USEPA requires
20339 monitoring under 40 CFR 141.40 ~~(except Cryptosporidium)~~, the reports
20340 must present tables must contain the average and range at which the
20341 supplier detected the contaminant. The report must~~may~~ briefly explain the
20342 reasons for monitoring for unregulated contaminants such as:-

20343
20344 A) Unregulated contaminant monitoring helps the Agency to determine
20345 where certain contaminants occur and whether the Agency should
20346 consider regulating those contaminants in the future.

20347
20348 B) May use an alternative educational statement in the CCR if
20349 approved by the Agency.

20350
20351 8) For suppliers that exceeded the lead action level in Section 611.350(c), the
20352 detected contaminant data section must clearly identify the exceedance if
20353 any corrective action has been required by the Agency during the
20354 monitoring period covered by the report. The report must include a clear
20355 and readily understandable explanation of the exceedance, the steps
20356 consumers can take to reduce their exposure to lead in drinking water, and a
20357 description of any corrective actions the supplier has or will take to address
20358 the exceedance.

20359
20360 e) Information on Cryptosporidium, radon, and other contaminants:

20361
20362 1) If the CWS monitored for Cryptosporidium, ~~which including monitoring~~
20363 ~~under Subpart L, and the monitoring~~ indicates the possible presence of
20364 Cryptosporidium in the supplier's source water or finished water, the
20365 report must include ~~specific information:~~

20366
20367 A) A summary of the results of the monitoring~~It must summarize the~~
20368 monitoring results; and

20369
20370 B) An explanation of the significance of the results~~It must explain the~~
20371 results' significance.

20372
20373 2) If the CWS monitored for radon, and the monitoring indicates the possible
20374 presence of radon in the supplier's finished water, the report must include
20375 ~~specific information:~~

20376
20377 A) The results of the monitoring~~monitoring results;~~ and

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- B) An explanation of the significance of the results~~It must explain the results' significance.~~
- 3) If the CWS conducted additional monitoring indicating the presence of other contaminants in the supplier's finished water, the report must include specific information:
 - A) The monitoring results; and
 - B) It must explain the results' significance noting any ~~pertinent~~ health advisory or proposed regulation.
- f) Complying with an NPDWR. In addition to the information subsection (d)(6) requires, the report must note any of specific violations that occurred in ~~subsections (f)(1) through (f)(7) occurring~~ during the period~~year~~ the report covers and include a clear and readily understandable explanation of the violation, any potential adverse health effects, and the steps the CWS took to correct the violation.
 - 1) Monitoring and reporting compliance data.
 - 2) Filtration and Disinfection Under Subpart B. For a CWS failing to install adequate filtration or disinfection equipment or processes or having filtration or disinfection equipment or processes fail, causing a violation, the report must include specific language to explain potential adverse health effects: "Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches."
 - 3) Lead and copper control requirements under~~Copper Control Requirements Under~~ Subpart G. For suppliers that fail~~a supplier failing~~ to take one or more actions under Sections 611.350 through 611.363~~Section 611.350(d), 611.351, 611.352, 611.353, or 611.354~~, the report must include the applicable language from Appendix A for lead, copper, or both.
 - 4) Treatment Techniques for Acrylamide and Epichlorohydrin Under Section 611.296. For a supplier violating Section 611.296, the report must include the applicable language from Appendix A.
 - 5) A supplier failing to maintain required compliance data records.

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- 6) A supplier not complying with special monitoring requirements under Section 611.630.
 - 7) A supplier violating the terms of a variance, adjusted standard, site-specific rule, or administrative or judicial order.
 - g) Variances, Adjusted Standards, and Site-Specific Rules. If a supplier operates under the terms of a variance, adjusted standard, or site-specific rule the Board issued under Section 611.111, 611.112, or 611.131, the report must contain **certain information:**
 - 1) It must explain the reasons for the variance, adjusted standard, or site-specific rule;
 - 2) It must state when the Board issued the variance, adjusted standard, or site-specific rule;
 - 3) It must include a brief status report on the steps the CWS is taking to install treatment, find alternative sources of water, or otherwise comply with the terms and schedules of the variance, adjusted standard, or site-specific rule; and
 - 4) It must include a notice of any opportunity for public input in any review or renewal of the variance, adjusted standard, or site-specific rule.
 - h) Additional Information
 - 1) The report must briefly explain about contaminants that one may reasonably expect to find in drinking water, including bottled water. This may include the language from subsections (h)(1)(A) through (h)(1)(C), or the CWS may use its own comparable language. The report also must include the language from subsection (h)(1)(D).
 - A) Both~~The sources of drinking water (both~~ tap water and bottled water come from)~~include~~ rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material. The water can also pick up and transport substances resulting from the presence of animals or from human activity. These substances are also called contaminants.
 - B) Contaminants are any physical, chemical, biological, or radiological

20464 substance or matter in water. Contaminants that may be present in
20465 source water include ~~Source water may include any of several~~
20466 ~~contaminants:~~

- 20467
- 20468 i) Microbial contaminants, such as viruses and bacteria,
20469 which may come from sewage treatment plants, septic
20470 systems, agricultural livestock operations, and wildlife;
20471
- 20472 ii) Inorganic contaminants, such as salts and metals, which can
20473 occur~~be~~ naturally in the soil or groundwater or may-
20474 ~~occurring or~~ result from urban stormwater runoff, industrial
20475 or domestic wastewater discharges, oil and gas production,
20476 mining, or farming;
20477
- 20478 iii) Pesticides and herbicides, which may come from a variety
20479 of sources such as agriculture, urban stormwater runoff, or
20480 residential uses;
20481
- 20482 iv) Organic chemical contaminants, including synthetic and
20483 volatile organic chemicals, which are products and
20484 byproducts of industrial processes and petroleum
20485 production and which can also come from gas stations,
20486 urban stormwater runoff, or septic systems; and
20487
- 20488 v) Radioactive contaminants, which can occur~~be~~ naturally-
20489 ~~occurring~~ or the result of oil and gas production and mining
20490 activities.
20491

20492 C) To protect public health~~In order to ensure that tap water is safe to~~
20493 ~~drink~~, USEPA prescribes regulations that limit the amount of
20494 certain contaminants in tap water PWSs provide. United States
20495 Food and Drug Administration (USFDA) regulations establish
20496 limits for contaminants in bottled water that must provide the same
20497 protection for public health.
20498

20499 D) One may reasonably expect drinking water, including bottled
20500 water, to contain at least small amounts of some contaminants.
20501 The presence of contaminants does not necessarily mean~~indicate~~
20502 that water poses a health risk. More information about
20503 contaminants and potential health effects is available from the
20504 USEPA Safe Drinking Water Hotline (800-426-4791) or USEPA's
20505 Safe Drinking Water Information webpage
20506 (www.epa.gov/safewater~~ground-water-and-drinking-water/safe-~~

- 20507 ~~drinking water information~~).
- 20508
- 20509 2) The report must include a telephone number for the CWS's owner,
- 20510 operator, or designee as a source of additional information about the
- 20511 report. If a supplier uses a website or social media to share additional
- 20512 information, the USEPA recommends including information about how to
- 20513 access such media platforms in the report.
- 20514
- 20515 3) In communities with a large proportion of consumers with limited English
- 20516 proficiency~~non-English speaking residents~~, as the Agency determines, the
- 20517 report must contain information in the appropriate languages regarding the
- 20518 importance of the report and either contain information~~or contain a~~
- 20519 ~~telephone number or address~~ where consumers~~residents~~ may obtain~~contact~~
- 20520 ~~the supplier for~~ a translated copy of the report, or assistance in the
- 20521 appropriate language(s) or the report must be in the appropriate
- 20522 language(s)~~language~~.
- 20523
- 20524 4) The report must inform about opportunities for public participation in
- 20525 decisions potentially affecting water quality.
- 20526
- 20527 5) The CWS may include any additional information it deems necessary for
- 20528 public education that is consistent with and does not detract from the
- 20529 purpose of the report.
- 20530
- 20531 6) Suppliers That Must Comply with Subpart S
- 20532
- 20533 A) Any GWS supplier that receives~~receiving~~ written notice from the
- 20534 Agency of a significant deficiency or notice from a laboratory of a
- 20535 fecal indicator-positive ground water source sample that is not
- 20536 invalidated by the Agency under Section 611.802(d) must inform
- 20537 its customers of any significant deficiency that is~~still~~ uncorrected
- 20538 at the time of the next reporting period or of any report. ~~Any GWS~~
- 20539 ~~supplier receiving notice from a laboratory of a~~ fecal indicator-
- 20540 positive groundwater source sample in the next report or 6-month
- 20541 updated in compliance with Section 611.885~~that the Agency does~~
- 20542 ~~not invalidate under Section 611.802(d)~~ must inform its customers
- 20543 ~~of the fecal indicator positive groundwater source sample in the~~
- 20544 ~~next report~~. The supplier must continue to ~~annually~~ inform the
- 20545 public annually until the Agency determines that~~issues a SEP~~
- 20546 ~~determining the supplier corrected~~ the particular significant
- 20547 deficiency is corrected or ~~addressed~~ the fecal contamination in the
- 20548 groundwater source is addressed under Section 611.803(a). Each
- 20549 report must include the following elements~~specific information~~:

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- i) The nature of the particular significant deficiency or the source of the fecal contamination (if the supplier knows the source) and the date the Agency identified the significant deficiency or the dates of the fecal indicator-positive groundwater source samples;
 - ii) Whether or not the supplier has addressed the fecal contamination in the groundwater source under Section 611.803(a) and the date the supplier did so;
 - iii) For each significant deficiency or fecal contamination in the groundwater source that the supplier has not addressed under Section 611.803(a), the Agency-approved plan and schedule for correction, including interim measures, progress to date, and any interim measures the supplier completed; and
 - iv) If the supplier receives notice of a fecal indicator-positive groundwater source sample that the Agency does not invalidate under Section 611.802(d), the potential health effects using the pertinent health effects language from [appendix Appendix A to this subpart](#).
- B) If the Agency issues a SEP directing a supplier to do so, a supplier with significant deficiencies that the supplier corrected before issuing the next report must inform its customers under subsection (h)(7)(A)(iv) of the significant deficiency, how the supplier corrected the deficiency, and the date the supplier corrected the deficiency.
- 7) Suppliers That Must Comply with Subpart AA
- A) Any supplier that must comply with the Level 1 assessment requirement or a Level 2 assessment requirement that is not due to an E. coli MCL violation must include in the report the text found in subsections (h)(7)(A)(i) ~~through (h)(7)(A)(ii) or (h)(7)(A)(i) and~~ (h)(7)(A)(iii), as appropriate, filling in the blanks accordingly and the text found in subsection (h)(7)(A)(iv), if appropriate.
 - i) "Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present

20593 or that a potential pathway exists through which
20594 contamination may enter the drinking water distribution
20595 system. We found coliforms indicating the need to look for
20596 potential problems in water treatment or distribution.
20597 When this occurs, we are required to conduct assessment(s)
20598 to identify problems and to correct any problems that were
20599 found during these assessments."

20600
20601 ii) "During the past year we were required to conduct [insert
20602 number of Level 1 assessments] Level 1 assessment(s).
20603 [insert number of Level 1 assessments] Level 1
20604 assessment(s) were completed. In addition, we were
20605 required to take [insert number of corrective actions]
20606 corrective actions and we completed [insert number of
20607 corrective actions] of these actions."

20608
20609 iii) "During the past year [insert number of Level 2
20610 assessments] Level 2 assessments were required to be
20611 completed for our water system. [insert number of Level 2
20612 assessments] Level 2 assessments were completed. In
20613 addition, we were required to take [insert number of
20614 corrective actions] corrective actions and we completed
20615 [insert number of corrective actions] of these actions."

20616
20617 iv) Any supplier that has failed to complete all the required
20618 assessments or correct all identified sanitary defects, is in
20619 violation of the treatment technique requirement and must
20620 also include one or both of the following statements, as
20621 appropriate: "During the past year we failed to conduct all
20622 ~~of~~ the required assessment(s)." or "During the past year we
20623 failed to correct all identified defects that were found
20624 during the assessment."

20625
20626 B) Any supplier that must conduct a Level 2 assessment due to an E.
20627 coli MCL violation must include in the report the text found in
20628 subsections (h)(7)(B)(i) and (h)(7)(B)(ii), and health effects
20629 language in appendix A to this subpart, filling in the blanks
20630 accordingly and the appropriate alternative text found in subsection
20631 (h)(7)(B)(ii), if appropriate. Suppliers may use an alternative
20632 statement with equivalent information for paragraphs (h)(7)(B)(i)
20633 through (iii), if approved by the primacy agency.
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- i) ~~"E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.~~ We found *E. coli* bacteria, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s), also known as level 2 assessment, to identify problems and to correct any problems that were found during these assessments."
 - ii) "We were required to complete a detailed assessment of our water system, also known as a Level 2 assessment, because we found *E. coli* in our water system. In addition, we were required to take [insert number of corrective actions] corrective actions and we completed [insert number of corrective actions] of these actions."
 - iii) Any supplier that has failed to complete the required assessment or correct all identified sanitary defects, is in violation of the treatment technique requirement and must also include one or both of the following statements, as appropriate: "We failed to conduct the required assessment." or "We failed to correct all ~~sanitary~~ defects that were identified during the assessment that we conducted."
- C) If a supplier detects *E. coli* and has violated the *E. coli* MCL, in addition to completing the table, as subsection (d)(4) requires, the supplier must include one or more of specific statements best describing the noncompliance:
- i) "We had an *E. coli*-positive repeat sample following a total coliform-positive routine sample."
 - ii) "We had a total coliform-positive repeat sample following an *E. coli*-positive routine sample."
 - iii) "We failed to take all required repeat samples following an *E. coli*-positive routine sample."

20678 iv) "We failed to test for E. coli when any repeat sample tested
20679 positive for total coliform."
20680

20681 D) If a supplier detects E. coli ~~and has but does~~ not violated the E. coli
20682 MCL, in addition to completing the table as required in subsection
20683 (d)(4)~~requires~~, the supplier may include a statement explaining
20684 that although the supplier detected E. coli, it did not violate the E.
20685 coli MCL.
20686

20687 8) Suppliers required to comply with subpart G.
20688

20689 A) The report must notify consumers that complete lead tap sampling
20690 data is available for review and must include information on how
20691 to access the data.
20692

20693 B) The report must include a statement that a service line inventory
20694 (including inventories where the publicly accessible inventory
20695 consist of a written statement that there are no lead, galvanized
20696 requiring replacement, lead status unknown service lines, known
20697 lead connectors or connectors of unknown material) has been
20698 prepared and include instructions to access the publicly accessible
20699 service line inventory. If the service line inventory is available
20700 online, the report must include the direct link to the inventory.
20701

20702 C) For suppliers with lead, galvanized requiring replacement, or lead
20703 status unknown service lines in the supplier's inventory under
20704 Section 611.854(a) and (b), the report must include information on
20705 how to obtain a copy of the service line replacement plan or a
20706 direct link to the plan if the supplier is required to make the service
20707 line replacement plan available online.
20708

20709 D) The report must contain a plainly worded explanation of the
20710 corrosion control efforts the supplier is taking in compliance with
20711 subpart G, and AH, if applicable. Corrosion control efforts consist
20712 of treatment (e.g., pH adjustment, alkalinity adjustment, or
20713 corrosion inhibitor addition) and other efforts contributing to the
20714 control of the corrosivity of water, e.g., monitoring to assess the
20715 corrosivity of water. The supplier may use one of the following
20716 templates or use their own explanation that includes equivalent
20717 information.
20718

20719 i) For suppliers with Agency or USEPA-designated Optimal
20720 Corrosion Control Treatment:

20721 Corrosion of pipes, plumbing fittings and fixtures may
20722 cause lead and copper to enter drinking water. To assess
20723 corrosion of lead and copper, [name of supplier] conducts
20724 tap sampling for lead and copper at selected sites [insert
20725 frequency at which supplier conducts tap sampling]. [Name
20726 of supplier] treats water using [identify treatment method]
20727 to control corrosion, which was designated as the optimal
20728 corrosion control treatment by [the Agency or USEPA, as
20729 applicable]. To ensure the treatment is operating
20730 effectively, [name of supplier] monitors water quality
20731 parameters set by the [Agency or USEPA, as applicable]
20732 [insert frequency at which supplier conducts water quality
20733 parameter monitoring]. If applicable add: "[Name of
20734 supplier] is currently conducting a study of corrosion
20735 control to determine if any changes to treatment methods
20736 are needed to minimize the corrosivity of the water."
20737

20738 ii) For suppliers without Agency or USEPA designated
20739 Optimal Corrosion Control Treatment: Corrosion of pipes,
20740 plumbing fittings and fixtures may cause metals, including
20741 lead and copper, to enter drinking water. To assess
20742 corrosion of lead and copper, [name of supplier] conducts
20743 tap sampling for lead and copper at selected sites [insert
20744 frequency at which supplier conducts tap sampling]. If
20745 applicable, add: "[Name of supplier] treats water using
20746 [identify treatment method] to control corrosion. If
20747 applicable add: "[Name of supplier] is currently conducting
20748 a study of corrosion control to determine if any changes to
20749 treatment methods are needed to minimize the corrosivity
20750 of the water.
20751

20752 E) The report must include a statement that the supplier is required to
20753 sample for lead in schools and licensed childcare facilities as
20754 requested by the facility and that directs the public to contact their
20755 school or childcare facility for further information about potential
20756 sampling results.
20757

20758 BOARD NOTE: This Section derives from 40 CFR 141.153.

20759 (Source: Amended at 50 Ill. Reg. _____, effective _____)

20761 **Section 611.884 Required Additional Health Information**
20762
20763

- 20764 a) All reports must prominently display the following language: "Some people may
20765 be more vulnerable to contaminants in drinking water than the general population.
20766 Immuno-compromised persons such as persons with cancer undergoing
20767 chemotherapy, persons who have undergone organ transplants, people with
20768 HIV/AIDS or other immune system disorders, some elderly, and infants can be
20769 particularly at risk from infections. These people should seek advice about
20770 drinking water from their health care providers. USEPA or Centers for Disease
20771 Control and Prevention guidelines on appropriate means to lessen the risk of
20772 infection by Cryptosporidium and other microbial contaminants are available
20773 from the USEPA Safe Drinking Water Hotline (800-426-4791) or on USEPA's
20774 website epa.gov/safewater."
20775
- 20776 b) A supplier that detects arsenic above 0.005 mg/L and up to and including 0.010
20777 mg/L must do the following:
20778
- 20779 1) The supplier must include in its report a short informational statement
20780 about arsenic, using the following language: Arsenic is known to cause
20781 cancer in humans. Arsenic also may cause other health effects such as skin
20782 damage and circulatory problems. [NAME OF SUPPLIER] meets the
20783 USEPA arsenic drinking water standard, also known as a Maximum
20784 Contaminant Level (MCL). However, you should know that USEPA's
20785 MCL for arsenic balances the scientific community's understanding of
20786 arsenic-related health effects and ~~"While your drinking water meets~~
20787 ~~USEPA's standard for arsenic, it does contain low levels of arsenic.~~
20788 ~~USEPA's standard balances the current understanding of arsenic's possible~~
20789 ~~health effects against~~ the costs of removing arsenic from drinking water.
20790 The highest concentration of arsenic found in [YEAR] was [INSERT
20791 MAX ARSENIC LEVEL per Section 611.184(d)(4)(D) ppb. ~~USEPA~~
20792 ~~continues to research the health effects of low levels of arsenic, which is a~~
20793 ~~naturally-occurring mineral known to cause cancer in humans at high~~
20794 ~~concentrations and is linked to other health effects such as skin damage~~
20795 ~~and circulatory problems.";~~ ~~or~~
20796
- 20797 2) May use an alternative educational statement in the CCR if approved by the
20798 Agency. ~~The supplier may write its own educational statement, but only in~~
20799 ~~consultation with the Agency.~~
20800
- 20801 c) A supplier that detects nitrate at levels above 5 mg/L, but below the MCL, must
20802 do the following:
20803
- 20804 1) The supplier must include a short informational statement about the
20805 impacts of nitrate on children, using the following language: Even though
20806 [NAME of SUPPLIER] meets USEPA nitrate drinking water standard, also

20807 known as Maximum Contaminant Level (MCL), if you are caring for an
20808 infant and using tap water to prepare formula, you may want to use alternate
20809 sources of water or ask for advice from your health care provider.
20810 Nitrate~~"Nitrate in drinking water at~~ levels above 10 ppm pose~~s~~ a
20811 particularly high health concern~~risk~~ for infants under~~of less than~~ six
20812 months of age and can interfere with the capacity of the infant's blood to
20813 carry oxygen, resulting in a serious illness. Symptoms of serious illness
20814 include shortness of breath and blueness of the skin, known as "blue baby
20815 syndrome". Nitrate~~High nitrate~~ levels in drinking water can increase~~cause~~
20816 blue baby syndrome. Nitrate levels may rise quickly for short periods of
20817 time due to high levels of~~because of~~ rainfall or agricultural activity,
20818 therefore we test for nitrate [INSERT APPLICABLE SAMPLING
20819 FREQUENCY]. The highest level for nitrate found during [YEAR] was
20820 [INSERT MAX NITRATE LEVEL per Section 611.883(d)(4)(D)] ppm.~~If~~
20821 ~~you are caring for an infant you should ask advice from your health care~~
20822 ~~provider"; or~~

20823
20824 2) The CWS supplier may write its own educational statement, but only if
20825 approved by~~in consultation with~~ the Agency.

20826
20827 d) Every report must include the following lead-specific information:

20828
20829 1) A short informational statement about lead in drinking water and its
20830 effects on children. The statement must include the following
20831 information:

20832
20833 Lead can cause serious health effects in people of all
20834 ages~~problems~~, especially for pregnant people, infants (both
20835 formula-fed and breastfed),~~women~~ and young children. Lead in
20836 drinking water is primarily from materials and parts used
20837 in~~components associated with~~ service lines and in home plumbing.
20838 [INSERT NAME OF SUPPLIER] is responsible for providing
20839 high quality drinking water and removing lead pipes, but cannot
20840 control the variety of materials used in the plumbing ~~components~~
20841 in your home. Because lead levels may vary over time, lead
20842 exposure is possible even when your tap sampling results do not
20843 detect lead at one point in time. You can help protect yourself and
20844 your family~~You share the responsibility for protecting yourself and~~
20845 ~~your family from the lead in your home plumbing. You can take~~
20846 ~~responsibility~~ by identifying and removing lead materials within
20847 your home plumbing and taking steps to reduce your family's risk.
20848 Using a filter, certified by an American National Standards
20849 Institute accredited certifier to reduce lead is effective in reducing

20850 lead exposures. Follow the instructions provided with the filter to
20851 ensure the filter is used properly. Use only cold water for drinking,
20852 cooking, and making baby formula. Boiling water does not
20853 remove lead from water. Before using tap water for drinking,
20854 cooking, or making baby formula~~Before drinking tap water~~, flush
20855 your pipes for several minutes. You can do this by running your
20856 tap, taking a shower, doing laundry or a load of dishes. If you
20857 have a lead service line or galvanized requiring replacement
20858 service line, you may need to flush your pipes for a longer
20859 period.~~You can also use a filter certified by an American National~~
20860 ~~Standards Institute accredited certifier to reduce lead in drinking~~
20861 ~~water.~~ If you are concerned about lead in your water and wish,
20862 ~~you may wish~~ to have your water tested, contact [INSERT NAME
20863 OF SUPPLIER UTILITY and CONTACT INFORMATION].
20864 Information on lead in drinking water, testing methods, and steps
20865 you can take to minimize exposure is available at
20866 <http://www.epa.gov/safewater/lead>.

20867
20868 2) A supplier may use an alternative~~write its own~~ educational statement in
20869 the CCR if approved by,~~but only in consultation with~~ the Agency.

20870
20871 e) ~~A CWS supplier that detects TTHM above 0.080 mg/L, but below the MCL in~~
20872 ~~Section 611.312, as an annual average, monitored and calculated under the~~
20873 ~~provisions of former Section 611.680, must include the health effects language~~
20874 ~~prescribed by Appendix A of this Part.~~

20875
20876 ~~BOARD NOTE: Former Section 611.680 originally derived from 40 CFR~~
20877 ~~141.30(a) and (b). USEPA removed 40 CFR 141.30 in its entirety in 2006. The~~
20878 ~~Board repealed former Section 611.680 in 2012. The references to former Section~~
20879 ~~611.680 in this subsection (e) relate to use of existing monitoring data collected~~
20880 ~~under those provisions as they existed before their repeal.~~

20881
20882 BOARD NOTE: This Section derives from 40 CFR 141.154.

20883
20884 (Source: Amended at 50 Ill. Reg. _____, effective _____)

20885
20886 **Section 611.885 Report Delivery and Recordkeeping**

20887
20888 a) Except as provided in subsection (g), each CWS must ~~mail or otherwise~~ directly
20889 deliver ~~a~~one copy of the report to each customer.

20890
20891 1) Suppliers must use at a minimum, one of the following forms of delivery:

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- 1) Where a supplier is aware that it serves a substantial number of non-bill paying consumers, the supplier is encouraged to directly deliver the reports or notices of availability of the reports to service addresses.
- 2) Where a supplier is aware of a substantial number of bill-paying consumers without access to electronic forms of the report, the supplier should use at least one non-electronic form of delivery.
- c) No later than 10 days after the date the CWS is required to distribute the report to its customers, each CWS must ~~provide~~mail a copy of the report to the Agency, ~~and followed within three months by~~ a certification that the report(s) ~~has/have~~report has been distributed to customers, and that the information is correct and consistent with the compliance monitoring data previously submitted to the Agency.
- d) No later than the date the CWS is required to distribute the report to its customers, each CWS must deliver the report to any other agency or clearinghouse identified by the Agency.
- e) Each CWS must make its reports available to the public upon request. Suppliers should make a reasonable effort to provide the reports in an accessible format to anyone who requests an accommodation.
- f) Each CWS serving ~~50,000~~100,000 or more persons must post its current year's report to a publicly-accessible site on the ~~internet~~Internet.
- g) The Governor or ~~their~~his designee may waive the requirement of subsection (a) for a CWS serving fewer than 10,000 persons. or the Tribal Leader where the Tribe has met the eligibility requirements contained in 40 C.F.R. § 142.72 for the purposes of waiving the mailing requirement, can waive the requirement of subsection (a) for CWSs serving fewer than 10,000 persons. In consultation with the tribal government, the USEPA Regional Administrator may waive the requirement of Section 611.855(a) in areas in Indian country where no tribe has been deemed eligible.
 - 1) The~~Such a~~ CWS must ~~do the following~~:
 - A) The CWS must publish the report in one or more local newspapers or on one or more local online news sites serving the county in which the CWS is located;
 - B) The CWS must inform the customers that the ~~reports~~report will not

20979 be mailed, either in the newspapers in which the report is published
20980 or by other means approved by the Agency; and

20981
20982 C) The CWS must make the report available to the public upon
20983 request.

20984
20985 2) Systems serving fewer than 500 persons may forgo the requirements of
20986 subsections (g)(1)(A) and (g)(1)(B) if they provide notice that the report is
20987 available upon request at least once per year to their customers by mail, ~~by~~
20988 door-to-door delivery, or by posting in one or more locations where
20989 persons served by the supplier can reasonably be expected to see it
20990 ~~at a location approved by the Agency that the report is available upon request.~~

20991
20992 h) Any system subject to this Subpart U must ~~keep~~retain copies of its consumer
20993 confidence report for no less than three years.

20994
20995 i) Suppliers serving 100,000 or more persons, must develop a plan for providing
20996 assistance to consumers with limited English proficiency. The supplier must
20997 evaluate the languages spoken by persons with limited English proficiency served
20998 by the supplier, and the supplier's anticipated approach to address translation needs.
20999 The first plan must be provided to the Agency with the first report in 2027. Plans
21000 must be evaluated annually and updated as necessary and reported with the
21001 certification required in subsection (c).

21002
21003 j) Delivery timing and biannual delivery:

21004
21005 1) Each CWS must distribute reports by July 1 each year. Each report
21006 distributed by July 1 must use data collected during, or prior to, the previous
21007 calendar year using methods described in subsection (a).

21008
21009 2) Each CWS serving 10,000 or more persons must distribute the report
21010 biannually, or twice per calendar year, by December 31 using methods
21011 described in subsection (a).

21012
21013 3) Suppliers required to comply with subsection (j)(2), with a violation or
21014 action level exceedance that occurred between January 1 and June 30 of the
21015 current year, or have received monitoring results from required monitoring
21016 under the Unregulated Contaminant Monitoring Rule in 40 C.F.R § 141.40,
21017 must include a 6-month update with the second report with the following:

21018
21019 A) A short description of the nature of the 6-month update and the
21020 biannual delivery.
21021

- 21022 B) If a supplier receives an MCL, MRDL, or treatment technique
- 21023 violation, the 6-month update must include the applicable
- 21024 contaminant section information in Section 611.883(d)(4), and a
- 21025 readily understandable explanation of the violation including: the
- 21026 length of the violation, the potential adverse health effects, actions
- 21027 taken by the supplier to address the violation, and timeframe the
- 21028 supplier expects to complete those actions. To describe the potential
- 21029 health effects, the supplier must use the relevant language of
- 21030 appendix A to this subpart.
- 21031
- 21032 C) If a supplier receives any other violation, the 6-month update must
- 21033 include the information in Section 611.883(f).
- 21034
- 21035 D) If a supplier exceeded the lead action level following monitoring
- 21036 conducted between January 1 and June 30 of the current year, the
- 21037 supplier must include information identified in Section
- 21038 611.883(d)(4)(F) and (d)(8).
- 21039
- 21040 E) For suppliers monitoring under 40 C.F.R. § 141.40 that become
- 21041 aware of results for samples collected during the reporting year but
- 21042 were not included in the reports distributed by July 1, the supplier
- 21043 must include information as required by Section 611.883(d)(7).
- 21044

21045 BOARD NOTE: Derived from 40 CFR 141.155 ~~(2016)~~.

21046 (Source: Amended at 50 Ill. Reg. _____, effective _____)

21047 Section 611.886 Summary of Report Contents

- 21048
- 21049
- 21050
- 21051 a) Each report must include a summary displayed prominently at the beginning of
- 21052 the report, including a brief description of the nature of the report.
- 21053
- 21054 b) Suppliers must include, at a minimum, the following information in the summary:
- 21055
- 21056 1) Summary of violations and compliance information included in the report
- 21057 required by Section 611.883(d)(6) and (8), (f), and (h)(6) and (7).
- 21058
- 21059 2) Contact information for owner, operator, or supplier of the CWS as a
- 21060 source of additional information concerning the report, per Section
- 21061 611.183(h)(2).
- 21062
- 21063 c) If applicable, suppliers must include the following in the summary:
- 21064

- 21065 1) For suppliers using delivery methods in Section 611.885(a)(1)(B), (C), or
21066 (D), the summary must include directions for consumers to request a paper
21067 copy of the report, as described in Section 611.885(a)(2).
21068
- 21069 2) For suppliers subject to Section 611.883(h)(3) because they serve a large
21070 proportion of consumers with limited English proficiency, the summary
21071 must include information where consumers may obtain a translated copy
21072 of the report, or get assistance in the appropriate language(s).
21073
- 21074 3) For suppliers using the report to also meet the public notification
21075 requirements of subpart V, the summary must specify that it is also
21076 -serving to provide public notification of one or more violations or
21077 situations, provide a brief statement about the nature of the notice(s), and a
21078 brief description of how to locate the notice(s) in the report.
21079
- 21080 d) The summary should be written in plain language and may use infographics.
21081
- 21082 e) For those suppliers required to include a 6-month update with the second report
21083 under Section 611.855(j)(2), the summary should include a brief description of
21084 the nature of the report and update, noting the availability of new information for
21085 the current year (between January and June).
21086
- 21087 f) The report summary must include the following standard language to encourage
21088 the distribution of the report to all persons served:
21089
- 21090 Please share this information with anyone who drinks this water (or their
21091 guardians), especially those who may not have received this report directly (for
21092 example, people in apartments, nursing homes, schools, and businesses). You can
21093 do this by posting this report in a public place or distributing copies by hand,
21094 mail, email, or another method.
21095

21096 BOARD NOTE: Derived from 40 CFR 141.156

21097
21098 (Source: Added at 50 Ill. Reg. _____, effective _____)
21099

21100 SUBPART V: PUBLIC NOTIFICATION OF DRINKING WATER VIOLATIONS

21101 **Section 611.901 General Public Notification Requirements**

21102
21103
21104 The requirements of this Subpart V replace former notice requirements.

- 21105
21106 a) **Who Must Give Public Notice.** Each owner or operator of a PWS (a CWS, an
21107 NTNCWS, or a transient non-CWS) must give notice for all violations of an

21108 NPDWR and for other situations, as listed in this subsection (a). The term
 21109 "NPDWR violation" is used in this Subpart V to include violations of an MCL, an
 21110 MRDL, a treatment technique, monitoring requirements, or a testing procedure ~~set~~
 21111 ~~forth~~ in this Part. Appendix G identifies the tier assignment for each specific
 21112 violation or situation requiring a public notice.

- 21113 1) NPDWR Violations
 - 21114 A) A failure to comply with an applicable MCL or MRDL.
 - 21115 B) A failure to comply with a prescribed treatment technique.
 - 21116 C) A failure to perform water quality monitoring, as required by this
 - 21117 Part.
 - 21118 D) A failure to comply with testing procedures as prescribed by this
 - 21119 Part.
- 21120 2) Relief Equivalent to a Variance and Exemptions under Sections 1415 and
- 21121 1416 of SDWA.
- 21122 A) Operation under relief equivalent to a SDWA section 1415
- 21123 variance, under Section 611.111, or a SDWA section 1416
- 21124 exemption, under Section 611.112.
- 21125 B) A failure to comply with the requirements of any schedule that has
- 21126 been set under relief equivalent to a SDWA section 1415 variance,
- 21127 under Section 611.111, or a SDWA section 1415 exemption, under
- 21128 Section 611.112.
- 21129 3) Special Public Notices
 - 21130 A) The occurrence of a waterborne disease outbreak or other
 - 21131 waterborne emergency.
 - 21132 B) An exceedance of the nitrate MCL by a non-CWS, if granted
 - 21133 permission by the Agency under Section 611.300(d).
 - 21134 C) The notice required by Section 611.908 for an exceedance of 2
 - 21135 mg/L fluoride (the federal secondary MCL for fluoride (see 40
 - 21136 CFR 143.3)).

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21150 BOARD NOTE: See the Board Note appended to Section 611.908
21151 for explanation.

21152
21153 D) The availability of unregulated contaminant monitoring data
21154 collected as required by USEPA under 40 CFR 141.40.

21155
21156 E) Other violations and situations determined by the Agency in a SEP
21157 to require a public notice under this Subpart V, not already listed in
21158 Appendix G.

21159
21160 F) Exceeding the lead action level.

21161
21162 b) The Type of Public Notice Required for Each Violation or Situation. The public
21163 notice requirements of this Subpart V are divided into three tiers, to take into
21164 account the seriousness of the violation or situation and of any potential adverse
21165 health effects that may be involved. The public notice requirements for each
21166 violation or situation listed in subsection (a) are determined by the tier to which it
21167 is assigned. This subsection (b) provides the definition of each tier. Appendix G
21168 identifies the tier assignment for each specific violation or situation.

21169
21170 1) Tier 1 public notice: required for NPDWR violations and situations with
21171 significant potential to have serious adverse effects on human health as a
21172 result of short-term exposure.

21173
21174 2) Tier 2 public notice: required for all other NPDWR violations and
21175 situations with potential to have serious adverse effects on human health.

21176
21177 3) Tier 3 public notice: required for all other NPDWR violations and
21178 situations not included in Tier 1 and Tier 2.

21179
21180 c) Who Must Receive Notice

21181
21182 1) Each PWS supplier must provide public notice to persons served by the
21183 water supplier under this Subpart V. A PWS supplier that sells or
21184 otherwise provides drinking water to another PWS supplier (i.e., to a
21185 consecutive system) is required to give public notice to the owner or
21186 operator of the consecutive system; the consecutive system supplier is
21187 responsible for providing public notice to the persons it serves.

21188
21189 2) If a PWS supplier has a violation in a portion of the distribution system
21190 that is physically or hydraulically isolated from other parts of the
21191 distribution system, the Agency may allow the system to limit distribution
21192 of the public notice to only persons served by that portion of the system

21193 that is out of compliance. The Agency must issue a SEP when allowing
21194 the supplier to limit distributing notice.

21195
21196 3) The supplier must also submit a copy of the notice to the Agency and the
21197 Administrator (for exceeding the lead action level) under Section
21198 611.840(d).

21199

21200 BOARD NOTE: This Section derives from 40 CFR 141.201.

21201

21202 (Source: Amended at 50 Ill. Reg. _____, effective _____)

21203

21204 **Section 611.902 Tier 1 Public Notice: Form, Manner, and Frequency of Notice**

21205

21206 a) Violations or Situations That Require a Tier 1 Public Notice. This subsection (a)
21207 lists the violation categories and other situations requiring a Tier 1 public notice.
21208 Appendix G identifies the tier assignment for each specific violation or situation.
21209 The violation categories include:

21210

21211 1) Violation of the MCL for E. coli (as specified in Section 611.325(c)).

21212

21213 2) Violation of the MCL for nitrate, nitrite, or total nitrate and nitrite, as
21214 defined in Section 611.301, or when the water supplier fails to take a
21215 confirmation sample within 24 hours after the supplier's receipt of the
21216 results from the first sample showing an exceedance of the nitrate or nitrite
21217 MCL, as specified in Section 611.606(b).

21218

21219 3) Exceedance of the nitrate MCL by a non-CWS supplier, if permitted to
21220 exceed the MCL by the Agency under Section 611.300(d), as required
21221 under Section 611.909.

21222

21223 4) Violation of the MRDL for chlorine dioxide, as defined in Section
21224 611.313(a), when one or more samples taken in the distribution system the
21225 day following an exceedance of the MRDL at the entrance of the
21226 distribution system exceed the MRDL, or when the water supplier does
21227 not take the required samples in the distribution system, as specified in
21228 Section 611.383(c)(2)(A).

21229

21230 5) This subsection (a)(5) refers to a violation of the former turbidity standard
21231 of Section 611.320, which the Board repealed because it applied to no
21232 suppliers in Illinois. This statement maintains structural consistency with
21233 the federal regulations.

21234

21235 6) Violation of the Surface Water Treatment Rule (SWTR), Interim

21236 Enhanced Surface Water Treatment Rule (IESWTR), or Long Term 1
 21237 Enhanced Surface Water Treatment Rule (LT1ESWTR) treatment
 21238 technique requirement resulting from a single exceedance of the maximum
 21239 allowable turbidity limit (as identified in Appendix G), if the Agency
 21240 determines after consultation that a Tier 1 public notice is required or if
 21241 consultation does not take place within 24 hours after the supplier learns
 21242 of the violation.

- 21243
- 21244 7) Occurrence of a waterborne disease outbreak, as defined in Section
 21245 611.101, or other waterborne emergency (such as a failure or significant
 21246 interruption in key water treatment processes, a natural disaster that
 21247 disrupts the water supply or distribution system, or a chemical spill or
 21248 unexpected loading of possible pathogens into the source water that
 21249 significantly increases the potential for drinking water contamination).
- 21250
- 21251 8) Detection of E. coli, enterococci, or coliphage in source water samples, as
 21252 specified in Section 611.802(a) and (b).
- 21253
- 21254 9) Other violations or situations with significant potential to have serious
 21255 adverse effects on human health as a result of short-term exposure, as
 21256 determined by the Agency in a SEP.
- 21257
- 21258 10) Exceeding the lead action level, as Section 141.80(c) specifies.
- 21259

21260 b) When the Tier 1 Public Notice Is to Be Provided. Additional Steps Required. A
 21261 PWS supplier must do the following:

- 21262
- 21263 1) It must provide a public notice as soon as practical but no later than 24
 21264 hours after the supplier learns of the violation or situation requiring Tier 1
 21265 public notice;
- 21266
- 21267 2) It must initiate consultation with the Agency as soon as practical, but no
 21268 later than 24 hours after the PWS supplier learns of the violation or
 21269 situation, to determine additional public notice requirements; and
- 21270
- 21271 3) It must comply with any additional public notification requirements
 21272 (including any repeat notices or direction on the duration of the posted
 21273 notices) that are established as a result of the consultation with the
 21274 Agency. ~~The~~Such requirements may include the timing, form, manner,
 21275 frequency, and content of repeat notices (if any) and other actions
 21276 designed to reach all persons served.
- 21277

21278 c) The Form and Manner of the Public Notice. A PWS supplier must provide the

21279 notice within 24 hours in a form and manner reasonably calculated to reach all
21280 persons served. The form and manner used by the PWS supplier are to fit the
21281 specific situation, but must be designed to reach residential, transient, and non-
21282 transient users of the water system. In order to reach all persons served, a water
21283 supplier is to use, at a minimum, one or more of the following forms of delivery:

- 21284
- 21285 1) Appropriate broadcast media (such as radio and television);
- 21286
- 21287 2) Posting of the notice in conspicuous locations throughout the area served
- 21288 by the water supplier;
- 21289
- 21290 3) Hand delivery of the notice to persons served by the water supplier; or
- 21291
- 21292 4) Another delivery method approved in writing by the Agency in a SEP.
- 21293

21294 BOARD NOTE: This Section derives from 40 CFR 141.202.

21295
21296 (Source: Amended at 50 Ill. Reg. _____, effective _____)

21297
21298 **Section 611.903 Tier 2 Public Notice: Form, Manner, and Frequency of Notice**

- 21299
- 21300 a) Violations or Situations That Require a Tier 2 Public Notice. This subsection (a)
- 21301 lists the violation categories and other situations requiring a Tier 2 public notice.
- 21302 Appendix G identifies the tier assignment for each specific violation or situation.
- 21303
- 21304 1) All violations of the MCL, MRDL, and treatment technique requirements,
- 21305 except if where a Tier 1 notice is required under Section 611.902(a) or
- 21306 if where the Agency determines by a SEP that a Tier 1 notice is required.
- 21307
- 21308 2) Violations of the monitoring and testing procedure requirements, if where
- 21309 the Agency determines by a SEP that a Tier 2 rather than a Tier 3 public
- 21310 notice is required, taking into account potential health impacts and
- 21311 persistence of the violation.
- 21312
- 21313 3) Failure to comply with the terms and conditions of any relief equivalent to
- 21314 a SDWA section 1415 variance or a SDWA section 1416 exemption in
- 21315 place.
- 21316
- 21317 4) Failure to take corrective action or failure to maintain at least 4-log
- 21318 treatment of viruses (using inactivation, removal, or an Agency-approved
- 21319 combination of 4-log virus inactivation and removal) before or at the first
- 21320 customer under Section 611.803(a).
- 21321

- 21322 b) When Tier 2 Public Notice Is to Be Provided
 21323
 21324 1) A PWS supplier must provide the public notice as soon as practical, but no
 21325 later than 30 days after the supplier learns of the violation. If the public
 21326 notice is posted, the notice must remain in place for as long as the
 21327 violation or situation persists, but in no case for less than seven days, even
 21328 if the violation or situation is resolved. The Agency may, in appropriate
 21329 circumstances, by a SEP, allow additional time for the initial notice of up
 21330 to three months from the date the supplier learns of the violation. It is not
 21331 appropriate for the Agency to grant an extension to the 30-day deadline for
 21332 any unresolved violation or to allow across-the-board extensions by rule or
 21333 policy for other violations or situations requiring a Tier 2 public notice.
 21334 Extensions granted by the Agency must be in writing.
 21335
 21336 2) The PWS supplier must repeat the notice every three months as long as the
 21337 violation or situation persists, unless the Agency determines that
 21338 appropriate circumstances warrant a different repeat notice frequency. In
 21339 no circumstance may the repeat notice be given less frequently than once
 21340 per year. It is not appropriate for the Agency to allow less frequent repeat
 21341 notice for an MCL or treatment technique violation under the Total
 21342 Coliform Rule or Subpart AA or a treatment technique violation under the
 21343 Surface Water Treatment Rule or Interim Enhanced Surface Water
 21344 Treatment Rule. It is also not appropriate for the Agency to allow across-
 21345 the-board reductions in the repeat notice frequency for other ongoing
 21346 violations requiring a Tier 2 repeat notice. An Agency determination
 21347 allowing repeat notices to be given less frequently than once every three
 21348 months must be in writing.
 21349
 21350 3) For the turbidity violations specified in this subsection (b)(3), a PWS
 21351 supplier must consult with the Agency as soon as practical but no later
 21352 than 24 hours after the supplier learns of the violation, to determine
 21353 whether a Tier 1 public notice under Section 611.902(a) is required to
 21354 protect public health. When consultation does not take place within the 24-
 21355 hour period, the ~~supplier water system~~ must distribute a Tier 1 notice of the
 21356 violation within the next 24 hours (i.e., no later than 48 hours after the
 21357 supplier learns of the violation), following the requirements under Section
 21358 611.902(b) and (c). Consultation with the Agency is required for the
 21359 following:
 21360
 21361 A) Violation of the turbidity MCL under Section 611.320(b); or
 21362
 21363 B) Violation of the SWTR, IESWTR, or treatment technique
 21364 requirement resulting from a single exceedance of the maximum

21365 allowable turbidity limit.

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c) The Form and Manner of Tier 2 Public Notice. A PWS supplier must provide the initial public notice and any repeat notices in a form and manner that is reasonably calculated to reach persons served in the required time period. The form and manner of the public notice may vary based on the specific situation and type of water system, but it must at a minimum meet the following requirements:

- 1) Unless directed otherwise by the Agency in writing, by a SEP, a CWS supplier must provide notice by the following:
 - A) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the PWS supplier; and
 - B) Any other method reasonably calculated to reach other persons regularly served by the supplier, if they would not normally be reached by the notice required in subsection (c)(1)(A). ~~The~~~~Such~~ persons may include those who do not pay water bills or do not have service connection addresses (e.g., house renters, apartment dwellers, university students, nursing home patients, prison inmates, etc.). Other methods may include: Publication in a local newspaper; delivery of multiple copies for distribution by customers that provide their drinking water to others (e.g., apartment building owners or large private employers); posting in public places served by the supplier or on the Internet; or delivery to community organizations.
- 2) Unless directed otherwise by the Agency in writing, by a SEP, a non-CWS supplier must provide notice by the following means:
 - A) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the supplier, or by mail or direct delivery to each customer and service connection (~~if~~~~where~~ known); and
 - B) Any other method reasonably calculated to reach other persons served by the system if they would not normally be reached by the notice required in subsection (c)(2)(A). ~~The~~~~Such~~ persons may include those served who may not see a posted notice because the posted notice is not in a location they routinely pass by. Other methods may include the following: Publication in a local newspaper or newsletter distributed to customers; use of E-mail to

21408 notify employees or students; or delivery of multiple copies in
21409 central locations (e.g., community centers).

21410
21411 BOARD NOTE: Derived from 40 CFR 141.203.

21412
21413 (Source: Amended at 50 Ill. Reg. _____, effective _____)

21414
21415 **Section 611.904 Tier 3 Public Notice: Form, Manner, and Frequency of Notice**

21416
21417 a) Violations or Situations That Require a Tier 3 Public Notice. This subsection (a)
21418 lists the violation categories and other situations requiring a Tier 3 public notice.
21419 Appendix G identifies the tier assignment for each specific violation or situation.

21420
21421 1) Monitoring violations under this Part, except if where a Tier 1 notice is
21422 required under Section 611.902(a) or if where the Agency determines by a
21423 SEP that a Tier 2 notice is required;

21424
21425 2) Failure to comply with a testing procedure established in this Part, except
21426 if where a Tier 1 notice is required under Section 611.902(a) or if where the
21427 Agency determines by a SEP that a Tier 2 notice is required;

21428
21429 3) Operation under relief equivalent to a SDWA section 1415 variance
21430 granted under Section 611.111 or relief equivalent to a SDWA section
21431 1416 exemption granted under Section 611.112;

21432
21433 4) Availability of unregulated contaminant monitoring results, as required
21434 under Section 611.907;

21435
21436 5) The notice for an exceedance of 2 mg/l fluoride (the federal secondary
21437 MCL for fluoride (see 40 CFR 143.3)), as required under Section 611.908;
21438 and

21439
21440 BOARD NOTE: See the Board Note appended to Section 611.908 for
21441 explanation.

21442
21443 6) Reporting and recordkeeping violations under Subpart AA.

21444
21445 b) When the Tier 3 Public Notice Is To Be Provided

21446
21447 1) A PWS supplier must provide the public notice not later than one year
21448 after the supplier learns of the violation or situation or begins operating
21449 under relief equivalent to a SDWA section 1415 variance or section 1416
21450 exemption. Following the initial notice, the supplier must repeat the

21451 notice annually for as long as the violation, relief equivalent to a SDWA
21452 section 1415 variance or section 1416 exemption, or other situation
21453 persists. If the public notice is posted, the notice must remain in place for
21454 as long as the violation, relief equivalent to a SDWA section 1415
21455 variance or section 1416 exemption, or other situation persists, but in no
21456 case less than seven days (even if the violation or situation is resolved).

21457
21458 2) Instead of individual Tier 3 public notices, a PWS supplier may use an
21459 annual report detailing all violations and situations that occurred during
21460 the previous twelve months, as long as the timing requirements of
21461 subsection (b)(1) are met.
21462

21463 c) The Form and Manner of the Tier 3 Public Notice. A PWS supplier must provide
21464 the initial notice and any repeat notices in a form and manner that is reasonably
21465 calculated to reach persons served in the required time period. The form and
21466 manner of the public notice may vary based on the specific situation and type of
21467 water system, but it must at a minimum meet the following requirements:
21468

21469 1) Unless directed otherwise by the Agency by a SEP in writing, a CWS
21470 supplier must provide notice by the following:
21471

21472 A) Mail or other direct delivery to each customer receiving a bill and
21473 to other service connections to which water is delivered by the
21474 supplier; and
21475

21476 B) Any other method reasonably calculated to reach other persons
21477 regularly served by the supplier, if they would not normally be
21478 reached by the notice required in subsection (c)(1)(A). ~~The~~Such
21479 persons may include those who do not pay water bills or do not
21480 have service connection addresses (e.g., house renters, apartment
21481 dwellers, university students, nursing home patients, prison
21482 inmates, etc.). Other methods may include the following:
21483 publication in a local newspaper; delivery of multiple copies for
21484 distribution by customers that provide their drinking water to
21485 others (e.g., apartment building owners or large private
21486 employers); posting in public places or on the Internet; or delivery
21487 to community organizations.
21488

21489 2) Unless directed otherwise by the Agency by a SEP in writing, a non-CWS
21490 supplier must provide notice by the following:
21491

21492 A) Posting the notice in conspicuous locations throughout the
21493 distribution system frequented by persons served by the supplier,

21494 or by mail or direct delivery to each customer and service
21495 connection (if ~~where~~ known); and

21496
21497 B) Any other method reasonably calculated to reach other persons
21498 served by the supplier, if they would not normally be reached by
21499 the notice required in subsection (c)(2)(A). ~~The~~Such persons may
21500 include those who may not see a posted notice because the notice
21501 is not in a location they routinely pass by. Other methods may
21502 include the following: publication in a local newspaper or
21503 newsletter distributed to customers; use of E-mail to notify
21504 employees or students; or delivery of multiple copies in central
21505 locations (e.g., community centers).

21506
21507 d) When the Consumer Confidence Report May Be Used to Meet the Tier 3 Public
21508 Notice Requirements. For a CWS supplier, the Consumer Confidence Report
21509 (CCR) required under Subpart U may be used as a vehicle for the initial Tier 3
21510 public notice and all required repeat notices, as long as the following is true:

- 21511 1) The CCR is provided to persons served no later than 12 months after the
- 21512 supplier learns of the violation or situation as required under Section
- 21513 611.904(b);
- 21514
- 21515 2) The Tier 3 notice contained in the CCR follows the content requirements
- 21516 under Section 611.905; and
- 21517
- 21518 3) The CCR is distributed following the delivery requirements under Section
- 21519 611.904(c).
- 21520
- 21521

21522 BOARD NOTE: Derived from 40 CFR 141.204.

21523 (Source: Amended at 50 Ill. Reg. _____, effective _____)

21524
21525
21526 **Section 611.908 Special Notice for Exceedance of the Fluoride Secondary Standard**

21527
21528 a) When to Give Special Notice. A CWS supplier that exceeds the federal fluoride
21529 secondary MCL of 2 mg/ℓ (see 40 CFR 143.3) (determined by the last single
21530 sample taken in ~~compliance~~accordance with Section 611.603), but does not
21531 exceed the maximum contaminant level (MCL) of 4 mg/ℓ for fluoride (as
21532 specified in Section 611.301), must provide the public notice in subsection (c) to
21533 persons served. Public notice must be provided as soon as practical but no later
21534 than 12 months from the day the supplier learns of the exceedance. A copy of the
21535 notice must also be sent to all new billing units and new customers at the time
21536 service begins and to the Department of Public Health. The PWS supplier must

21537 repeat the notice at least annually for as long as the SMCL is exceeded. If the
21538 public notice is posted, the notice must remain in place for as long as the fluoride
21539 SMCL is exceeded, but in no case less than seven days (even if the exceedance is
21540 eliminated). On a case-by-case basis, the Agency may require an initial notice
21541 sooner than 12 months and repeat notices more frequently than annually.
21542

21543 BOARD NOTE: The federal regulations provide at 40 CFR 143.1 that secondary
21544 MCLs relate to the aesthetic qualities of water; they are not enforceable standards.
21545 The National Primary Drinking Water Regulations, however, include an
21546 enforceable requirement, at corresponding 40 CFR 141.208, that requires public
21547 notice upon exceedance of the secondary MCL for fluoride.
21548

21549 b) The Form and Manner of a Special Notice. The form and manner of the public
21550 notice (including repeat notices) must follow the requirements for a Tier 3 public
21551 notice in Section 611.904(c), (d)(1), and (d)(3).
21552

21553 c) Mandatory Language in a Special Notice. The notice must contain the following
21554 language, including the language necessary to fill in the blanks:
21555

21556 This is an alert about your drinking water and a cosmetic dental problem
21557 that might affect children under nine years of age. At low levels, fluoride
21558 can help prevent cavities, but children drinking water containing more
21559 than 2 milligrams per liter (mg/l) of fluoride may develop cosmetic
21560 discoloration of their permanent teeth (dental fluorosis). The drinking
21561 water provided by your community water system (name) has a fluoride
21562 concentration of (insert value) mg/l. Dental fluorosis, in its moderate or
21563 severe forms, may result in a brown staining or pitting of the permanent
21564 teeth. This problem occurs only in developing teeth, before they erupt
21565 from the gums. Children under nine should be provided with alternative
21566 sources of drinking water or water that has been treated to remove the
21567 fluoride to avoid the possibility of staining and pitting of their permanent
21568 teeth. You may also want to contact your dentist about proper use by
21569 young children of fluoride-containing products. Older children and adults
21570 may safely drink the water.
21571

21572 Drinking water containing more than 4 mg/l of fluoride (the USEPA's
21573 drinking water standard) can increase your risk of developing bone
21574 disease. Your drinking water does not contain more than 4 mg/l of
21575 fluoride, but we're required to notify you when we discover that the
21576 fluoride levels in your drinking water exceed 2 mg/l because of this
21577 cosmetic dental problem.
21578

21579 For more information, please call (name of water system contact) of (name

21580 of community water system) at (phone number). Some home water
21581 treatment units are also available to remove fluoride from drinking water.
21582 To learn more about available home water treatment units, you may call
21583 NSF International at 1-877-8-NSF-HELP.
21584

21585 BOARD NOTE: Derived from 40 CFR 141.208.

21586
21587 (Source: Amended at 50 Ill. Reg. _____, effective _____)
21588

21589 **SUBPART W: INITIAL DISTRIBUTION SYSTEM EVALUATIONS**
21590

21591 **Section 611.921 Standard Monitoring**
21592

21593 a) Standard Monitoring Plan. A supplier's standard monitoring plan must comply
21594 with subsections (a)(1) through (a)(4). The supplier must prepare and submit its
21595 standard monitoring plan to the Agency according to the appropriate of the
21596 schedules provided in Section 611.920(c).
21597

21598 1) The supplier's standard monitoring plan must include a schematic of its
21599 distribution system (including distribution system entry points and their
21600 sources, and storage facilities), with notes indicating locations and dates of
21601 all projected standard monitoring, and all projected Subpart I compliance
21602 monitoring.
21603

21604 2) The supplier's standard monitoring plan must include justification of
21605 standard monitoring location selection and a summary of data the supplier
21606 relied on to justify standard monitoring location selection.
21607

21608 3) The supplier's standard monitoring plan must specify the population
21609 served and its system type (i.e., that it is a Subpart B or groundwater
21610 system).
21611

21612 4) The supplier must ~~keep~~retain a complete copy of its standard monitoring
21613 plan submitted under this subsection (a), including any Agency
21614 modification of the plan, for as long as the supplier is required to
21615 ~~keep~~retain its IDSE report under subsection (c)(4).
21616

21617 b) Standard Monitoring
21618

21619 1) The supplier must monitor as indicated in the applicable of subsections
21620 (b)(1)(A) through (b)(1)(P), subject to the limitations of subsections
21621 (b)(1)(Q) and (b)(1)(R). The supplier must collect dual sample sets at
21622 each monitoring location. One sample in the dual sample set must be

21623 analyzed for TTHM. The other sample in the dual sample set must be
21624 analyzed for HAA5. The supplier must conduct one monitoring period
21625 during the peak historical month for TTHM levels or HAA5 levels or the
21626 month of warmest water temperature. The supplier must review available
21627 compliance, study, or operational data to determine the peak historical
21628 month for TTHM or HAA5 levels or warmest water temperature.

21629
21630 A) A Subpart B system supplier that serves fewer than 500 persons
21631 and ~~that~~which operates a consecutive system must collect samples
21632 once each calendar year during the peak historical month: one
21633 near an entry point to the distribution system and one at a high
21634 TTHM location, for a total of two samples during each monitoring
21635 period.
21636

21637 B) A Subpart B system supplier that serves fewer than 500 persons
21638 and ~~that~~which does not operate a consecutive system must collect
21639 samples once each calendar year during the peak historical month:
21640 one at a high TTHM location and one at a high HAA5 location, for
21641 a total of two samples during each monitoring period.
21642

21643 C) A Subpart B system supplier that serves 500 to 3,300 persons and
21644 ~~that~~which operates a consecutive system must collect samples four
21645 times each calendar year (once every 90 days): one near an entry
21646 point to the distribution system and one at a high TTHM location,
21647 for a total of two samples during each monitoring period.
21648

21649 D) A Subpart B system supplier that serves 500 to 3,300 persons and
21650 ~~that~~which does not operate a consecutive system must collect
21651 samples four times each calendar year (once every 90 days): one
21652 at a high TTHM location and one at a high HAA5 location, for a
21653 total of two samples during each monitoring period.
21654

21655 E) A Subpart B system supplier that serves 3,301 to 9,999 persons
21656 must collect samples four times each calendar year (once every 90
21657 days): one at a location in the distribution system that represents
21658 the average residence time, two at high TTHM locations, and one
21659 at a high HAA5 location, for a total of four samples during each
21660 monitoring period.
21661

21662 F) A Subpart B system supplier that serves 10,000 to 49,999 persons
21663 must collect samples six times each calendar year (once every 60
21664 days): one near an entry point to the distribution system, two at
21665 locations in the distribution system that represent the average

- 21666 residence time, three at each TTHM location, and two at high
21667 HAA5 locations, for a total of eight samples during each
21668 monitoring period.
21669
- 21670 G) A Subpart B system supplier that serves 50,000 to 249,999 persons
21671 must collect samples six times each calendar year (once every 60
21672 days): three near entry points to the distribution system, four at
21673 locations in the distribution system that represent the average
21674 residence time, five at high TTHM locations, and four at high
21675 HAA5 locations, for a total of 16 samples during each monitoring
21676 period.
21677
- 21678 H) A Subpart B system supplier that serves 250,000 to 999,999
21679 persons must collect samples six times each calendar year (once
21680 every 60 days): four near entry points to the distribution system,
21681 six at locations in the distribution system that represent the average
21682 residence time, eight at high TTHM locations, and six at high
21683 HAA5 locations, for a total of 24 samples during each monitoring
21684 period.
21685
- 21686 I) A Subpart B system supplier that serves 1,000,000 to 4,999,999
21687 persons must collect samples six times each calendar year (once
21688 every 60 days): six near entry points to the distribution system,
21689 eight at locations in the distribution system that represent the
21690 average residence time, ten at high TTHM locations, and eight at
21691 high HAA5 locations, for a total of 32 samples during each
21692 monitoring period.
21693
- 21694 J) A Subpart B system supplier that serves 5,000,000 or more persons
21695 must collect samples six times each calendar year (once every 60
21696 days): eight near entry points to the distribution system, ten at
21697 locations in the distribution system that represent the average
21698 residence time, 12 at high TTHM locations, and ten at high HAA5
21699 locations, for a total of 40 samples during each monitoring period.
21700
- 21701 K) A groundwater system supplier that serves fewer than 500 persons
21702 and ~~that~~which operates a consecutive system must collect samples
21703 once each calendar year during the peak historical month: one
21704 near an entry point to the distribution system and one at a high
21705 TTHM location, for a total of two samples during each monitoring
21706 period.
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- L) A groundwater system supplier that serves fewer than 500 persons and ~~that~~^{which} does not operate a consecutive system must collect samples once each calendar year during the peak historical month: one at a high TTHM location and one at a high HAA5 location, for a total of two samples during each monitoring period.
 - M) A groundwater system supplier that serves 500 to 9,999 persons must collect samples four times each calendar year (once every 90 days): one at a high TTHM location and one at a high HAA5 location, for a total of two samples during each monitoring period.
 - N) A groundwater system supplier that serves 10,000 to 99,999 persons must collect samples four times each calendar year (once every 90 days): one near an entry point to the distribution system, one at a location in the distribution system that represents the average residence time, two at high TTHM locations, and two at high HAA5 locations, for a total of six samples during each monitoring period.
 - O) A groundwater system supplier that serves 100,000 to 499,999 persons must collect samples four times each calendar year (once every 90 days): one near an entry point to the distribution system, one at a location in the distribution system that represents the average residence time, three at high TTHM locations, and three at high HAA5 locations, for a total of eight samples during each monitoring period.
 - P) A groundwater system supplier that serves 500,000 or more persons must collect samples four times each calendar year (once every 90 days): two near an entry point to the distribution system, two at locations in the distribution system that represent the average residence time, four at high TTHM locations, and four at high HAA5 locations, for a total of 12 samples during each monitoring period.
 - Q) A dual sample set (i.e., a TTHM and an HAA5 sample) must be taken at each monitoring location during each monitoring period.
 - R) The "peak historical month", for the purposes of subsections (b)(1)(A), (b)(1)(B), (b)(1)(K), and (b)(1)(L), means the month with the highest TTHM or HAA5 levels or the warmest water temperature.

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- 2) The supplier must take samples at locations other than the existing Subpart I monitoring locations. Monitoring locations must be distributed throughout the distribution system.
 - 3) If the number of entry points to the distribution system is fewer than the specified number of entry point monitoring locations, excess entry point samples must be equally replaced at high TTHM and HAA5 locations. If there is an odd extra location number, the supplier must take a sample at a high TTHM location. If the number of entry points to the distribution system is more than the specified number of entry point monitoring locations, the supplier must take samples at the entry points to the distribution system that have the highest annual water flows.
 - 4) The supplier's monitoring under this subsection (b) may not be reduced under the provisions of Section 611.500, and the Agency may not reduce the supplier's monitoring using the provisions of Section 611.161.
- c) IDSE Report. A supplier's IDSE report must include the elements required in subsections (c)(1) through (c)(4). The supplier must submit its IDSE report to the Agency according to the ~~applicability~~~~applicable~~ of the schedules ~~set forth~~ in Section 611.920(c).
- 1) The supplier's IDSE report must include all TTHM and HAA5 analytical results from Subpart I compliance monitoring and all standard monitoring conducted during the period of the IDSE as individual analytical results and LRAAs presented in a tabular or spreadsheet format acceptable to the Agency. If changed from the supplier's standard monitoring plan submitted under subsection (a), the supplier's report must also include a schematic of the supplier's distribution system, the population served, and system type (Subpart B system or groundwater system).
 - 2) The supplier's IDSE report must include an explanation of any deviations from the supplier's approved standard monitoring plan.
 - 3) The supplier must recommend and justify Subpart Y compliance monitoring locations and timing based on the protocol in Section 611.925.
 - 4) The supplier must ~~keep~~~~retain~~ a complete copy of its IDSE report submitted under this Section for ten years after the date on which the supplier submitted the supplier's report. If the Agency modifies the Subpart Y monitoring requirements that the supplier recommended in its IDSE report or if the Agency approves alternative monitoring locations under Section 611.161, the supplier must keep a copy of the Agency's

21794 notification on file for ten years after the date of the Agency's notification.
21795 The supplier must make the IDSE report and any Agency notification
21796 available for review by the Agency or the public.
21797

21798 BOARD NOTE: Derived from 40 CFR 141.601.
21799

21800 (Source: Amended at 50 Ill. Reg. _____, effective _____)
21801

21802 **Section 611.922 System-Specific Studies**
21803

21804 a) System-Specific Study Plan. A supplier's system-specific study plan must be
21805 based on either existing monitoring results, as required under subsection (a)(1), or
21806 modeling, as required under subsection (a)(2). The supplier must prepare and
21807 submit the supplier's system-specific study plan to the Agency according to the
21808 schedule in Section 611.920(c).
21809

21810 1) Existing Monitoring Results. A supplier may comply by submitting
21811 monitoring results collected before it is required to begin monitoring under
21812 Section 611.920(c). The monitoring results and analysis must meet the
21813 criteria in subsections (a)(1)(A) and (a)(1)(B).
21814

21815 A) Minimum Requirements
21816

21817 i) TTHM and HAA5 results must be based on samples
21818 collected and analyzed in ~~compliance~~ ~~accordance~~ with
21819 Section 611.381. Samples must be collected no earlier than
21820 five years prior to the study plan submission date.
21821

21822 ii) The monitoring locations and frequency must meet the
21823 conditions identified in the applicable of subsections
21824 (a)(1)(A)(iii) through (a)(1)(A)(xv). Each location must be
21825 sampled once during the peak historical month for TTHM
21826 levels or HAA5 levels or the month of warmest water
21827 temperature for every 12 months of data submitted for that
21828 location. Monitoring results must include all Subpart I
21829 compliance monitoring results, plus additional monitoring
21830 results as necessary to meet minimum sample requirements.
21831

21832 iii) A Subpart B system supplier that serves fewer than 500
21833 persons must collect samples from three monitoring
21834 locations: three samples for TTHM and three samples for
21835 HAA5.
21836

- 21837 iv) A Subpart B system supplier that serves 500 to 3,300
21838 persons must collect samples from three monitoring
21839 locations: nine samples for TTHM and nine samples for
21840 HAA5.
21841
- 21842 v) A Subpart B system supplier that serves 3,301 to 9,999
21843 persons must collect samples from six monitoring
21844 locations: 36 samples for TTHM and 36 samples for
21845 HAA5.
21846
- 21847 vi) A Subpart B system supplier that serves 10,000 to 49,999
21848 persons must collect samples from each of 12 monitoring
21849 locations: 72 samples for TTHM and 72 samples for
21850 HAA5.
21851
- 21852 vii) A Subpart B system supplier that serves 50,000 to 249,999
21853 persons must collect samples from 24 monitoring locations:
21854 144 samples for TTHM and 144 samples for HAA5.
21855
- 21856 viii) A Subpart B system supplier that serves 250,000 to
21857 999,999 persons must collect samples from 36 monitoring
21858 locations: 216 samples for TTHM and 216 samples for
21859 HAA5.
21860
- 21861 ix) A Subpart B system supplier that serves 1,000,000 to
21862 4,999,999 persons must collect samples from 48
21863 monitoring locations: 288 samples for TTHM and 288
21864 samples for HAA5.
21865
- 21866 x) A Subpart B system supplier that serves 5,000,000 or more
21867 persons must collect samples from 60 monitoring locations:
21868 360 samples for TTHM and 360 samples for HAA5.
21869
- 21870 xi) A groundwater system supplier that serves fewer than 500
21871 persons must collect samples from three monitoring
21872 locations: three samples for TTHM and three samples for
21873 HAA5.
21874
- 21875 xii) A groundwater system supplier that serves 500 to 9,999
21876 persons must collect samples from three monitoring
21877 locations: nine samples for TTHM and nine samples for
21878 HAA5.
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- xiii) A groundwater system supplier that serves 10,000 to 99,999 persons must collect samples from 12 monitoring locations: 48 samples for TTHM and 48 samples for HAA5.
 - xiv) A groundwater system supplier that serves 100,000 to 499,999 persons must collect samples from 18 monitoring locations: 72 samples for TTHM and 72 samples for HAA5.
 - xv) A groundwater system supplier that serves 500,000 or more persons must collect samples from 24 monitoring locations: 96 samples for TTHM and 96 samples for HAA5.
- B) Reporting Monitoring Results. A supplier must report the following information:
- i) The supplier must report previously collected monitoring results and certify that the reported monitoring results include all compliance and noncompliance results generated during the time period that began with the first reported result and ~~that~~^{which} ended with the most recent Subpart I results;
 - ii) The supplier must certify that the samples were representative of the entire distribution system and treatment and that the distribution system and treatment have not changed significantly since the samples were collected;
 - iii) The supplier's study monitoring plan must include a schematic of its distribution system (including distribution system entry points and their sources and storage facilities in the system), with notes indicating the locations and dates of all completed or planned system-specific study monitoring;
 - iv) The supplier's system-specific study plan must specify the population served and its system type (i.e., that it is a Subpart B or groundwater system);
 - v) The supplier must ~~keep~~^{retain} a complete copy of its system-specific study plan submitted under this subsection

21923 (a)(1), including any Agency modification of the supplier's
21924 system-specific study plan, for as long as the supplier is
21925 required to ~~keep~~retain its IDSE report under subsection
21926 (b)(5); and

21927
21928 vi) If the supplier submits previously collected data that fully
21929 meet the number of samples required under subsection
21930 (a)(1)(A)(ii), and the Agency rejects some of the data in
21931 writing, by a SEP, the supplier must either conduct
21932 additional monitoring to replace rejected data on a schedule
21933 approved by the Agency in the SEP, or it must conduct
21934 standard monitoring under Section 611.921.
21935

21936 2) Modeling. A supplier may comply through analysis of an extended-period
21937 simulation hydraulic model. The extended-period simulation hydraulic
21938 model and analysis must meet the following criteria:

21939
21940 A) Minimum Extended-Period Hydraulic Model Requirements

21941
21942 i) The extended-period hydraulic model must simulate 24-
21943 hour variation in demand and show a consistently repeating
21944 24-hour pattern of residence time.

21945
21946 ii) The extended-period hydraulic model must represent the
21947 criteria listed in subsection (a)(2)(D).
21948

21949 BOARD NOTE: This subsection (a)(2)(A)(ii) is derived
21950 from 40 CFR 141.602(a)(2)(i)(B). The Board has codified
21951 40 CFR 141.602(a)(2)(i)(B)(1) through (a)(2)(i)(B)(9) as
21952 subsections (a)(2)(D)(i) through (a)(2)(D)(ix) to comport
21953 with Illinois Administrative Code codification
21954 requirements.
21955

21956 iii) The extended-period hydraulic model must be calibrated or
21957 have calibration plans for the current configuration of the
21958 distribution system during the period of high TTHM
21959 formation potential. All storage facilities in the system
21960 must be evaluated as part of the calibration process. All
21961 required calibration must be completed no later than 12
21962 months after the supplier has submitted the plan.
21963

21964 B) Reporting Modeling. The supplier's system-specific study plan
21965 must include the information described in subsections (a)(2)(B)(i)

21966 through (a)(2)(B)(vii), subject to the requirements of subsection
21967 (a)(2)(B)(vii).
21968

- 21969 i) Tabular or spreadsheet data demonstrating that the model
21970 meets requirements in subsections (a)(2)(A)(ii) and
21971 (a)(2)(D).
21972
- 21973 ii) A description of all calibration activities undertaken and, if
21974 calibration is complete, a graph of predicted tank levels
21975 versus measured tank levels for the system storage facility
21976 with the highest residence time in each pressure zone, and a
21977 time-series graph of the residence time at the longest
21978 residence time storage facility in the distribution system
21979 showing the predictions for the entire simulation period
21980 (i.e., from time zero until the time it takes for the model to
21981 reach a consistently repeating pattern of residence time).
21982
- 21983 iii) Model output showing preliminary 24-hour average
21984 residence time predictions throughout the distribution
21985 system.
21986
- 21987 iv) The timing and the number of samples representative of the
21988 distribution system planned for at least one monitoring
21989 period of TTHM and HAA5 dual-sample monitoring at a
21990 number of locations no fewer than would be required for
21991 the system under standard monitoring in Section 611.921
21992 during the historical month of high TTHM. These samples
21993 must be taken at locations other than existing Subpart I
21994 compliance monitoring locations.
21995
- 21996 v) A description of how all requirements will be completed no
21997 later than 12 months after the supplier submits the
21998 supplier's system-specific study plan.
21999
- 22000 vi) A schematic of the supplier's distribution system (including
22001 distribution system entry points and their sources and
22002 system storage facilities), with notes indicating the
22003 locations and dates of all completed system-specific study
22004 monitoring (if calibration is complete) and all Subpart I
22005 compliance monitoring.
22006
- 22007 vii) The population served and system type (i.e., that it is a
22008 Subpart B or groundwater system).

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viii) The supplier must ~~keep~~retain a complete copy of the supplier's system-specific study plan submitted under this subsection (a)(2), including any Agency modification of the supplier's system-specific study plan, for as long as the supplier is required to ~~keep~~retain the supplier's IDSE report under subsection (b)(7).

C) If the supplier submits a model that does not fully meet the requirements under subsection (a)(2), the supplier must correct the Agency-cited deficiencies and respond to Agency inquiries concerning the model. If the supplier fails to correct deficiencies or respond to inquiries to the Agency's satisfaction, the supplier must conduct standard monitoring under Section 611.921.

D) The extended-period hydraulic model must represent the following criteria:

- i) 75 percent of pipe volume;
- ii) 50 percent of pipe length;
- iii) All pressure zones;
- iv) All 12-inch diameter and larger pipes;
- v) All eight-inch and larger pipes that connect pressure zones, influence zones from different sources, storage facilities, major demand areas, pumps, and control valves or ~~that~~which are known or expected to be significant conveyors of water;
- vi) All six-inch and larger pipes that connect remote areas of a distribution system to the main portion of the system;
- vii) All storage facilities with standard operations represented in the model;
- viii) All active pump stations with controls represented in the model; and
- ix) All active control valves.

22052 BOARD NOTE: This subsection (a)(2)(D) is derived from 40
22053 CFR 141.602(a)(2)(i)(B). The Board has codified 40 CFR
22054 141.602(a)(2)(i)(B)(1) through (a)(2)(i)(B)(9) as subsections
22055 (a)(2)(D)(i) through (a)(2)(D)(ix) to comport with Illinois
22056 Administrative Code codification requirements.
22057

- 22058 b) IDSE Report. The supplier's IDSE report must include the elements required in
22059 subsections (b)(1) through (b)(6). The supplier must submit its IDSE report
22060 according to the applicable of the schedules in Section 611.920(c).
22061
- 22062 1) The supplier's IDSE report must include all TTHM and HAA5 analytical
22063 results from Subpart I compliance monitoring and all system-specific
22064 study monitoring conducted during the period of the system-specific study
22065 presented in a tabular or spreadsheet format acceptable to the Agency. If
22066 changed from the supplier's system-specific study plan submitted under
22067 subsection (a), the supplier's IDSE report must also include a schematic of
22068 its distribution system, the population served, and system type (i.e., that it
22069 is a Subpart B or groundwater system).
22070
 - 22071 2) If the supplier used the modeling provision under subsection (a)(2), it must
22072 include final information for the elements described in subsection
22073 (a)(2)(B), and a 24-hour time-series graph of residence time for each
22074 Subpart Y compliance monitoring location selected.
22075
 - 22076 3) The supplier must recommend and justify Subpart Y compliance
22077 monitoring locations and timing based on the protocol in Section 611.925.
22078
 - 22079 4) The supplier's IDSE report must include an explanation of any deviations
22080 from its approved system-specific study plan.
22081
 - 22082 5) The supplier's IDSE report must include the basis (analytical and
22083 modeling results) and justification that it used to select the recommended
22084 Subpart Y monitoring locations.
22085
 - 22086 6) The supplier may submit its IDSE report in lieu of its system-specific
22087 study plan on the schedule identified in Section 611.920(c) for submission
22088 of the system-specific study plan if the supplier believes that it has the
22089 necessary information before the time that the system-specific study plan
22090 is due. If the supplier elects this approach, its IDSE report must also
22091 include all information required under subsection (a).
22092
 - 22093 7) The supplier must ~~keep~~retain a complete copy of its IDSE report
22094 submitted under this Section for ten years after the date that the supplier

22095 submitted its IDSE report. If the Agency modifies the Subpart Y
22096 monitoring requirements that the supplier recommended in the supplier's
22097 IDSE report or if the Agency approves alternative monitoring locations,
22098 the supplier must keep a copy of the Agency's notification on file for ten
22099 years after the date of the Agency's notification. The supplier must make
22100 the IDSE report and any Agency notification available for review by the
22101 Agency or the public.

22102
22103 BOARD NOTE: Derived from 40 CFR 141.602.

22104
22105 (Source: Amended at 50 Ill. Reg. _____, effective _____)

22106
22107 **Section 611.923 40/30 Certification**

- 22108
22109 a) Eligibility. A supplier was eligible for 40/30 certification if it had no TTHM or
22110 HAA5 monitoring violations under Subpart I and no individual sample exceeded
22111 0.040 mg/L for TTHM or 0.030 mg/L for HAA5 during an eight consecutive
22112 calendar quarter period implementing this Subpart W. Eligibility for 40/30
22113 certification required eight consecutive calendar quarters of Subpart I compliance
22114 monitoring results, unless the supplier was on reduced monitoring under Subpart I
22115 and needed not monitor. If the supplier did not monitor, the supplier was to base
22116 its eligibility on compliance samples during the preceding 12 months.

22117
22118 BOARD NOTE: Implementing this Subpart W occurred in stages from October
22119 1, 2006 through October 1, 2014. The monitoring for 40/30 certification began
22120 either January 2004 or January 2005, depending on population served and other
22121 factors. See 40 CFR 141.600(c) and 141.603(a). The Board removed the now-
22122 obsolete implementation dates.

- 22123
22124 b) 40/30 Certification

22125
22126 1) A supplier was to certify to the Agency that no compliance sample under
22127 Subpart I during the applicable period under subsection (a) exceeded
22128 0.040 mg/L for TTHM or 0.030 mg/L for HAA5, and the supplier had no
22129 TTHM or HAA5 monitoring violations during the period under subsection
22130 (a).

22131
22132 2) The Agency could require the supplier to submit compliance monitoring
22133 results, distribution system schematics, or recommended Subpart Y
22134 compliance monitoring locations in addition to the supplier's certification.
22135 If the supplier failed to submit the Agency-requested information, the
22136 Agency could require standard monitoring under Section 611.921 or a
22137 system-specific study under Section 611.922.

- 22138
22139 3) The Agency could still require standard monitoring under Section 611.921
22140 or a system-specific study under Section 611.922 even if the supplier met
22141 the criteria in subsection (a).
22142
22143 4) The supplier was to ~~keep~~retain a complete copy of its certification under
22144 this Section for ten years after submitting it to the Agency. The supplier
22145 was to make the certification, all data upon which it based the
22146 certification, and any Agency notification available for Agency or public
22147 review.
22148

22149 BOARD NOTE: This Section derives from 40 CFR 141.603. Although this Section is an
22150 implementing provision with compliance deadlines long past, the Board removed the obsolete
22151 compliance dates but retained the rule in past-tense to avoid a gap in the Illinois rules.
22152

22153 (Source: Amended at 50 Ill. Reg. _____, effective _____)
22154

22155 **Section 611.925 Subpart Y Compliance Monitoring Location Recommendations**
22156

- 22157 a) A supplier's IDSE report must include its recommendations and justification for
22158 where and during what months it will conduct TTHM and HAA5 monitoring for
22159 Subpart Y. The supplier must base its recommendations on the criteria ~~set forth~~
22160 in subsections (b) through (e).
22161
22162 b) The supplier must select the number of monitoring locations specified in the
22163 applicable of subsections (b)(1) through (b)(13), subject to the limitations of
22164 subsections (b)(14) and (b)(15). The supplier will use these recommended
22165 locations as Subpart Y routine compliance monitoring locations, unless the
22166 Agency requires different or additional locations. The supplier should distribute
22167 locations throughout the distribution system to the extent possible.
22168
22169 1) A Subpart B system supplier that serves fewer than 500 persons must
22170 annually collect samples from two monitoring locations: one sample from
22171 the highest TTHM location and one sample from the highest HAA5
22172 location.
22173
22174 2) A Subpart B system supplier that serves 500 to 3,300 persons must
22175 quarterly collect samples from two monitoring locations: one sample from
22176 the highest TTHM location and one sample from the highest HAA5
22177 location.
22178
22179 3) A Subpart B system supplier that serves 3,301 to 9,999 persons must
22180 quarterly collect samples from two monitoring locations: one sample from

- 22181 the highest TTHM location and one sample from the highest HAA5
 22182 location.
 22183
- 22184 4) A Subpart B system supplier that serves 10,000 to 49,999 persons must
 22185 quarterly collect samples from four monitoring locations: two samples
 22186 from the highest TTHM locations, one sample from the highest HAA5
 22187 location, and one sample from an existing Subpart I compliance location.
 22188
- 22189 5) A Subpart B system supplier that serves 50,000 to 249,999 persons must
 22190 quarterly collect samples from eight monitoring locations: three samples
 22191 from the highest TTHM location, three samples from the highest HAA5
 22192 locations, and two samples from existing Subpart I compliance locations.
 22193
- 22194 6) A Subpart B system supplier that serves 250,000 to 999,999 persons must
 22195 quarterly collect samples from 12 monitoring locations: five samples from
 22196 the highest TTHM location, four samples from the highest HAA5
 22197 locations, and three samples from existing Subpart I compliance locations.
 22198
- 22199 7) A Subpart B system supplier that serves 1,000,000 to 4,999,999 persons
 22200 must quarterly collect samples from 16 monitoring locations: six samples
 22201 from the highest TTHM location, six samples from the highest HAA5
 22202 locations, and four samples from existing Subpart I compliance locations.
 22203
- 22204 8) A Subpart B system supplier that serves more than 5,000,000 persons
 22205 must quarterly collect samples from 20 monitoring locations: eight
 22206 samples from the highest TTHM location, seven samples from the highest
 22207 HAA5 locations, and five samples from existing Subpart I compliance
 22208 locations.
 22209
- 22210 9) A groundwater system supplier that serves fewer than 500 persons must
 22211 annually collect samples from two monitoring locations: one sample from
 22212 the highest TTHM location and one sample from the highest HAA5
 22213 location.
 22214
- 22215 10) A groundwater system supplier that serves 500 to 9,999 persons must
 22216 annually collect samples from two monitoring locations: one sample from
 22217 the highest TTHM location and one sample from the highest HAA5
 22218 location.
 22219
- 22220 11) A groundwater system supplier that serves 10,000 to 99,999 persons must
 22221 quarterly collect samples from four monitoring locations: two samples
 22222 from the highest TTHM locations, one sample from the highest HAA5
 22223 location, and one sample from an existing Subpart I compliance location.

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- 12) A groundwater system supplier that serves 100,000 to 499,999 persons must quarterly collect samples from six monitoring locations: three samples from the highest TTHM locations, two samples from the highest HAA5 locations, and one sample from an existing Subpart I compliance location.
 - 13) A groundwater system supplier that serves more than 500,000 persons must quarterly collect samples from eight monitoring locations: three samples from the highest TTHM locations, three samples from the highest HAA5 locations, and two samples from existing Subpart I compliance locations.
 - 14) The supplier must monitor during the month of highest DBP concentrations.
 - 15) A supplier on quarterly monitoring must take dual sample sets every 90 days at each monitoring location, except for a Subpart B system supplier that serves 500 to 3,300 persons. A groundwater system supplier that serves 500 to 9,999 persons ~~that~~~~which~~ is on annual monitoring must take dual sample sets at each monitoring location. Any other supplier that is on annual monitoring or ~~that~~~~which~~ is a Subpart B system supplier that serves 500 to 3,300 persons is required to take individual TTHM and HAA5 samples (instead of a dual sample set) at the locations with the highest TTHM and HAA5 concentrations, respectively. For a supplier that serves fewer than 500 people, only one location with a dual sample set per monitoring period is needed if the highest TTHM and HAA5 concentrations occur at the same location and month.
- c) The supplier must recommend Subpart Y compliance monitoring locations based on standard monitoring results, system-specific study results, and Subpart I compliance monitoring results. The supplier must follow the protocol in subsections (c)(1) through (c)(8). If required to monitor at more than eight locations, the supplier must repeat the protocol as necessary. If the supplier does not have existing Subpart I compliance monitoring results or if the supplier does not have enough existing Subpart I compliance monitoring results, the supplier must repeat the protocol, skipping the provisions of subsections (c)(3) and (c)(7) as necessary, until the supplier has identified the required total number of monitoring locations.
- 1) The location with the highest TTHM LRAA not previously selected as a Subpart Y monitoring location.

- 22267 2) The location with the highest HAA5 LRAA not previously selected as a
22268 Subpart Y monitoring location.
- 22269
- 22270 3) The existing Subpart I average residence time compliance monitoring
22271 location (maximum residence time compliance monitoring location for a
22272 groundwater system) with the highest HAA5 LRAA not previously
22273 selected as a Subpart Y monitoring location.
- 22274
- 22275 4) The location with the highest TTHM LRAA not previously selected as a
22276 Subpart Y monitoring location.
- 22277
- 22278 5) The location with the highest TTHM LRAA not previously selected as a
22279 Subpart Y monitoring location.
- 22280
- 22281 6) The location with the highest HAA5 LRAA not previously selected as a
22282 Subpart Y monitoring location.
- 22283
- 22284 7) The existing Subpart I average residence time compliance monitoring
22285 location (maximum residence time compliance monitoring location for a
22286 groundwater system) with the highest TTHM LRAA not previously
22287 selected as a Subpart Y monitoring location.
- 22288
- 22289 8) The location with the highest HAA5 LRAA not previously selected as a
22290 Subpart Y monitoring location.
- 22291
- 22292 d) The supplier may recommend locations other than those specified in subsection
22293 (c) if the supplier includes a rationale for selecting other locations. If the Agency
22294 approves the alternative locations, the supplier must monitor at these locations to
22295 determine compliance under Subpart Y.
- 22296
- 22297 e) The supplier's recommended schedule must include Subpart Y monitoring during
22298 the peak historical month for TTHM and HAA5 concentration, unless the Agency
22299 approves another month. Once the supplier has identified the peak historical
22300 month, and if the supplier is required to conduct routine monitoring at least
22301 quarterly, the supplier must schedule Subpart Y compliance monitoring at a
22302 regular frequency of every 90 or fewer days.
- 22303

22304 BOARD NOTE: Derived from 40 CFR 141.605 ~~(2016)~~.

22305 (Source: Amended at 50 Ill. Reg. _____, effective _____)

22306
22307
22308 **SUBPART X: ENHANCED FILTRATION AND DISINFECTION –**
22309 **SYSTEMS SERVING FEWER THAN 10,000 PEOPLE**

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Section 611.953 Disinfection Profile

- a) Applicability. A disinfection profile is a graphical representation of a system's level of *Giardia lamblia* or virus inactivation measured during the course of a year. A Subpart B community or non-transient non-community water system [supplier](#) that serves fewer than 10,000 persons must develop a disinfection profile unless the Agency, by a SEP, determines that a profile is unnecessary. The Agency may approve the use of a more representative data set for disinfection profiling than the data set required under subsections (c) through (g).

- b) Determination That a Disinfection Profile Is Not Necessary. The Agency may only determine that a disinfection profile is not necessary if the system's TTHM and HAA5 levels are below 0.064 mg/l and 0.048 mg/l, respectively. To determine these levels, TTHM and HAA5 samples must have been collected during the month with the warmest water temperature, and at the point of maximum residence time in the distribution system. The Agency may, by a SEP, approve the use of a different data set to determine these levels if it determines that the data set is representative TTHM and HAA5 data.

- c) Development of a Disinfection Profile. A disinfection profile consists of the following three steps:
 - 1) First, the supplier must collect data for several parameters from the plant, as discussed in subsection (d), over the course of 12 months;
 - 2) Second, the supplier must use this data to calculate weekly log inactivation as discussed in subsections (e) and (f); and
 - 3) Third, the supplier must use these weekly log inactivations to develop a disinfection profile as specified in subsection (g).

- d) Data Required for a Disinfection Profile. A supplier must monitor the following parameters to determine the total log inactivation using the analytical methods in Section 611.531, once per week on the same calendar day, over 12 consecutive months:
 - 1) The temperature of the disinfected water at each residual disinfectant concentration sampling point during peak hourly flow;
 - 2) If a supplier uses chlorine, the pH of the disinfected water at each residual disinfectant concentration sampling point during peak hourly flow;

- 22353 3) The disinfectant contact times ("T") during peak hourly flow; and
 22354
 22355 4) The residual disinfectant concentrations ("C") of the water before or at the
 22356 first customer and prior to each additional point of disinfection during
 22357 peak hourly flow.
 22358
 22359 e) Calculations Based on the Data Collected. The tables in Appendix B must be
 22360 used to determine the appropriate $CT_{99.9}$ value. The supplier must calculate the
 22361 total inactivation ratio as follows, and multiply the value by 3.0 to determine log
 22362 inactivation of *Giardia lamblia*:
 22363
 22364 1) If the supplier uses only one point of disinfectant application, it must
 22365 determine either of the following:
 22366
 22367 A) One inactivation ratio ($CT_{calc}/CT_{99.9}$) before or at the first customer
 22368 during peak hourly flow; or
 22369
 22370 B) Successive $CT_{calc}/CT_{99.9}$ values, representing sequential
 22371 inactivation ratios, between the point of disinfectant application
 22372 and a point before or at the first customer during peak hourly flow.
 22373 Under this alternative, the supplier must calculate the total
 22374 inactivation ratio by determining $CT_{calc}/CT_{99.9}$ for each sequence
 22375 and then adding the $CT_{calc}/CT_{99.9}$ values together to determine
 22376 $\Sigma CT_{calc}/CT_{99.9}$.
 22377
 22378 2) If the supplier uses more than one point of disinfectant application before
 22379 the first customer, it must determine the $CT_{calc}/CT_{99.9}$ value of each
 22380 disinfection segment immediately prior to the next point of disinfectant
 22381 application, or for the final segment, before or at the first customer, during
 22382 peak hourly flow using the procedure specified in subsection (e)(1)(B).
 22383
 22384 f) Use of Chloramines, Ozone, or Chlorine Dioxide as a Primary Disinfectant. If a
 22385 supplier uses chloramines, ozone, or chlorine dioxide for primary disinfection, the
 22386 supplier must also calculate the logs of inactivation for viruses and develop an
 22387 additional disinfection profile for viruses using methods approved by the Agency.
 22388
 22389 g) Development and Maintenance of the Disinfection Profile in Graphic Form. Each
 22390 log inactivation serves as a data point in the supplier's disinfection profile. A
 22391 supplier will have obtained 52 measurements (one for every week of the year).
 22392 This will allow the supplier and the Agency the opportunity to evaluate how
 22393 microbial inactivation varied over the course of the year by looking at all 52
 22394 measurements (the supplier's disinfection profile). The supplier must ~~keep~~retain
 22395 the disinfection profile data in graphic form, such as a spreadsheet, which must be

22396 available for review by the Agency as part of a sanitary survey. The supplier
22397 must use this data to calculate a benchmark if the supplier is considering changes
22398 to disinfection practices.
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22400 BOARD NOTE: Derived from 40 CFR 141.530 through 141.536.

22401
22402 (Source: Amended at 50 Ill. Reg. _____, effective _____)
22403

22404 **Section 611.955 Combined Filter Effluent Turbidity Limits**
22405

- 22406 a) Applicability. A Subpart B system supplier that serves fewer than 10,000
22407 persons, ~~that~~which is required to filter, and ~~that uses~~which utilizes filtration other
22408 than slow sand filtration or diatomaceous earth filtration must meet the combined
22409 filter effluent turbidity requirements of subsections (b) through (d). If the supplier
22410 uses slow sand or diatomaceous earth filtration the supplier is not required to meet
22411 the combined filter effluent turbidity limits of this Subpart X, but the supplier
22412 must continue to meet the combined filter effluent turbidity limits in Section
22413 611.250.
22414
- 22415 b) Combined Filter Effluent Turbidity Limits. A supplier must meet two
22416 strengthened combined filter effluent turbidity limits.
22417
- 22418 1) The first combined filter effluent turbidity limit is a "95th percentile"
22419 turbidity limit that a supplier must meet in at least 95 percent of the
22420 turbidity measurements taken each month. Measurements must continue
22421 to be taken as described in Sections 611.531 and 611.533. Monthly
22422 reporting must be completed according to Section 611.957(a). The
22423 following are the required limits for specific filtration technologies:
22424
- 22425 A) For a system with conventional filtration or direct filtration, the
22426 95th percentile turbidity value is 0.3 NTU.
22427
- 22428 B) For a system with any other alternative filter technology, the 95th
22429 percentile turbidity value is a value (not to exceed 1 NTU) to be
22430 determined by the Agency, by a SEP, based on the demonstration
22431 described in subsection (c).
22432
- 22433 2) The second combined filter effluent turbidity limit is a "maximum"
22434 turbidity limit that a supplier may at no time exceed during the month.
22435 Measurements must continue to be taken as described in Sections 611.531
22436 and 611.533. Monthly reporting must be completed according to Section
22437 611.957(a). The following are the required limits for specific filtration
22438 technologies:

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- A) For a system with conventional filtration or direct filtration, the maximum turbidity value is 1 NTU.
 - B) For a system with any other alternative filter technology, the maximum turbidity value is a value (not to exceed 5 NTU) to be determined by the Agency, by a SEP, based on the demonstration described in subsection (c).
- c) Requirements for an Alternative Filtration System
- 1) If a supplier's system consists of alternative filtration (filtration other than slow sand filtration, diatomaceous earth filtration, conventional filtration, or direct filtration) the supplier is required to conduct a demonstration (see tables in subsection (b)). The supplier must demonstrate to the Agency, using pilot plant studies or other means, that its system's filtration, in combination with disinfection treatment, consistently achieves the following:
 - A) 99 percent removal of *Cryptosporidium* oocysts;
 - B) 99.9 percent removal or inactivation of *Giardia lamblia* cysts; and
 - C) 99.99 percent removal or inactivation of viruses.
 - 2) This subsection (c)(2) corresponds with 40 CFR 141.552(b), which USEPA has designated as "reserved". This statement maintains structural correspondence with the corresponding federal regulation.
- d) Requirements for a Lime-Softening System. If a supplier practices lime softening, the supplier may acidify representative combined filter effluent turbidity samples prior to analysis using a protocol approved by the Agency.

22472 BOARD NOTE: Derived from 40 CFR 141.550 through 141.553.

22473
22474 (Source: Amended at 50 Ill. Reg. _____, effective _____)

22475
22476 **Section 611.956 Individual Filter Turbidity Requirements**

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- a) Applicability. A Subpart B system supplier that serves fewer than 10,000 persons and utilizing conventional filtration or direct filtration must conduct continuous monitoring of turbidity for each individual filter in a supplier's system. The following requirements apply to continuous turbidity monitoring:

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- 1) Monitoring must be conducted using an approved method in Section 611.531;
 - 2) Calibration of turbidimeters must be conducted using procedures specified by the manufacturer;
 - 3) Results of turbidity monitoring must be recorded at least every 15 minutes;
 - 4) Monthly reporting must be completed according to Section 611.957(a); and
 - 5) Records must be maintained according to Section 611.957(b).
- b) Failure of Turbidity Monitoring Equipment. If there is a failure in the continuous turbidity monitoring equipment, the supplier must conduct grab sampling every four hours in lieu of continuous monitoring until the turbidimeter is back on-line. The supplier has 14 days to resume continuous monitoring before a violation is incurred.
- c) Special Requirements for Systems with Two or Fewer Filters. If a supplier's system only consists of two or fewer filters, the supplier may conduct continuous monitoring of combined filter effluent turbidity in lieu of individual filter effluent turbidity monitoring. Continuous monitoring must meet the same requirements ~~set forth~~ in subsections (a)(1) through (a)(4) and (b).
- d) Follow-Up Action. Follow-up action is required according to the following requirements:
- 1) If the turbidity of an individual filter (or the turbidity of combined filter effluent (CFE) for a system with two filters that monitor CFE in lieu of individual filters) exceeds 1.0 NTU in two consecutive recordings 15 minutes apart, the supplier must report to the Agency by the 10th of the following month and include the filter numbers, corresponding dates, turbidity values that exceeded 1.0 NTU, and the cause (if known) for the exceedances.
 - 2) If a supplier was required to report to the Agency for three months in a row and turbidity exceeded 1.0 NTU in two consecutive recordings 15 minutes apart at the same filter (or CFE for systems with two filters that monitor CFE in lieu of individual filters), the supplier must conduct a self-assessment of the filters within 14 days after the day on which the filter

22525 exceeded 1.0 NTU in two consecutive measurements for the third straight
22526 month, unless a CPE, as specified in subsection (d)(3), was required. A
22527 supplier that has a system with two filters that monitor CFE in lieu of
22528 individual filters must conduct a self-assessment on both filters. The self-
22529 assessment must consist of at least the following components: assessment
22530 of filter performance, development of a filter profile, identification and
22531 prioritization of factors limiting filter performance, assessment of the
22532 applicability of corrections, and preparation of a filter self-assessment
22533 report.

22534
22535 3) If a supplier was required to report to the Agency for two months in a row
22536 and turbidity exceeded 2.0 NTU in two consecutive recordings 15 minutes
22537 apart at the same filter (or CFE for systems with two filters that monitor
22538 CFE in lieu of individual filters), the supplier must arrange to have a
22539 comprehensive performance evaluation (CPE) conducted by the Agency
22540 or a third party approved by the Agency not later than 60 days following
22541 the day the filter exceeded 2.0 NTU in two consecutive measurements for
22542 the second straight month. If a CPE has been completed by the Agency or
22543 a third party approved by the Agency within the 12 prior months or the
22544 system and Agency are jointly participating in an ongoing comprehensive
22545 technical assistance (CTA) project at the system, a new CPE is not
22546 required. If conducted, a CPE must be completed and submitted to the
22547 Agency no later than 120 days following the day the filter exceeded 2.0
22548 NTU in two consecutive measurements for the second straight month.

22549
22550 e) Special Individual Filter Monitoring for a Lime-Softening System. If a supplier's
22551 system ~~uses~~utilizes lime softening, the supplier may apply to the Agency for
22552 alternative turbidity exceedance levels for the levels specified in subsection (d).
22553 The supplier must be able to demonstrate to the Agency that higher turbidity
22554 levels are due to lime carryover only, and not due to degraded filter performance.

22555
22556 BOARD NOTE: Derived from 40 CFR 141.560 through 141.564.

22557
22558 (Source: Amended at 50 Ill. Reg. _____, effective _____)

22559
22560 **Section 611.957 Reporting and Recordkeeping Requirements**

22561
22562 a) Reporting. This Subpart X requires a supplier to report several items to the
22563 Agency. Subsections (a)(1) through (a)(4) describe the items that must be
22564 reported and the frequency of reporting. (The supplier is required to report the
22565 information described in subsections (a)(1) through (a)(4), if it is subject to the
22566 specific requirement indicated.)
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22610
- 1) If a supplier is subject to the combined filter effluent requirements (Section 611.955), it must report as follows:
 - A) The total number of filtered water turbidity measurements taken during the month, by the 10th of the following month.
 - B) The number and percentage of filtered water turbidity measurements taken during the month that are less than or equal to the supplier's required 95th percentile limit, by the 10th of the following month.
 - C) The date and value of any turbidity measurements taken during the month that exceed the maximum turbidity value for the supplier's filtration system, by the 10th of the following month.
 - 2) If the supplier is subject to the individual filter turbidity requirements (Section 611.956), it must report as follows:
 - A) The fact that the supplier's system conducted individual filter turbidity monitoring during the month, by the 10th of the following month.
 - B) The filter numbers, corresponding dates, and the turbidity values that exceeded 1.0 NTU during the month, by the 10th of the following month, but only if two consecutive measurements exceeded 1.0 NTU.
 - C) If a self-assessment is required, the date that it was triggered and the date that it was completed, by the 10th of the following month (or 14 days after the self-assessment was triggered only if the self-assessment was triggered during the last four days of the month).
 - D) If a CPE is required, the fact that the CPE is required and the date that it was triggered, by the 10th of the following month.
 - E) A copy of completed CPE report, within 120 days after the CPE was triggered.
 - 3) If the supplier is subject to the disinfection profiling (Section 611.953), it must report results of optional monitoring that show TTHM levels 0.064 mg/ℓ and HAA5 levels 0.048 mg/ℓ (only if the supplier wishes to forgo profiling) or that the supplier has begun disinfection profiling.

- 22611 4) If the supplier is subject to the disinfection benchmarking (Section
22612 611.954), it must report a description of the proposed change in
22613 disinfection, its system's disinfection profile for Giardia lamblia (and, if
22614 necessary, viruses) and disinfection benchmark, and an analysis of how
22615 the proposed change will affect the current levels of disinfection, anytime
22616 the supplier is considering a significant change to its disinfection practice.
22617
- 22618 b) Recordkeeping. A supplier must keep several types of records based on the
22619 requirements of this Subpart X, in addition to recordkeeping requirements under
22620 Sections 611.261 and 611.262. Subsections (b)(1) through (b)(3) describe the
22621 necessary records, the length of time these records must be kept, and for which
22622 requirement the records pertain. (The supplier is required to maintain records
22623 described in subsections (b)(1) through (b)(3), if it is subject to the specific
22624 requirement indicated.)
22625
- 22626 1) If the supplier is subject to the individual filter turbidity requirements
22627 (Section 611.956), it must ~~keep~~retain the results of individual filter
22628 monitoring as necessary records for at least three years.
22629
- 22630 2) If the supplier is subject to disinfection profiling (Section 611.953), it
22631 must ~~keep~~retain the results of its disinfection profile (including raw data
22632 and analysis) as necessary records indefinitely.
22633
- 22634 3) If the supplier is subject to disinfection benchmarking (Section 611.954),
22635 it must ~~keep~~retain its disinfection benchmark (including raw data and
22636 analysis) as necessary records indefinitely.
22637

22638 BOARD NOTE: Derived from 40 CFR 141.570 and 141.571-~~(2016)~~.
22639

22640 (Source: Amended at 50 Ill. Reg. _____, effective _____)
22641

22642 SUBPART Y: STAGE 2 DISINFECTION BYPRODUCTS REQUIREMENTS
22643

22644 **Section 611.970 General Requirements**
22645

- 22646 a) General. The requirements of this Subpart Y constitute NPDWRs. The
22647 regulations in this Subpart Y establish monitoring and other requirements for
22648 achieving compliance with MCLs based on LRAAs for TTHM and HAA5, and
22649 for achieving compliance with MRDLs for chlorine and chloramine for certain
22650 consecutive systems.
22651
- 22652 b) Applicability. A supplier is subject to these requirements if its system is a CWS
22653 or a NTNCWS that uses a primary or residual disinfectant other than ultraviolet

22654 light or ~~that~~^{which} delivers water that has been treated with a primary or residual
22655 disinfectant other than ultraviolet light.

22656
22657 c) A supplier must comply with ~~the requirements in~~ this Subpart Y as follows:

22658
22659 1) The supplier's monitoring frequency is specified in Section 611.971(a)(2).

22660
22661 A) If a supplier is required to conduct quarterly monitoring, it must
22662 begin monitoring in the first full calendar quarter that includes the
22663 applicable compliance date ~~set forth~~ in this subsection (c).

22664
22665 B) If a supplier is required to conduct monitoring less frequently than
22666 quarterly, it must begin monitoring in the calendar month
22667 recommended in the IDSE report prepared under Section 611.921
22668 or Section 611.922 or in the calendar month identified in the
22669 Subpart Y monitoring plan developed under Section 611.972, but
22670 in no instance later than 12 months after the applicable compliance
22671 date ~~set forth~~ in this subsection (c).

22672
22673 2) If a supplier is required to conduct quarterly monitoring, it must make
22674 compliance calculations at the end of the fourth calendar quarter that
22675 follows the compliance date and at the end of each subsequent quarter (or
22676 earlier if the LRAA calculated based on fewer than four quarters of data
22677 would cause the MCL to be exceeded regardless of the monitoring results
22678 of subsequent quarters). If a supplier is required to conduct monitoring
22679 less frequently than quarterly, it must make compliance calculations
22680 beginning with the first compliance sample taken after the compliance
22681 date.

22682
22683 3) The Agency may, by a SEP, determine that the combined distribution
22684 system does not include certain consecutive systems based on factors such
22685 as receipt of water from a wholesale system only on an emergency basis or
22686 receipt of only a small percentage and small volume of water from a
22687 wholesale system. The Agency may also determine that the combined
22688 distribution system does not include certain wholesale systems based on
22689 factors such as delivery of water to a consecutive system only on an
22690 emergency basis or delivery of only a small percentage and small volume
22691 of water to a consecutive system.

22692
22693 BOARD NOTE: Implementation of this Subpart Y occurred in stages during
22694 October 1, 2012 through October 1, 2014, depending on population served. See
22695 40 CFR 141.620(c)(1) through (c)(5). The Board removed the now-obsolete
22696 implementation dates.

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d) Monitoring and Compliance

- 1) Suppliers Required to Monitor Quarterly. To comply with Subpart Y MCLs in Section 611.312(b)(2), the supplier must calculate LRAAs for TTHM and HAA5 using monitoring results collected under this Subpart Y, and it must determine that each LRAA does not exceed the MCL. If the supplier fails to complete four consecutive quarters of monitoring, it must calculate compliance with the MCL based on the average of the available data from the most recent four quarters. If the supplier takes more than one sample per quarter at a monitoring location, it must average all samples taken in the quarter at that location to determine a quarterly average to be used in the LRAA calculation.
- 2) Suppliers Required to Monitor Yearly or Less Frequently. To determine compliance with Subpart Y MCLs in Section 611.312(b)(2), the supplier must determine that each sample taken is less than the MCL. If any sample exceeds the MCL, the supplier must comply with the requirements of Section 611.975. If no sample exceeds the MCL, the sample result for each monitoring location is considered the LRAA for that monitoring location.

- e) Violation for Failure to Monitor. A supplier is in violation of the monitoring requirements for each quarter that a monitoring result would be used in calculating an LRAA if the supplier fails to monitor.

BOARD NOTE: Derived from 40 CFR 141.620.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

Section 611.971 Routine Monitoring

a) Monitoring

- 1) If a supplier submitted an IDSE report, it must begin monitoring at the locations and during the months that the supplier has recommended in its IDSE report submitted under Section 611.925, following the schedule ~~set forth~~ in Section 611.970(c), unless the Agency, by a SEP, requires other locations or additional locations after its review. If the supplier submitted a 40/30 certification under Section 611.923, it qualified for a very small system waiver under Section 611.924, or it is a NTNCWS that serves fewer than 10,000 persons, the supplier must monitor at the locations and

22739 on the dates identified in its monitoring plan as described in Section
22740 611.382(f), updated as required by Section 611.972.

- 22741
- 22742 2) The supplier must monitor at no fewer than the number of locations
22743 identified in the applicable of subsections (a)(2)(A) through (a)(2)(M),
22744 subject to the limitations of subsections (a)(2)(N) and (a)(2)(O).
- 22745
- 22746 A) A Subpart B system supplier that serves fewer than 500 persons
22747 must monitor annually at two distribution system monitoring
22748 locations during each monitoring period.
- 22749
- 22750 B) A Subpart B system supplier that serves 500 to 3,300 persons must
22751 monitor quarterly at two distribution system monitoring locations
22752 during each monitoring period.
- 22753
- 22754 C) A Subpart B system supplier that serves 3,301 to 9,999 persons
22755 must monitor quarterly at two distribution system monitoring
22756 locations during each monitoring period.
- 22757
- 22758 D) A Subpart B system supplier that serves 10,000 to 49,999 persons
22759 must monitor quarterly at four distribution system monitoring
22760 locations during each monitoring period.
- 22761
- 22762 E) A Subpart B system supplier that serves 50,000 to 249,999 persons
22763 must monitor quarterly at eight distribution system monitoring
22764 locations during each monitoring period.
- 22765
- 22766 F) A Subpart B system supplier that serves 250,000 to 999,999
22767 persons must monitor quarterly at 12 distribution system
22768 monitoring locations during each monitoring period.
- 22769
- 22770 G) A Subpart B system supplier that serves 1,000,000 to 4,999,999
22771 persons must monitor quarterly at 16 distribution system
22772 monitoring locations during each monitoring period.
- 22773
- 22774 H) A Subpart B system supplier that serves 5,000,000 or more persons
22775 must monitor quarterly at 20 distribution system monitoring
22776 locations during each monitoring period.
- 22777
- 22778 I) A groundwater system supplier that serves fewer than 500 persons
22779 must monitor annually at two distribution system monitoring
22780 locations during each monitoring period.
- 22781

- 22782 J) A groundwater system supplier that serves 500 to 9,999 persons
22783 must monitor annually at two distribution system monitoring
22784 locations during each monitoring period.
22785
- 22786 K) A groundwater system supplier that serves 10,000 to 99,999
22787 persons must monitor quarterly at four distribution system
22788 monitoring locations during each monitoring period.
22789
- 22790 L) A groundwater system supplier that serves 100,000 to 499,999
22791 persons must monitor quarterly at six distribution system
22792 monitoring locations during each monitoring period.
22793
- 22794 M) A groundwater system supplier that serves 500,000 or more
22795 persons must monitor quarterly at eight distribution system
22796 monitoring locations during each monitoring period.
22797
- 22798 N) The supplier must monitor during month of highest DBP
22799 concentrations.
22800
- 22801 O) A supplier on quarterly monitoring must take dual sample sets
22802 every 90 days at each monitoring location, except for a Subpart B
22803 system supplier that serves 500 to 3,300. A groundwater system
22804 supplier that serves 500 to 9,999 persons ~~that~~which is on annual
22805 monitoring must take dual sample sets at each monitoring location.
22806 Any other supplier that is on annual monitoring or ~~that~~which is a
22807 Subpart B system supplier that serves 500 to 3,300 is required to
22808 take individual TTHM and HAA5 samples (instead of a dual
22809 sample set) at the locations with the highest TTHM and HAA5
22810 concentrations, respectively. For a supplier that serves fewer than
22811 500 people, only one location with a dual sample set per
22812 monitoring period is needed if the highest TTHM and HAA5
22813 concentrations occur at the same location and month.
22814
- 22815 3) If a supplier is an undisinfected system that begins using a disinfectant
22816 other than UV light after the dates ~~set forth~~ in Subpart W for complying
22817 with the IDSE requirements, the supplier must consult with the Agency to
22818 identify compliance monitoring locations for this Subpart Y. The supplier
22819 must then develop a monitoring plan under Section 611.972 that includes
22820 those monitoring locations.
22821
- 22822 b) Analytical Methods. A supplier must use an approved method listed in Section
22823 611.381 for TTHM and HAA5 analyses in this Subpart Y. Analyses must be

22824 conducted by laboratories that have received certification as specified in Section
22825 611.381.

22826
22827 BOARD NOTE: Derived from 40 CFR 141.621.

22828
22829 (Source: Amended at 50 Ill. Reg. _____, effective _____)

22830
22831 **Section 611.977 Requirements for Remaining on Reduced TTHM and HAA5 Monitoring**
22832 **Based on Subpart I Results**

22833
22834 A supplier may remain on reduced monitoring after the applicable dates identified in Section
22835 611.970(c) for compliance with this Subpart Y only if the supplier fulfills each of the
22836 requirements ~~set forth~~ in subsections (a) through (c), subject to the limitations of subsection (d):

- 22837
- 22838 a) The supplier qualifies for a 40/30 certification ~~underpursuant to~~ Section 611.923
22839 or it has received a very small system waiver ~~underpursuant to~~ Section 611.924;
 - 22840
 - 22841 b) The supplier meets the reduced monitoring criteria ~~set forth~~ in Section 611.973(a);
 - 22842
 - 22843 c) The supplier does not change or add monitoring locations from those used for
22844 compliance monitoring under Subpart I; and
 - 22845
 - 22846 d) If the supplier's monitoring locations ~~underpursuant to~~ this Subpart Y differ from
22847 its monitoring locations ~~underpursuant to~~ Subpart I, the supplier may not remain
22848 on reduced monitoring after the dates identified in Section 611.970(c) for the
22849 purposes of compliance with this Subpart Y.

22850
22851 BOARD NOTE: Derived from 40 CFR 141.627 ~~(2016)~~.

22852
22853 (Source: Amended at 50 Ill. Reg. _____, effective _____)

22854
22855 **Section 611.979 Reporting and Recordkeeping Requirements**

- 22856
- 22857 a) Reporting
 - 22858
 - 22859 1) A supplier must report the following information to the Agency within ten
22860 days after the end of any quarter in which monitoring is required for each
22861 monitoring location:
 - 22862
 - 22863 A) The number of samples taken during the last quarter;
 - 22864
 - 22865 B) The date and results of each sample taken during the last quarter;
- 22866

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- C) The arithmetic average of quarterly results for the last four quarters for each monitoring location (LRAA), beginning at the end of the fourth calendar quarter that follows the compliance date and at the end of each subsequent quarter. If the LRAA calculated based on fewer than four quarters of data would cause the MCL to be exceeded regardless of the monitoring results of subsequent quarters, the supplier must report this information to the Agency as part of the first report due following the compliance date or anytime ~~after~~^{after} ~~thereafter that~~ this determination is made. If the supplier is required to conduct monitoring at a frequency that is less than quarterly, it must make compliance calculations beginning with the first compliance sample taken after the compliance date, unless the supplier is required to conduct increased monitoring under Section 611.975;
 - D) A statement whether, based on Section 611.312(b)(2) and this Subpart Y, the MCL was violated at any monitoring location; and
 - E) Any operational evaluation levels that were exceeded during the quarter and, if so, the location and date, and the calculated TTHM and HAA5 levels.
- 2) If a supplier is a Subpart B system supplier that seeks to qualify for or remain on reduced TTHM and HAA5 monitoring, it must report the following source water TOC information for each treatment plant that treats surface water or groundwater under the direct influence of surface water to the Agency within ten days after the end of any quarter in which monitoring is required:
- A) The number of source water TOC samples taken each month during last quarter;
 - B) The date and result of each sample taken during last quarter;
 - C) The arithmetic average of monthly samples taken during the last quarter or the result of the quarterly sample;
 - D) The running annual average (RAA) of quarterly averages from the past four quarters; and
 - E) Whether the RAA exceeded 4.0 mg/ℓ.

22909 3) The Agency may, by a SEP, choose to perform calculations and determine
22910 whether the MCL was exceeded or the system is eligible for reduced
22911 monitoring in lieu of having the system report that information under this
22912 Section.

22913
22914 b) Recordkeeping. A supplier must ~~keep~~retain any Subpart Y monitoring plans and
22915 the supplier's Subpart Y monitoring results as required by Section 611.860.
22916

22917 BOARD NOTE: Derived from 40 CFR 141.629.

22918 (Source: Amended at 50 Ill. Reg. _____, effective _____)
22919
22920

22921 SUBPART Z: ENHANCED TREATMENT FOR CRYPTOSPORIDIUM
22922

22923 **Section 611.1001 Source Water Monitoring Requirements: Source Water Monitoring**
22924

22925 a) Initial Round of Source Water Monitoring. A supplier must conduct the
22926 following monitoring on the schedule in subsection (c), unless it meets the
22927 monitoring exemption criteria in subsection (d).
22928

22929 1) A filtered system supplier serving 10,000 or more people must sample its
22930 source water for Cryptosporidium, E. coli, and turbidity at least monthly
22931 for 24 months.
22932

22933 2) An unfiltered system supplier serving 10,000 or more people must sample
22934 its source water for Cryptosporidium at least monthly for 24 months.
22935

22936 3) Smaller System Suppliers Monitoring for E. coli
22937

22938 A) A filtered system supplier serving fewer than 10,000 people must
22939 sample its source water for E. coli at least once every two weeks
22940 for 12 months.
22941

22942 B) A filtered system supplier serving fewer than 10,000 people may
22943 avoid E. coli monitoring if the system notifies the Agency that it
22944 will monitor for Cryptosporidium as described in subsection (a)(4).
22945 The system must notify the Agency no later than three months
22946 prior to the date before which the system is otherwise required to
22947 start E. coli monitoring under subsection (c).
22948

22949 4) Smaller System Suppliers Monitoring for Cryptosporidium. A filtered
22950 system supplier serving fewer than 10,000 people must sample its source
22951 water for Cryptosporidium at least twice per month for 12 months or at

- 22952 least monthly for 24 months if it meets any of the conditions ~~set forth~~ in
 22953 subsections (a)(4)(A) through (a)(4)(C), subject to the limitations of
 22954 subsection (a)(4)(D), based on monitoring conducted under subsection
 22955 (a)(3).
 22956
 22957 A) For a supplier using a lake or reservoir source, the annual mean E.
 22958 coli concentration is greater than 10 E. coli/100 mL.
 22959
 22960 B) For a supplier using a flowing stream source, the annual mean E.
 22961 coli concentration is greater than 50 E. coli/100 mL.
 22962
 22963 C) The supplier does not conduct E. coli monitoring as described in
 22964 subsection (a)(3).
 22965
 22966 D) A supplier using groundwater under the direct influence of surface
 22967 water must comply with the requirements of subsection (a)(4)
 22968 based on the E. coli level that applies to the nearest surface water
 22969 body. If no surface water body is nearby, the system must comply
 22970 based on the requirements that apply to a supplier using a lake or
 22971 reservoir source.
 22972
 22973 5) For a filtered system supplier serving fewer than 10,000 people, the
 22974 Agency may issue a SEP approving monitoring for an indicator other than
 22975 E. coli under subsection (a)(3). The Agency may also issue a SEP
 22976 approving an alternative to the E. coli concentration in subsection
 22977 (a)(4)(A), (a)(4)(B), or (a)(4)(D) to trigger Cryptosporidium monitoring.
 22978 This approval by the Agency must be provided to the supplier in writing,
 22979 and it must include the basis for the Agency's determination that the
 22980 alternative indicator or trigger level will provide a more accurate
 22981 identification of whether a system will exceed the Bin 1 Cryptosporidium
 22982 level ~~set forth~~ in Section 611.1010.
 22983
 22984 6) An unfiltered system supplier serving fewer than 10,000 people must
 22985 sample its source water for Cryptosporidium at least twice per month for
 22986 12 months or at least monthly for 24 months.
 22987
 22988 7) A supplier may sample more frequently than required by this Section if the
 22989 sampling frequency is evenly spaced throughout the monitoring period.
 22990
 22991 b) Second Round of Source Water Monitoring. A supplier must conduct a second
 22992 round of source water monitoring that meets the requirements for monitoring
 22993 parameters, frequency, and duration described in subsection (a), unless it meets

22994 the monitoring exemption criteria in subsection (d). The supplier must conduct
22995 this monitoring on the schedule ~~set forth~~ in subsection (c).
22996

22997 c) Monitoring Schedule. A supplier must perform the two rounds of monitoring
22998 subsections (a) and (b) require on the schedule in this subsection (c), unless the
22999 supplier meets the monitoring exemption criteria in subsection (d).
23000

23001 1) Suppliers That Serve at Least 100,000 People
23002

23003 A) The suppliers must have begun the first round of source water
23004 monitoring no later than the end of October 2006.
23005

23006 B) The suppliers must have begun the second round of source water
23007 monitoring no later than the end of April 2015.
23008

23009 2) Suppliers That Serve from 50,000 to 99,999 People
23010

23011 A) The suppliers must have begun the first round of source water
23012 monitoring no later than the end of April 2007.
23013

23014 B) The suppliers must have begun the second round of source water
23015 monitoring no later than the end of October 2015.
23016

23017 3) Suppliers That Serve from 10,000 to 49,999 People
23018

23019 A) The suppliers must have begun the first round of source water
23020 monitoring no later than the end of April 2008.
23021

23022 B) The suppliers must have begun the second round of source water
23023 monitoring no later than the end of October 2016.
23024

23025 4) Suppliers That Serve Fewer Than 10,000 People and That Monitor for E.
23026 coli
23027

23028 A) The suppliers must have begun the first round of source water
23029 monitoring no later than the end of October 2008.
23030

23031 B) The suppliers must have begun the second round of source water
23032 monitoring no later than the end of October 2017.
23033

23034 5) Suppliers That Serve Fewer Than 10,000 People and That Monitor for
23035 Cryptosporidium
23036

23037 A) The suppliers must have begun the first round of source water
23038 monitoring no later than the end of April 2010.

23039
23040 B) The suppliers must have begun the second round of source water
23041 monitoring no later than the end of April 2019.

23042
23043 BOARD NOTE: The Board retained the past implementation dates until
23044 implementation of the Long Term 2 Enhanced Surface Water Treatment Rule in
23045 this Subpart Z is complete.

23046
23047 d) Monitoring Avoidance

23048
23049 1) A filtered system supplier is not required to conduct source water
23050 monitoring under this Subpart Z if the system will provide a total of at
23051 least 5.5-log of treatment for Cryptosporidium, equivalent to meeting the
23052 treatment requirements of Bin 4 in Section 611.1011.

23053
23054 2) An unfiltered system supplier is not required to conduct source water
23055 monitoring under this Subpart Z if the system will provide a total of at
23056 least 3-log Cryptosporidium inactivation, equivalent to meeting the
23057 treatment requirements for an unfiltered system supplier with a mean
23058 Cryptosporidium concentration of greater than 0.01 oocysts/L in Section
23059 611.1012.

23060
23061 3) If a supplier chooses to provide the level of treatment ~~set forth~~ in
23062 subsection (d)(1) or (d)(2), as applicable, rather than start source water
23063 monitoring, it must notify the Agency in writing no later than the date on
23064 which the system is otherwise required to submit a sampling schedule for
23065 monitoring under Section 611.1002. Alternatively, a supplier may choose
23066 to stop sampling at any point after it has initiated monitoring if it notifies
23067 the Agency in writing that it will provide this level of treatment. The
23068 supplier must install and operate technologies to provide this level of
23069 treatment before the applicable treatment compliance date ~~set forth~~ in
23070 Section 611.1013.

23071
23072 e) Plants Operating Only Part of the Year. A supplier that has a Subpart B plant that
23073 operates for only part of the year must conduct source water monitoring in
23074 compliance~~accordance~~ with this Subpart Z, but with the following modifications:

23075
23076 1) The supplier must sample its source water only during the months that the
23077 plant operates, unless the Agency issue a SEP specifying another
23078 monitoring period based on plant operating practices.

23079

- 23080 2) A supplier with plants that operate less than six months per year and that
23081 monitors for Cryptosporidium must collect at least six Cryptosporidium
23082 samples per year during each of two years of monitoring. Samples must
23083 be evenly spaced throughout the period during which the plant operates.
23084
- 23085 f) New Sources and New Systems
23086
- 23087 1) New sources. A supplier that begins using a new source of surface water
23088 or groundwater under the direct influence of surface water after the
23089 supplier was required to begin monitoring under subsection (c) must
23090 monitor the new source on a schedule that the Agency has approved in a
23091 SEP. Source water monitoring must meet the requirements of this Subpart
23092 Z. The supplier must also meet the bin classification and Cryptosporidium
23093 treatment requirements of Sections 611.1010 and 611.1011 or Section
23094 611.1012, as applicable, for the new source on a schedule that the Agency
23095 has approved in a SEP.
23096
- 23097 2) The requirements of Section 611.1001(f) apply to a Subpart B system
23098 supplier that begins operation after the applicable monitoring start date ~~set~~
23099 ~~forth~~ in subsection (c).
23100
- 23101 3) The supplier must begin a second round of source water monitoring no
23102 later than six years following initial bin classification under Section
23103 611.1010 or determination of the mean Cryptosporidium level under
23104 Section 611.1012.
23105
- 23106 g) Failure to collect any source water sample required under this Section in
23107 ~~compliance~~~~accordance~~ with the sampling schedule, sampling location, analytical
23108 method, approved laboratory, and reporting requirements of Sections 611.1002
23109 through 611.1006 is a monitoring violation.
23110
- 23111 h) Grandfathering Monitoring Data. A supplier may use (grandfather) monitoring
23112 data collected prior to the applicable monitoring start date in subsection (c) to
23113 meet the initial source water monitoring requirements in subsection (a).
23114 Grandfathered data may substitute for an equivalent number of months at the end
23115 of the monitoring period. All data submitted under this subsection must meet the
23116 requirements ~~set forth~~ in Section 611.1007.
23117

23118 BOARD NOTE: This Section derives from 40 CFR 141.701.

23119 (Source: Amended at 50 Ill. Reg. _____, effective _____)
23120
23121

23122 **Section 611.1006 Source Water Monitoring Requirements: Reporting Source Water**
23123 **Monitoring Results**
23124

23125 a) A supplier must report results from the source water monitoring required under
23126 Section 611.1001 no later than ten days after the end of the first month following
23127 the month when the sample is collected.

23128
23129 b) Submission of Analytical Results to USEPA
23130

23131 1) A supplier serving at least 10,000 people must report the results from the
23132 initial source water monitoring required under Section 611.1001(a) to the
23133 Data Collection and Tracking System (DCTS) through USEPA's Central
23134 Data Exchange (CDX).
23135

23136 BOARD NOTE: The supplier must register with the CDX to use the
23137 DCTS. For information see "Step-by-Step Guide to the Data Collection
23138 and Tracking System (DCTS)", USEPA, Office of Water (4606)
23139 (document number EPA 815/B-08-001), available from USEPA, National
23140 Center for Environmental Publications, www.epa.gov/nscep (search
23141 "815B08001"); telephone 888-890-1995; e-mail epacdx@csc.com
23142 ("Technical Support" in the subject line); or fax 301-429-3905.
23143

23144 2) If a supplier is unable to report monitoring results into the DCTS, the
23145 supplier may use an alternative approach for reporting monitoring results
23146 that USEPA has approved in writing.
23147

23148 c) A supplier serving fewer than 10,000 people must report results from the initial
23149 source water monitoring required under Section 611.1001(a) to the Agency.
23150

23151 d) A supplier must report results from the second round of source water monitoring
23152 required under Section 611.1001(b) to the Agency.
23153

23154 e) A supplier must report the applicable information in subsections (e)(1) and (e)(2)
23155 for the source water monitoring required under Section 611.1001.
23156

23157 1) A supplier must report the data elements ~~set forth~~ in subsection (e)(1)(D)
23158 for each Cryptosporidium analysis.
23159

23160 A) For matrix spike samples, a supplier must also report the sample
23161 volume spiked and estimated number of oocysts spiked. These
23162 data are not required for field samples.
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- B) For samples in which less than 10 L is filtered or less than 100% of the sample volume is examined, the supplier must also report the number of filters used and the packed pellet volume.
- C) For samples in which less than 100% of sample volume is examined, the supplier must also report the volume of resuspended concentrate and volume of this resuspension processed through immunomagnetic separation.
- D) Data Elements
- i) The PWS ID;
 - ii) The Facility ID;
 - iii) The sample collection date;
 - iv) The sample type (field or matrix spike);
 - v) The sample volume filtered (L), to nearest ¼ L;
 - vi) Whether 100 percent of the filtered volume was examined; and
 - vii) The number of oocysts counted.
- BOARD NOTE: Subsection (e)(1)(D) derives from unnumbered tabulated text in 40 CFR 141.706(e)(1).
- 2) A supplier must report the following data elements for each E. coli analysis:
- A) The PWS ID;
 - B) The Facility ID;
 - C) The sample collection date;
 - D) The analytical method number;
 - E) The method type;

- 23206 F) The source type (flowing stream, lake or reservoir, groundwater
23207 under the direct influence of surface water);
- 23208
- 23209 G) The E. coli count per 100 mL.
- 23210
- 23211 H) The turbidity, except that a supplier that serves fewer than 10,000
23212 people that is not required to monitor for turbidity under Section
23213 611.1001 is not required to report turbidity with its E. coli results.
- 23214

23215 BOARD NOTE: This Section derives from 40 CFR 141.706.

23216 (Source: Amended at 50 Ill. Reg. _____, effective _____)

23217

23218

23219 **Section 611.1007 Source Water Monitoring Requirements: Grandfathering Previously**
23220 **Collected Data**

- 23221 a) Initial Source Monitoring and Cryptosporidium Samples
- 23222
- 23223
- 23224 1) A supplier may comply with the initial source water monitoring
23225 requirements of Section 611.1001(a) by grandfathering sample results
23226 collected before the supplier is required to begin monitoring (i.e.,
23227 previously collected data). To be grandfathered, the sample results and
23228 analysis must meet the criteria in this Section and the Agency must
23229 approve the use of the data by a SEP.
- 23230
- 23231 2) A filtered system supplier may grandfather Cryptosporidium samples to
23232 meet the requirements of Section 611.1001(a) when the supplier does not
23233 have corresponding E. coli and turbidity samples. A supplier that
23234 grandfathers Cryptosporidium samples without E. coli and turbidity
23235 samples is not required to collect E. coli and turbidity samples when it
23236 completes the requirements for Cryptosporidium monitoring under Section
23237 611.1001(a).
- 23238
- 23239 b) E. coli Sample Analysis. The analysis of E. coli samples must meet the analytical
23240 method and approved laboratory requirements of Sections 611.1004 and
23241 611.1005.
- 23242
- 23243 c) Cryptosporidium Sample Analysis. The analysis of Cryptosporidium samples
23244 must meet the criteria in this subsection (c).
- 23245
- 23246 1) Laboratories must analyze Cryptosporidium samples using one of the
23247 following filtration, immunomagnetic separation, and
23248 immunofluorescence assay analytical methods, incorporated by reference

23249 in Section 611.102, or alternative methods approved by the Agency under
23250 Section 611.480:

- 23251
- 23252 A) USEPA 1623 (05);
- 23253
- 23254 B) USEPA 1622 (05);
- 23255
- 23256 C) USEPA 1623 (01);
- 23257
- 23258 D) USEPA 1622 (01); or
- 23259
- 23260 E) USEPA 1623 (99).
- 23261

23262 2) For each Cryptosporidium sample, the laboratory analyzed at least 10 ℓ of
23263 sample or at least 2 ml of packed pellet or as much volume as could be
23264 filtered by two filters that USEPA approved for the methods listed in
23265 subsection (c)(1).
23266

23267 d) Sampling Location. The sampling location must meet the conditions in Section
23268 611.1003.
23269

23270 e) Sampling Frequency. Cryptosporidium samples were collected no less frequently
23271 than each calendar month on a regular schedule, beginning no earlier than January
23272 1999. Sample collection intervals may vary for the conditions specified in
23273 Section 611.1002(b)(1) and (b)(2) if the supplier provides documentation of the
23274 condition when reporting monitoring results.
23275

23276 1) The Agency may, by a SEP, approve grandfathering of previously
23277 collected data ~~if~~where there are time gaps in the sampling frequency if the
23278 supplier conducts additional monitoring that the Agency has specified by a
23279 SEP to ensure that the data used to comply with the initial source water
23280 monitoring requirements of Section 611.1001(a) are seasonally
23281 representative and unbiased.
23282

23283 2) A supplier may grandfather previously collected data ~~if~~where the sampling
23284 frequency within each month varied. If the Cryptosporidium sampling
23285 frequency varied, the supplier must follow the monthly averaging
23286 procedure in Section 611.1010(b)(5) or Section 611.1012(a)(3), as
23287 applicable, when calculating the bin classification for a filtered system
23288 supplier or the mean Cryptosporidium concentration for an unfiltered
23289 system supplier.
23290

- 23291 f) Reporting Monitoring Results for Grandfathering. A supplier that requests to
23292 grandfather previously collected monitoring results must report the following
23293 information by the applicable dates listed in this subsection. A supplier must
23294 report this information to the Agency.
23295
- 23296 1) A supplier must report that it intends to submit previously collected
23297 monitoring results for grandfathering. This report must specify the
23298 number of previously collected results the supplier will submit, the dates
23299 of the first and last sample, and whether a supplier will conduct additional
23300 source water monitoring to meet the requirements of Section 611.1001(a).
23301 The supplier must report this information no later than the applicable date
23302 ~~set forth~~ in Section 611.1002.
23303
- 23304 2) A supplier must report previously collected monitoring results for
23305 grandfathering, along with the associated documentation listed in
23306 subsections (f)(2)(A) through (f)(2)(D), no later than two months after the
23307 applicable date listed in Section 611.1001(c).
23308
- 23309 A) For each sample result, a supplier must report the applicable data
23310 elements in Section 611.1006.
23311
- 23312 B) A supplier must certify that the reported monitoring results include
23313 all results that it generated during the time period beginning with
23314 the first reported result and ending with the final reported result.
23315 This applies to samples that were collected from the sampling
23316 location specified for source water monitoring under this Subpart
23317 Z, ~~that~~~~which~~ were not spiked, and ~~that~~~~which~~ were analyzed using
23318 the laboratory's routine process for the analytical methods listed in
23319 this Section.
23320
- 23321 C) The supplier must certify that the samples were representative of a
23322 plant's source waters and the source waters have not changed. It
23323 must report a description of the sampling locations, which must
23324 address the position of the sampling location in relation to its water
23325 sources and treatment processes, including points of chemical
23326 addition and filter backwash recycle.
23327
- 23328 D) For Cryptosporidium samples, the laboratory or laboratories that
23329 analyzed the samples must provide a letter certifying that the
23330 quality control criteria specified in the methods listed in subsection
23331 (c)(1) were met for each sample batch associated with the reported
23332 results. Alternatively, the laboratory may provide bench sheets
23333 and sample examination report forms for each field, matrix spike,

initial precision and recovery, ongoing precision and recovery, and method blank sample associated with the reported results.

- g) If the Agency determines that a previously collected data set submitted for grandfathering was generated during source water conditions that were not normal for the supplier, such as a drought, the Agency may, by a SEP, disapprove the data. Alternatively, the Agency may, by a SEP, approve the previously collected data if the supplier reports additional source water monitoring data, as determined by the Agency, to ensure that the data set used under Section 611.1010 or Section 611.1012 represents average source water conditions for the supplier.
- h) If a supplier submits previously collected data that fully meet the number of samples required for initial source water monitoring under Section 611.1001(a), and some of the data are rejected due to not meeting the requirements of this Section, the supplier must conduct additional monitoring to replace rejected data on a schedule that the Agency has approved by a SEP. A supplier is not required to begin this additional monitoring until two months after notification that data have been rejected and additional monitoring is necessary.

BOARD NOTE: Derived from 40 CFR 141.707.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

Section 611.1010 Treatment Technique Requirements: Bin Classification for Filtered System Suppliers

- a) Following completion of the initial round of source water monitoring required under Section 611.1001(a), a filtered system supplier must calculate an initial Cryptosporidium bin concentration for each plant for which monitoring was required. Calculation of the bin concentration must use the Cryptosporidium results reported under Section 611.1001(a) and must follow the appropriate of the procedures ~~set forth~~ in subsection (b).
- b) Bin Concentration Calculation Procedures
 - 1) For a supplier that collects a total of at least 48 samples, the bin concentration is equal to the arithmetic mean of all sample concentrations.
 - 2) For a supplier that collects a total of at least 24 samples, but not more than 47 samples, the bin concentration is equal to the highest arithmetic mean of all sample concentrations in any 12 consecutive months during which Cryptosporidium samples were collected.

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- 3) For a supplier that serves fewer than 10,000 people and ~~that~~~~which~~ monitors for Cryptosporidium for only one year (i.e., collect 24 samples in 12 months), the bin concentration is equal to the arithmetic mean of all sample concentrations.
 - 4) For a supplier with plants operating only part of the year that monitors fewer than 12 months per year under Section 611.1001(e), the bin concentration is equal to the highest arithmetic mean of all sample concentrations during any year of Cryptosporidium monitoring.
 - 5) If the monthly Cryptosporidium sampling frequency varies, a supplier must first calculate a monthly average for each month of monitoring. A supplier must then use these monthly average concentrations, rather than individual sample concentrations, in the applicable calculation for bin classification in subsections (b)(1) through (b)(4).
- c) A filtered system supplier must determine its initial bin classification according to subsections (c)(1) through (c)(5), subject to the limitations of subsection (c)(6), and using the Cryptosporidium bin concentration calculated under subsections (a) and (b).
- 1) For a supplier that is required to monitor for Cryptosporidium under Section 611.1001 and ~~that~~~~which~~ has a Cryptosporidium bin concentration of less than 0.075 oocysts/ℓ, the bin classification is Bin 1.
 - 2) For a supplier that is required to monitor for Cryptosporidium under Section 611.1001 and ~~that~~~~which~~ has a Cryptosporidium bin concentration of 0.075 oocysts/ℓ or more, but less than 1.0 oocysts/ℓ, the bin classification is Bin 2.
 - 3) For a supplier that is required to monitor for Cryptosporidium under Section 611.1001 and ~~that~~~~which~~ has a Cryptosporidium bin concentration of 1.0 oocysts/ℓ or more, but less than 3.0 oocysts/ℓ, the bin classification is Bin 3.
 - 4) For a supplier that is required to monitor for Cryptosporidium under Section 611.1001 and ~~that~~~~which~~ has a Cryptosporidium bin concentration of 3.0 oocysts/ℓ or more, the bin classification is Bin 4.
 - 5) For a supplier that that serves fewer than 10,000 people and ~~that~~~~which~~ is not required to monitor for Cryptosporidium under Section 611.1001(a)(4), the bin classification is Bin 1.

- 23420 6) The Cryptosporidium concentration is based on the applicable ~~of the~~
23421 calculations ~~set forth~~ in subsection (a) or (d).
23422
- 23423 d) Following completion of the second round of source water monitoring required
23424 under Section 611.1001(b), a filtered system supplier must recalculate its
23425 Cryptosporidium bin concentration using the Cryptosporidium results reported
23426 under Section 611.1001(b) and following the applicable ~~of the~~ procedures ~~set~~
23427 ~~forth~~ in subsections (b)(1) through (b)(4). A supplier must then redetermine its
23428 bin classification using this bin concentration and subsection (c).
23429
- 23430 e) Reporting the Bin Classification
23431
- 23432 1) A filtered system supplier must report its initial bin classification under
23433 subsection (c) to the Agency for approval no later than six months after
23434 the supplier is required to complete initial source water monitoring based
23435 on the applicable schedule ~~set forth~~ in Section 611.1001(c).
23436
- 23437 2) A supplier must report its bin classification under subsection (d) to the
23438 Agency for approval no later than six months after the supplier is required
23439 to complete the second round of source water monitoring based on the
23440 applicable schedule ~~set forth~~ in Section 611.1001(c).
23441
- 23442 3) The bin classification report to the Agency must include a summary of
23443 source water monitoring data and the calculation procedure used to
23444 determine bin classification.
23445
- 23446 f) A failure to comply with the conditions of subsection (e) is a violation of the
23447 treatment technique requirement.
23448

23449 BOARD NOTE: Derived from 40 CFR 141.710.

23450 (Source: Amended at 50 Ill. Reg. _____, effective _____)
23451
23452

23453 **Section 611.1011 Treatment Technique Requirements: Filtered System Additional**
23454 **Cryptosporidium Treatment Requirements**
23455

- 23456 a) A filtered system supplier must provide the level of additional treatment for
23457 Cryptosporidium specified in subsections (a)(1) through (a)(4) based on its bin
23458 classification, as determined under Section 611.1010, and according to the
23459 applicable schedule ~~set forth~~ in Section 611.1013.
23460
- 23461 1) If the supplier's bin classification is Bin 1, and the supplier uses
23462 conventional filtration treatment (including softening) in full compliance

- 23463 with the applicable provisions of Subparts B, R, and X, no additional
23464 treatment is required.
23465
- 23466 2) If the supplier's bin classification is Bin 2, and the supplier uses
23467 conventional filtration treatment (including softening) in full compliance
23468 with the applicable provisions of Subparts B, R, and X, then the additional
23469 Cryptosporidium treatment requirements are a 1-log treatment.
23470
- 23471 3) If the supplier's bin classification is Bin 2, and the supplier uses direct
23472 filtration in full compliance with the applicable provisions of Subparts B,
23473 R, and X, then the additional Cryptosporidium treatment requirements are
23474 a 1.5-log treatment.
23475
- 23476 4) If the supplier's bin classification is Bin 2, and the supplier uses slow sand
23477 or diatomaceous earth filtration in full compliance with the applicable
23478 provisions of Subparts B, R, and X, then the additional Cryptosporidium
23479 treatment requirements are a 1-log treatment.
23480
- 23481 5) If the supplier's bin classification is Bin 2, and the supplier uses alternative
23482 filtration technologies in full compliance with the applicable provisions of
23483 Subparts B, R, and X, then the additional Cryptosporidium treatment
23484 requirements are as determined by the Agency, by a SEP issued under
23485 Section 611.110, such that the total Cryptosporidium removal and
23486 inactivation is at least 4.0-log.
23487
- 23488 6) If the supplier's bin classification is Bin 3, and the supplier uses
23489 conventional filtration treatment (including softening) in full compliance
23490 with the applicable provisions of Subparts B, R, and X, then the additional
23491 Cryptosporidium treatment requirements are a 2-log treatment.
23492
- 23493 7) If the supplier's bin classification is Bin 3, and the supplier uses direct
23494 filtration in full compliance with the applicable provisions of Subparts B,
23495 R, and X, then the additional Cryptosporidium treatment requirements are
23496 a 2.5-log treatment.
23497
- 23498 8) If the supplier's bin classification is Bin 3, and the supplier uses slow sand
23499 or diatomaceous earth filtration in full compliance with the applicable
23500 provisions of Subparts B, R, and X, then the additional Cryptosporidium
23501 treatment requirements are a 2-log treatment.
23502
- 23503 9) If the supplier's bin classification is Bin 3, and the supplier uses alternative
23504 filtration technologies in full compliance with the applicable provisions of
23505 Subparts B, R, and X, then the additional Cryptosporidium treatment

23506 requirements are as determined by the Agency, by a SEP, such that the
23507 total Cryptosporidium removal and inactivation is at least 5.0-log.
23508

23509 10) If the supplier's bin classification is Bin 4, and the supplier uses
23510 conventional filtration treatment (including softening) in full compliance
23511 with the applicable provisions of Subparts B, R, and X, then the additional
23512 Cryptosporidium treatment requirements are a 2.5-log treatment.
23513

23514 11) If the supplier's bin classification is Bin 4, and the supplier uses direct
23515 filtration in full compliance with the applicable provisions of Subparts B,
23516 R, and X, then the additional Cryptosporidium treatment requirements are
23517 a 3-log treatment.
23518

23519 12) If the supplier's bin classification is Bin 4, and the supplier uses slow sand
23520 or diatomaceous earth filtration in full compliance with the applicable
23521 provisions of Subparts B, R, and X, then the additional Cryptosporidium
23522 treatment requirements are a 2.5-log treatment.
23523

23524 13) If the supplier's bin classification is Bin 4, and the supplier uses alternative
23525 filtration technologies in full compliance with the applicable provisions of
23526 Subparts B, R, and X, then the additional Cryptosporidium treatment
23527 requirements are as determined by the Agency, by a SEP, such that the
23528 total Cryptosporidium removal and inactivation is at least 5.5-log.
23529

23530 b) Required Treatment
23531

23532 1) A filtered system supplier must use one or more of the treatment and
23533 management options listed in Section 611.1015, termed the microbial
23534 toolbox, to comply with the additional Cryptosporidium treatment
23535 required in subsection (a).
23536

23537 2) A supplier classified in Bin 3 or Bin 4 must achieve at least 1-log of the
23538 additional Cryptosporidium treatment required under subsection (a) using
23539 either one or a combination of the following: bag filters, bank filtration,
23540 cartridge filters, chlorine dioxide, membranes, ozone, or UV, as described
23541 in Sections 611.1016 through 611.1020.
23542

23543 c) A failure by a supplier in any month to achieve treatment credit by meeting
23544 criteria in Sections 611.1016 through 611.1020 for microbial toolbox options that
23545 is at least equal to the level of treatment required in subsection (a) is a violation of
23546 the treatment technique requirement.
23547

23548 d) If the Agency determines, by a SEP, during a sanitary survey or an equivalent
23549 source water assessment that after a supplier completed the monitoring conducted
23550 under Section 611.1001(a) or 611.1001(b), significant changes occurred in the
23551 supplier's watershed that could lead to increased contamination of the source
23552 water by Cryptosporidium, the supplier must take actions specified by the Agency
23553 in the SEP to address the contamination. These actions may include additional
23554 source water monitoring or implementing microbial toolbox options listed in
23555 Section 611.1015.
23556

23557 BOARD NOTE: Derived from 40 CFR 141.711.

23558 (Source: Amended at 50 Ill. Reg. _____, effective _____)
23559

23560
23561 **Section 611.1012 Treatment Technique Requirements: Unfiltered System**
23562 **Cryptosporidium Treatment Requirements**
23563

23564 a) Determination of the Mean Cryptosporidium Level
23565

- 23566 1) Following completion of the initial source water monitoring required by
23567 Section 611.1001(a), an unfiltered system supplier is required to have
23568 calculated the arithmetic mean of all Cryptosporidium sample
23569 concentrations reported under Section 611.1001(a). The supplier is
23570 required to have reported this value to the Agency for approval no later
23571 than six months after the month the supplier is required to have completed
23572 initial source water monitoring based on the applicable schedule ~~set forth~~
23573 in Section 611.1001(c).
23574
- 23575 2) Following completion of the second round of source water monitoring
23576 required by Section 611.1001(b), an unfiltered system supplier must
23577 calculate the arithmetic mean of all Cryptosporidium sample
23578 concentrations reported under Section 611.1001(b). The supplier must
23579 report this value to the Agency for approval no later than six months after
23580 the month the supplier is required to complete the second round of source
23581 water monitoring based on the applicable schedule ~~set forth~~ in Section
23582 611.1001(c).
23583
- 23584 3) If the monthly Cryptosporidium sampling frequency varies, a supplier
23585 must first calculate a monthly average for each month of monitoring. The
23586 supplier must then use these monthly average concentrations, rather than
23587 individual sample concentrations, in the calculation of the mean
23588 Cryptosporidium level in subsection (a)(1) or (a)(2).
23589

- 23590 4) The report to the Agency of the mean Cryptosporidium levels calculated
23591 under subsections (a)(1) and (a)(2) must include a summary of the source
23592 water monitoring data used for the calculation.
23593
- 23594 5) A failure to comply with the conditions of subsection (a) is a violation of
23595 the treatment technique requirement.
23596
- 23597 b) Cryptosporidium Inactivation Requirements. An unfiltered system supplier must
23598 provide the level of inactivation for Cryptosporidium specified in this subsection,
23599 based on its mean Cryptosporidium levels, as determined under subsection (a) and
23600 according to the applicable schedule ~~set forth~~ in Section 611.1013.
23601
- 23602 1) An unfiltered system supplier with a mean Cryptosporidium level of 0.01
23603 oocysts/ℓ or less must provide at least 2-log Cryptosporidium inactivation.
23604
- 23605 2) An unfiltered system supplier with a mean Cryptosporidium level of
23606 greater than 0.01 oocysts/ℓ must provide at least 3-log Cryptosporidium
23607 inactivation.
23608
- 23609 c) Inactivation Treatment Technology Requirements. An unfiltered system supplier
23610 must use chlorine dioxide, ozone, or UV, as described in Section 611.1020, to
23611 meet the Cryptosporidium inactivation requirements of this Section.
23612
- 23613 1) A supplier that uses chlorine dioxide or ozone and fails to achieve the
23614 Cryptosporidium inactivation required in subsection (b) on more than one
23615 day in the calendar month is in violation of the treatment technique
23616 requirement.
23617
- 23618 2) A supplier that uses UV light and fails to achieve the Cryptosporidium
23619 inactivation required in subsection (b) by meeting the criteria in Section
23620 611.1020(d)(3)(B) is in violation of the treatment technique requirement.
23621
- 23622 d) Use of Two Disinfectants. An unfiltered system supplier must meet the combined
23623 Cryptosporidium inactivation requirements of this Section and Giardia lamblia
23624 and virus inactivation requirements of Section 611.241 using a minimum of two
23625 disinfectants, and each of two disinfectants must separately achieve the total
23626 inactivation required for any of Cryptosporidium, Giardia lamblia, or viruses.
23627

23628 BOARD NOTE: Derived from 40 CFR 141.712.

23629
23630 (Source: Amended at 50 Ill. Reg. _____, effective _____)
23631

23632 **Section 611.1013 Treatment Technique Requirements: Schedule for Compliance with**
23633 **Cryptosporidium Treatment Requirements**
23634

- 23635 a) Following initial bin classification under Section 611.1010(c), a filtered system
23636 supplier must provide the level of treatment for Cryptosporidium required by
23637 Section 611.1011 according to the applicable schedule ~~set forth~~ in subsection (c).
23638
- 23639 b) Following initial determination of the mean Cryptosporidium level under Section
23640 611.1012(a)(1), an unfiltered system supplier must provide the level of treatment
23641 for Cryptosporidium required by Section 611.1012 according to the applicable
23642 schedule ~~set forth~~ in subsection (c).
23643
- 23644 c) Cryptosporidium Treatment Compliance Dates
23645

23646 BOARD NOTE: The federal compliance dates and possible two-year extension
23647 corresponding 40 CFR 141.713(c) provides are all past dates. The Board
23648 ~~keep~~retains the text of subsections (c)(1) through (c)(5) as amended for guidance
23649 implementing the rules under Sections 611.1001(f) and 611.1013(d) and (e).
23650

- 23651 1) A supplier serving 100,000 or more persons was required to comply with
23652 Cryptosporidium treatment requirements before April 1, 2012.
23653
- 23654 2) A supplier serving 50,000 to 99,999 persons was required to comply with
23655 Cryptosporidium treatment requirements before October 1, 2012.
23656
- 23657 3) A supplier serving 10,000 to 49,999 persons was required to comply with
23658 Cryptosporidium treatment requirements before October 1, 2013.
23659
- 23660 4) A supplier serving fewer than 10,000 persons was required to comply with
23661 Cryptosporidium treatment requirements before October 1, 2014.
23662
- 23663 5) The Agency may allow no more than an additional two years for
23664 complying with the treatment requirement if it determines that additional
23665 time is necessary for the supplier to make capital improvements to
23666 implement the treatment.
23667
- 23668 d) If the bin classification for a filtered system supplier changes following the
23669 second round of source water monitoring, as determined under Section
23670 611.1010(d), the supplier must provide the level of treatment for Cryptosporidium
23671 required by Section 611.1011 on a schedule approved by the Agency in a SEP.
23672
- 23673 e) If the mean Cryptosporidium level for an unfiltered system supplier changes
23674 following the second round of monitoring, as determined under Section

23675 611.1012(a)(2), and if the supplier must provide a different level of
23676 Cryptosporidium treatment under Section 611.1012 due to this change, the
23677 supplier must meet this treatment requirement on a schedule approved by the
23678 Agency in a SEP.
23679

23680 BOARD NOTE: This Section derives from 40 CFR 141.713.

23681 (Source: Amended at 50 Ill. Reg. _____, effective _____)
23682
23683

23684 **Section 611.1015 Requirements for Microbial Toolbox Components: Microbial Toolbox**
23685 **Options for Meeting Cryptosporidium Treatment Requirements**
23686

23687 a) Treatment Credits
23688

23689 1) A supplier receives the applicable of the treatment credits ~~set forth~~ in
23690 subsection (b) by meeting the conditions for microbial toolbox options
23691 described in Sections 611.1016 through 611.1020. The supplier applies
23692 these treatment credits to meet the applicable treatment requirements ~~set~~
23693 ~~forth~~ in Section 611.1011 or Section 611.1012.
23694

23695 2) An unfiltered system supplier is eligible for treatment credits for the
23696 microbial toolbox options described in Section 611.1020 only.
23697

23698 b) Subsections (b)(1) through (b)(5) summarize options in the microbial toolbox.
23699

23700 1) Source Protection and Management Toolbox Options
23701

23702 A) Watershed Control Program. 0.5-log credit for Agency-approved
23703 program comprising required elements, annual program status
23704 report to Agency, and regular watershed survey. An unfiltered
23705 system supplier is not eligible for credit. Specific criteria are ~~set~~
23706 ~~forth~~ in Section 611.1016(a).
23707

23708 B) Alternative source or intake management: No prescribed credit. A
23709 supplier may conduct simultaneous monitoring for treatment bin
23710 classification at alternative intake locations or under alternative
23711 intake management strategies. Specific criteria are ~~set forth~~ in
23712 Section 611.1016(b).
23713

23714 2) Pre-Filtration Toolbox Options
23715

23716 A) Presedimentation Basin with Coagulation. 0.5-log credit during
23717 any month that presedimentation basins achieve a monthly mean

- 23718 reduction of 0.5-log or greater in turbidity or alternative Agency-
23719 approved performance criteria. To be eligible, basins must be
23720 operated continuously with coagulant addition and all plant flow
23721 must pass through basins. Specific criteria are ~~set forth~~ in Section
23722 611.1017(a).
23723
- 23724 B) Two-stage Lime Softening. 0.5-log credit for two-stage softening
23725 if chemical addition and hardness precipitation occur in both
23726 stages. All plant flow must pass through both stages. Single-stage
23727 softening is credited as equivalent to conventional treatment.
23728 Specific criteria are ~~set forth~~ in Section 611.1017(b).
23729
- 23730 C) Bank Filtration. 0.5-log credit for 25-foot setback or 1.0-log credit
23731 for 50-foot setback; the aquifer must be unconsolidated sand
23732 containing at least ten percent fines and average turbidity in the
23733 wells must be less than 1 NTU. A supplier using wells followed
23734 by filtration when conducting source water monitoring must
23735 sample the well to determine bin classification and is not eligible
23736 for additional credit. Specific criteria are ~~set forth~~ in Section
23737 611.1017(c).
23738
- 23739 3) Treatment Performance Toolbox Options
23740
- 23741 A) Combined Filter Performance. 0.5-log credit for combined filter
23742 effluent turbidity less than or equal to 0.15 NTU in at least 95
23743 percent of measurements each month. Specific criteria are ~~set~~
23744 ~~forth~~ in Section 611.1018(a).
23745
- 23746 B) Individual Filter Performance. 0.5-log credit (in addition to 0.5-
23747 log combined filter performance credit) if individual filter effluent
23748 turbidity is less than or equal to 0.15 NTU in at least 95 percent of
23749 samples each month in each filter and is never greater than 0.3
23750 NTU in two consecutive measurements in any filter. Specific
23751 criteria are ~~set forth~~ in Section 611.1018(b).
23752
- 23753 C) Demonstration of Performance. Credit awarded to unit process or
23754 treatment train based on a demonstration to the Agency with an
23755 Agency-approved protocol. Specific criteria are ~~set forth~~ in
23756 Section 611.1018(c).
23757
- 23758 4) Additional Filtration Toolbox Options
23759

- 23760 A) Bag or Cartridge Filters (individual filters). Up to 2-log credit
23761 based on the removal efficiency demonstrated during challenge
23762 testing with a 1.0-log factor of safety. Specific criteria are ~~set forth~~
23763 in Section 611.1019(a).
23764
- 23765 B) Bag or Cartridge Filters (in series). Up to 2.5-log credit based on
23766 the removal efficiency demonstrated during challenge testing with
23767 a 0.5-log factor of safety. Specific criteria are ~~set forth~~ in Section
23768 611.1019(a).
23769
- 23770 C) Membrane Filtration. Log credit equivalent to removal efficiency
23771 demonstrated in challenge test for device if supported by direct
23772 integrity testing. Specific criteria are ~~set forth~~ in Section
23773 611.1019(b).
23774
- 23775 D) Second Stage Filtration. 0.5-log credit for second separate
23776 granular media filtration stage if treatment train includes
23777 coagulation prior to first filter. Specific criteria are ~~set forth~~ in
23778 Section 611.1019(c).
23779
- 23780 E) Slow Sand Filters. 2.5-log credit as a secondary filtration step or
23781 3.0-log credit as a primary filtration process. No prior chlorination
23782 for either option. Specific criteria are ~~set forth~~ in Section
23783 611.1019(d).
23784
- 23785 5) Inactivation Toolbox Options
23786
- 23787 A) Chlorine Dioxide. Log credit based on measured CT in relation to
23788 CT table. Specific criteria are ~~set forth~~ in Section 611.1020(b).
23789
- 23790 B) Ozone. Log credit based on measured CT in relation to CT table.
23791 Specific criteria are ~~set forth~~ in Section 611.1020(b).
23792
- 23793 C) UV. Log credit based on validated UV dose in relation to UV dose
23794 table; reactor validation testing required to establish UV dose and
23795 associated operating conditions. Specific criteria are ~~set forth~~ in
23796 Section 611.1020(d).
23797

23798 BOARD NOTE: This Section derives from 40 CFR 141.715.

23799 (Source: Amended at 50 Ill. Reg. _____, effective _____)
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23802 **Section 611.1016 Requirements for Microbial Toolbox Components: Source Toolbox**
23803 **Components**

- 23804
- 23805 a) Watershed Control Program. A supplier receives 0.5-log Cryptosporidium
23806 treatment credit for implementing a watershed control program that meets the
23807 requirements of this Section.
23808
- 23809 1) A supplier that intends to apply for the watershed control program credit
23810 must notify the Agency of its intent no later than two years prior to the
23811 treatment compliance date applicable to the supplier in Section 611.1013.
23812
- 23813 2) A supplier must submit to the Agency a proposed watershed control plan
23814 no later than one year before the applicable treatment compliance date in
23815 Section 611.1013. The Agency must approve the watershed control plan
23816 for the supplier to receive watershed control program treatment credit.
23817 The watershed control plan must include the following elements:
23818
- 23819 A) Identification of an "area of influence" outside of which the
23820 likelihood of Cryptosporidium or fecal contamination affecting the
23821 treatment plant intake is not significant. This is the area to be
23822 evaluated in future watershed surveys under subsection (a)(5)(B);
23823
- 23824 B) Identification of both potential and actual sources of
23825 Cryptosporidium contamination and an assessment of the relative
23826 impact of these sources on the supplier's source water quality;
23827
- 23828 C) An analysis of the effectiveness and feasibility of control measures
23829 that could reduce Cryptosporidium loading from sources of
23830 contamination to the supplier's source water; and
23831
- 23832 D) A statement of goals and specific actions the supplier will
23833 undertake to reduce source water Cryptosporidium levels. The
23834 plan must explain how the actions are expected to contribute to
23835 specific goals, identify watershed partners and their roles, identify
23836 resource requirements and commitments, and include a schedule
23837 for plan implementation with deadlines for completing specific
23838 actions identified in the plan.
23839
- 23840 3) A supplier with an existing watershed control program (i.e., a program in
23841 place on January 5, 2006) is eligible to seek this credit. Its watershed
23842 control plans must meet the criteria in subsection (a)(2) and must specify
23843 ongoing and future actions that will reduce source water Cryptosporidium
23844 levels.

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- 4) If the Agency does not respond to a supplier regarding approval of a watershed control plan submitted under this Section and the supplier meets the other requirements of this Section, the watershed control program will be considered approved and 0.5 log Cryptosporidium treatment credit will be awarded, unless and until the Agency subsequently withdraws ~~the~~ approval by a SEP.
 - 5) A supplier must complete each of the following actions to maintain the 0.5-log credit.
 - A) It must submit an annual watershed control program status report to the Agency. The annual watershed control program status report must describe the supplier's implementation of the approved plan and assess the adequacy of the plan to meet its goals. The report must explain how the supplier is addressing any shortcomings in plan implementation, including those previously identified by the Agency or as the result of the watershed survey conducted under subsection (a)(5)(B). The report must also describe any significant changes that have occurred in the watershed since the last watershed sanitary survey. If a supplier determines during implementation that making a significant change to its approved watershed control program is necessary, the supplier must notify the Agency prior to making any such changes. If any change is likely to reduce the level of source water protection, the supplier must also list in its notification the actions the supplier will take to mitigate this effect;
 - B) The supplier must undergo a watershed sanitary survey every three years for a CWS supplier and every five years for a non-CWS supplier and submit the survey report to the Agency. The survey must be conducted according to Agency guidelines and by persons that the Agency approves.
 - i) The watershed sanitary survey must meet the following criteria: it must encompass the region identified in the Agency-approved watershed control plan as the area of influence; assess the implementation of actions to reduce source water Cryptosporidium levels; and identify any significant new sources of Cryptosporidium.
 - ii) If the Agency determines that significant changes may have occurred in the watershed since the previous watershed

23888 sanitary survey, the supplier must undergo another
23889 watershed sanitary survey before a date the Agency
23890 requires by a SEP, which may be earlier than the regular
23891 date in subsection (a)(5)(B); and
23892

23893 C) The supplier must make the watershed control plan, annual status
23894 reports, and watershed sanitary survey reports available to the
23895 public upon request. These documents must be in a plain language
23896 style and include criteria by which to evaluate the success of the
23897 program in achieving plan goals. The Agency may, by a SEP,
23898 approve that a supplier withhold from the public portions of the
23899 annual status report, watershed control plan, and watershed
23900 sanitary survey based on water supply security considerations.
23901

23902 6) If the Agency determines that a supplier is not carrying out the approved
23903 watershed control plan, the Agency may, by a SEP, withdraw the
23904 watershed control program treatment credit.
23905

23906 b) Alternative Source
23907

23908 1) A supplier may conduct source water monitoring that reflects a different
23909 intake location (either in the same source or for an alternate source) or a
23910 different procedure for the timing or level of withdrawal from the source
23911 (alternative source monitoring). If the Agency approves by a SEP, a
23912 supplier may determine its bin classification under Section 611.1010 based
23913 on the alternative source monitoring results.
23914

23915 2) If a supplier conducts alternative source monitoring under subsection
23916 (b)(1), it must also monitor their current plant intake concurrently as
23917 described in Section 611.1001.
23918

23919 3) Alternative source monitoring under subsection (b)(1) must meet the
23920 requirements for source monitoring to determine bin classification, as
23921 described in Sections 611.1001 through 611.1006. A supplier must report
23922 the alternative source monitoring results to the Agency, along with
23923 supporting information documenting the operating conditions under which
23924 the samples were collected.
23925

23926 4) If a supplier determines its bin classification under Section 611.1010 using
23927 alternative source monitoring results that reflect a different intake location
23928 or a different procedure for managing the timing or level of withdrawal
23929 from the source, the supplier must relocate the intake or permanently

23930 adopt the withdrawal procedure, as applicable, no later than the applicable
23931 treatment compliance date in Section 611.1013.

23932
23933 BOARD NOTE: Derived from 40 CFR 141.716.

23934
23935 (Source: Amended at 50 Ill. Reg. _____, effective _____)
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23937 **Section 611.1019 Requirements for Microbial Toolbox Components: Additional Filtration**
23938 **Toolbox Components**

23939 a) Bag and Cartridge Filters. A supplier receives Cryptosporidium treatment credit
23940 of up to 2.0-log for individual bag or cartridge filters and up to 2.5-log for bag or
23941 cartridge filters operated in series by meeting the criteria ~~set forth~~ in subsections
23942 (a)(1) through (a)(10). To be eligible for this credit, the supplier must report the
23943 results of challenge testing that meets the requirements of subsections (a)(2)
23944 through (a)(9) to the Agency. The filters must treat the entire plant flow taken
23945 from a Subpart B source.
23946

23947
23948 1) The Cryptosporidium treatment credit awarded to bag or cartridge filters
23949 must be based on the removal efficiency demonstrated during challenge
23950 testing that is conducted according to the criteria ~~set forth~~ in subsections
23951 (a)(2) through (a)(9). A factor of safety equal to 1-log for individual bag
23952 or cartridge filters and 0.5-log for bag or cartridge filters in series must be
23953 applied to challenge testing results to determine removal credit. A
23954 supplier may use results from challenge testing conducted prior to January
23955 5, 2006 if the prior testing was consistent with the criteria specified in
23956 subsections (a)(2) through (a)(9).
23957

23958 2) Challenge testing must be performed on full-scale bag or cartridge filters,
23959 and the associated filter housing or pressure vessel, that are identical in
23960 material and construction to the filters and housings the supplier will use
23961 for removal of Cryptosporidium. Bag or cartridge filters must be
23962 challenge tested in the same configuration that the supplier will use, either
23963 as individual filters or as a series configuration of filters.
23964

23965 3) Challenge testing must be conducted using Cryptosporidium or a surrogate
23966 that is removed no more efficiently than Cryptosporidium. The
23967 microorganism or surrogate used during challenge testing is referred to as
23968 the challenge particulate. The concentration of the challenge particulate
23969 must be determined using a method capable of discreetly quantifying the
23970 specific microorganism or surrogate used in the test; gross measurements
23971 such as turbidity may not be used.
23972

23973 4) The maximum feed water concentration that can be used during a
 23974 challenge test must be based on the detection limit of the challenge
 23975 particulate in the filtrate (i.e., filtrate detection limit) and must be
 23976 calculated using the following equation:

$$\text{Maximum Feed Concentration} = 1 \times 10^4 \times (\text{Filtrate Detection Limit})$$

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 23979
 23980 5) Challenge testing must be conducted at the maximum design flow rate for
 23981 the filter as specified by the manufacturer.

23982
 23983 6) Each filter evaluated must be tested for a duration sufficient to reach 100
 23984 percent of the terminal pressure drop, which establishes the maximum
 23985 pressure drop under which the filter may be used to comply with the
 23986 requirements of this Subpart Z.

23987
 23988 7) Removal efficiency of a filter must be determined from the results of the
 23989 challenge test and expressed in terms of log removal values using the
 23990 following equation:

$$\text{LRV} = \text{Log}_{10} (C_f) - \text{Log}_{10} (C_p)$$

23991
 23992
 23993
 23994 Where:

LRV = log removal value demonstrated during challenge testing

C_f = the feed concentration measured during the challenge test

C_p = the filtrate concentration measured during the challenge test. In
 applying this equation, the same units must be used for the feed
 and filtrate concentrations. If the challenge particulate is not
 detected in the filtrate, then the term C_p must be set equal to the
 detection limit.

23996
 23997 8) Each filter tested must be challenged with the challenge particulate during
 23998 three periods over the filtration cycle: within two hours after start-up of a
 23999 new filter; when the pressure drop is between 45 and 55 percent of the
 24000 terminal pressure drop; and at the end of the cycle after the pressure drop
 24001 has reached 100 percent of the terminal pressure drop. An LRV must be
 24002 calculated for each of these challenge periods for each filter tested. The
 24003 LRV for the filter ($\text{LRV}_{\text{filter}}$) must be assigned the value of the minimum
 24004 LRV observed during the three challenge periods for that filter.

24005
 24006 9) If fewer than 20 filters are tested, the overall removal efficiency for the
 24007 filter product line must be set equal to the lowest $\text{LRV}_{\text{filter}}$ among the
 24008 filters tested. If 20 or more filters are tested, the overall removal

24009 efficiency for the filter product line must be set equal to the 10th percentile
 24010 of the set of LRV_{filter} values for the various filters tested. The percentile is
 24011 defined by $(i/(n+1))$ where i is the rank of n individual data points ordered
 24012 lowest to highest. If necessary, the 10th percentile may be calculated using
 24013 linear interpolation.
 24014

- 24015 10) If a previously tested filter is modified in a manner that could change the
 24016 removal efficiency of the filter product line, challenge testing to
 24017 demonstrate the removal efficiency of the modified filter must be
 24018 conducted and submitted in writing to the Agency.
 24019

24020 b) Membrane Filtration
 24021

- 24022 1) A supplier receives Cryptosporidium treatment credit for membrane
 24023 filtration that meets the criteria of this subsection (b). Membrane cartridge
 24024 filters that meet the definition of membrane filtration in Section 611.102
 24025 are eligible for this credit. The level of treatment credit a supplier receives
 24026 is equal to the lower of the following values:
 24027

24028 A) The removal efficiency demonstrated during challenge testing
 24029 conducted under the conditions in subsection (b)(2); or

24030 B) The maximum removal efficiency that can be verified through
 24031 direct integrity testing used with the membrane filtration process
 24032 under the conditions in subsection (b)(3).
 24033

- 24034 2) Challenge Testing. The membrane used by the supplier must undergo
 24035 challenge testing to evaluate removal efficiency, and the supplier must
 24036 report the results of challenge testing to the Agency. Challenge testing
 24037 must be conducted according to the criteria ~~set forth~~ in subsections
 24038 (b)(2)(A) through (b)(2)(G). A supplier may use data from challenge
 24039 testing conducted prior to January 5, 2006 if the prior testing was
 24040 consistent with the criteria ~~set forth~~ in subsections (b)(2)(A) through
 24041 (b)(2)(G).
 24042

24043 A) Challenge testing must be conducted on either a full-scale
 24044 membrane module, identical in material and construction to the
 24045 membrane modules used in the supplier's treatment facility, or a
 24046 smaller-scale membrane module, identical in material and similar
 24047 in construction to the full-scale module. A module is defined as
 24048 the smallest component of a membrane unit in which a specific
 24049 membrane surface area is housed in a device with a filtrate outlet
 24050 structure.
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- B) Challenge testing must be conducted using *Cryptosporidium* oocysts or a surrogate that is removed no more efficiently than *Cryptosporidium* oocysts. The organism or surrogate used during challenge testing is referred to as the challenge particulate. The concentration of the challenge particulate, in both the feed and filtrate water, must be determined using a method capable of discretely quantifying the specific challenge particulate used in the test; gross measurements such as turbidity may not be used.

- C) The maximum feed water concentration that can be used during a challenge test is based on the detection limit of the challenge particulate in the filtrate and must be determined according to the following equation:

$$\text{Maximum Feed Concentration} = 3.16 \times 10^6 \times (\text{Filtrate Detection Limit})$$

- D) Challenge testing must be conducted under representative hydraulic conditions at the maximum design flux and maximum design process recovery specified by the manufacturer for the membrane module. Flux is defined as the throughput of a pressure driven membrane process expressed as flow per unit of membrane area. Recovery is defined as the volumetric percent of feed water that is converted to filtrate over the course of an operating cycle uninterrupted by events such as chemical cleaning or a solids removal process (i.e., backwashing).

- E) Removal efficiency of a membrane module must be calculated from the challenge test results and expressed as a log removal value according to the following equation:

$$\text{LRV} = \text{Log}_{10} (C_f) - \text{Log}_{10} (C_p)$$

Where:

- LRV = log removal value demonstrated during the challenge test
- C_f = the feed concentration measured during the challenge test
- C_p = the filtrate concentration measured during the challenge test. Equivalent units must be used for the feed and filtrate concentrations. If the challenge particulate is not

detected in the filtrate, the term C_p is set equal to the detection limit for the purpose of calculating the LRV. An LRV must be calculated for each membrane module evaluated during the challenge test.

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- F) The removal efficiency of a membrane filtration process demonstrated during challenge testing must be expressed as a log removal value (LRV_{C-Test}). If fewer than 20 modules are tested, then LRV_{C-Test} is equal to the lowest of the representative LRVs among the modules tested. If 20 or more modules are tested, then LRV_{C-Test} is equal to the 10th percentile of the representative LRVs among the modules tested. The percentile is defined by $(i/(n+1))$ where i is the rank of n individual data points ordered lowest to highest. If necessary, the 10th percentile may be calculated using linear interpolation.
 - G) The challenge test must establish a quality control release value (QCRV) for a non-destructive performance test that demonstrates the Cryptosporidium removal capability of the membrane filtration module. This performance test must be applied to each production membrane module used by the supplier that was not directly challenge tested in order to verify Cryptosporidium removal capability. Production modules that do not meet the established QCRV are not eligible for the treatment credit demonstrated during the challenge test.
 - H) If a previously tested membrane is modified in a manner that could change the removal efficiency of the membrane or the applicability of the non-destructive performance test and associated QCRV, additional challenge testing to demonstrate the removal efficiency of, and determine a new QCRV for, the modified membrane must be conducted and submitted to the Agency.
- 3) Direct Integrity Testing. A supplier must conduct direct integrity testing in a manner that demonstrates a removal efficiency equal to or greater than the removal credit awarded to the membrane filtration process and meets the requirements described in subsections (b)(3)(A) through (b)(3)(F). A "direct integrity test" is defined as a physical test applied to a membrane unit in order to identify and isolate integrity breaches (i.e., one or more leaks that could result in contamination of the filtrate).
- A) The direct integrity test must be independently applied to each membrane unit in service. A membrane unit is defined as a group

24125 of membrane modules that share common valving that allows the
 24126 unit to be isolated from the rest of the treatment system for the
 24127 purpose of integrity testing or other maintenance.
 24128

24129 B) The direct integrity method must have a resolution of three
 24130 micrometers or less, if where resolution is defined as the size of the
 24131 smallest integrity breach that contributes to a response from the
 24132 direct integrity test.
 24133

24134 C) The direct integrity test must have a sensitivity sufficient to verify
 24135 the log treatment credit awarded to the membrane filtration process
 24136 by the Agency, if where sensitivity is defined as the maximum log
 24137 removal value that can be reliably verified by a direct integrity test.
 24138 Sensitivity must be determined using the appropriate of the
 24139 following approaches, considering the type of direct integrity test
 24140 the supplier uses:
 24141

24142 i) For a direct integrity test that uses an applied pressure or
 24143 vacuum, the direct integrity test sensitivity must be
 24144 calculated according to the following equation:
 24145

24146
$$LRV_{DIT} = \text{Log}_{10} \left(\frac{Q_p}{VCF \times Q_{breach}} \right)$$

24147
 24148 Where:
 24149

LRV_{DIT} = the sensitivity of the direct integrity test
 Q_p = total design filtrate flow from the membrane unit

Q_{breach} = flow of water from an integrity breach associated with the smallest integrity test response that can be reliably measured

VCF = volumetric concentration factor. The volumetric concentration factor is the ratio of the suspended solids concentration on the high pressure side of the membrane relative to that in the feed water; or

24150
 24151 ii) For a direct integrity test that uses a particulate or
 24152 molecular marker, the direct integrity test sensitivity must
 24153 be calculated according to the following equation:
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$$LRV_{DIT} = \text{Log}_{10} (C_f) - \text{Log}_{10} (C_p)$$

Where:

- LRV_{DIT} = the sensitivity of the direct integrity test
- C_f = the typical feed concentration of the marker used in the test
- C_p = the filtrate concentration of the marker from an integral membrane unit

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- D) A supplier must establish a control limit within the sensitivity limits of the direct integrity test that is indicative of an integral membrane unit capable of meeting the removal credit awarded by the Agency.
 - E) If the result of a direct integrity test exceeds the control limit established under subsection (b)(3)(D), the supplier must remove the membrane unit from service. The supplier must conduct a direct integrity test to verify any repairs, and it may return the membrane unit to service only if the direct integrity test is within the established control limit.
 - F) A supplier must conduct direct integrity testing on each membrane unit at a frequency of not less than once each day that the membrane unit is in operation. The Agency may, by a SEP, approve less frequent testing, based on demonstrated process reliability, the use of multiple barriers effective for Cryptosporidium, or reliable process safeguards.
- 4) Indirect Integrity Monitoring. A supplier must conduct continuous indirect integrity monitoring on each membrane unit according to the criteria in subsections (b)(4)(A) through (b)(4)(E). "Indirect integrity monitoring" is defined as monitoring some aspect of filtrate water quality that is indicative of the removal of particulate matter. A supplier that implements continuous direct integrity testing of membrane units in ~~compliance~~ accordance with the criteria in subsections (b)(3)(A) through (b)(3)(E) is not subject to the requirements for continuous indirect integrity monitoring. The supplier must submit a monthly report to the Agency summarizing all continuous indirect integrity monitoring results triggering direct integrity testing and the corrective action that was taken in each case.

- 24192 A) Unless the Agency approves an alternative parameter by a SEP,
24193 continuous indirect integrity monitoring must include continuous
24194 filtrate turbidity monitoring.
24195
- 24196 B) Continuous indirect integrity monitoring must be conducted at a
24197 frequency of no less than once every 15 minutes.
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- 24199 C) Continuous indirect integrity monitoring must be separately
24200 conducted on each membrane unit.
24201
- 24202 D) If continuous indirect integrity monitoring includes turbidity and if
24203 the filtrate turbidity readings are above 0.15 NTU for a period
24204 greater than 15 minutes (i.e., two consecutive 15-minute readings
24205 above 0.15 NTU), direct integrity testing must immediately be
24206 performed on the associated membrane unit, as specified in
24207 subsections (b)(3)(A) through (b)(3)(E).
24208
- 24209 E) If indirect integrity monitoring includes an Agency-approved
24210 alternative parameter and if the alternative parameter exceeds an
24211 Agency-approved control limit for a period greater than 15
24212 minutes, direct integrity testing must immediately be performed on
24213 the associated membrane units, as specified in subsections
24214 (b)(3)(A) through (b)(3)(E).
24215
- 24216 c) Second Stage Filtration. A supplier receives 0.5-log *Cryptosporidium* treatment
24217 credit for a separate second stage of filtration that consists of sand, dual media,
24218 GAC, or other fine grain media following granular media filtration if the Agency
24219 approves by a SEP. To be eligible for this credit, the first stage of filtration must
24220 be preceded by a coagulation step and both filtration stages must treat the entire
24221 plant flow taken from a surface water or groundwater under the direct influence of
24222 surface water source. A cap, such as GAC, on a single stage of filtration is not
24223 eligible for this credit. The Agency must approve the treatment credit based on an
24224 assessment of the design characteristics of the filtration process.
24225
- 24226 d) Slow Sand Filtration (as secondary filter). A supplier is eligible to receive 2.5-log
24227 *Cryptosporidium* treatment credit by a SEP for a slow sand filtration process that
24228 follows a separate stage of filtration if both filtration stages treat entire plant flow
24229 taken from a surface water or groundwater under the direct influence of surface
24230 water source and no disinfectant residual is present in the influent water to the
24231 slow sand filtration process. The Agency must approve the treatment credit based
24232 on an assessment of the design characteristics of the filtration process. This
24233 subsection (d) does not apply to treatment credit awarded to slow sand filtration
24234 used as a primary filtration process.

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BOARD NOTE: Derived from 40 CFR 141.719.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

Section 611.1020 Requirements for Microbial Toolbox Components: Inactivation Toolbox Components

- a) Calculation of CT Values
 - 1) CT is the product of the disinfectant contact time (T, in minutes) and disinfectant concentration (C, in milligrams per liter). A supplier with treatment credit for chlorine dioxide or ozone under subsection (b) or (c) must calculate CT at least once each day, with both C and T measured during peak hourly flow, as specified in Sections 611.531 and 611.532.
 - 2) A supplier with several disinfection segments in sequence may calculate CT for each segment, **if where** a disinfection segment is defined as a treatment unit process with a measurable disinfectant residual level and a liquid volume. Under this approach, the supplier must add the Cryptosporidium CT values in each segment to determine the total CT for the treatment plant.
- b) CT Values for Chlorine Dioxide and Ozone
 - 1) A supplier receives the Cryptosporidium treatment credit listed in Table H by meeting the corresponding chlorine dioxide CT value for the applicable water temperature, as described in subsection (a).
 - 2) A supplier receives the Cryptosporidium treatment credit listed in Table I by meeting the corresponding ozone CT values for the applicable water temperature, as described in subsection (a).
- c) Site-Specific Study. The Agency may, by a SEP, approve alternative chlorine dioxide or ozone CT values to those listed in Tables H and I on a site-specific basis. The Agency must base this approval on a site-specific study conducted by the supplier according to an Agency-approved protocol.
- d) Ultraviolet Light. A supplier receives Cryptosporidium, Giardia lamblia, and virus treatment credits for ultraviolet (UV) light reactors by achieving the corresponding UV dose values shown in Table J. The supplier must validate and monitor UV reactors, as described in subsections (d)(2) and (d)(3), to demonstrate that they are achieving a particular UV dose value for treatment credit.

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- 1) UV Dose Table. The treatment credits listed in Table J are for UV light at a wavelength of 254 nm as produced by a low-pressure mercury vapor lamp. To receive treatment credit for other lamp types, a supplier must demonstrate an equivalent germicidal dose through reactor validation testing, as described in subsection (d)(2). The UV dose values in this table are applicable only to post-filter applications of UV in a filtered system supplier and to an unfiltered system supplier.
 - 2) Reactor Validation Testing. A supplier must use UV reactors that have undergone validation testing to determine the operating conditions under which the reactor delivers the UV dose required in subsection (d)(1) (i.e., validated operating conditions). These operating conditions must include flow rate; UV intensity, as measured by a UV sensor; and UV lamp status.
 - A) When determining validated operating conditions, a supplier must account for the following factors: UV absorbance of the water; lamp fouling and aging; measurement uncertainty of on-line sensors; UV dose distributions arising from the velocity profiles through the reactor; failure of UV lamps or other critical treatment system components; and inlet and outlet piping or channel configurations of the UV reactor.
 - B) Validation testing must include the following: Full scale testing of a reactor that conforms uniformly to the UV reactors used by the supplier and inactivation of a test microorganism whose dose response characteristics have been quantified with a low pressure mercury vapor lamp.
 - C) The Agency may, by a SEP, approve an alternative approach to validation testing.
 - 3) Reactor Monitoring
 - A) A supplier must monitor its UV reactors to determine if the reactors are operating within validated conditions, as determined under subsection (d)(2). This monitoring must include UV intensity, as measured by a UV sensor; flow rate; lamp status; and other parameters that the Agency has designated by a SEP based on UV reactor operation. A supplier must verify the calibration of UV sensors and must recalibrate sensors in ~~compliance~~ accordance with a protocol that the Agency has approved by the SEP.

- 24321 B) To receive treatment credit for UV light, a supplier must treat at
- 24322 least 95 percent of the water delivered to the public during each
- 24323 month by UV reactors operating within validated conditions for the
- 24324 required UV dose, as described in subsections (d)(1) and (d)(2).
- 24325 The supplier must demonstrate compliance with this condition by
- 24326 the monitoring required under subsection (d)(3)(A).
- 24327

24328 BOARD NOTE: Derived from 40 CFR 141.720.

24329 (Source: Amended at 50 Ill. Reg. _____, effective _____)

24330 **Section 611.1021 Reporting and Recordkeeping Requirements: Reporting Requirements**

- 24333
- 24334 a) A supplier must report sampling schedules under Section 611.1002 and source
- 24335 water monitoring results under Section 611.1006 unless it notifies the Agency that
- 24336 it will not conduct source water monitoring because the supplier meets the criteria
- 24337 of Section 611.1001(d).
- 24338
- 24339 b) A supplier must report the use of uncovered finished water storage facilities to the
- 24340 Agency, as described in Section 611.1014.
- 24341
- 24342 c) A filtered system supplier must report its Cryptosporidium bin classification, as
- 24343 described in Section 611.1010.
- 24344
- 24345 d) An unfiltered system supplier must report its mean source water Cryptosporidium
- 24346 level, as described in Section 611.1012.
- 24347
- 24348 e) A supplier must report disinfection profiles and benchmarks to the Agency, as
- 24349 described in Sections 611.1008 and 611.1009, prior to making a significant
- 24350 change in disinfection practice.
- 24351
- 24352 f) A supplier must report to the Agency in ~~compliance~~accordance with subsections
- 24353 (f)(1) through (f)(15) for any microbial toolbox options used to comply with
- 24354 treatment requirements under Section 611.1011 or Section 611.1012.
- 24355 Alternatively, the Agency may, by a SEP, approve a supplier to certify operation
- 24356 within required parameters for treatment credit rather than reporting monthly
- 24357 operational data for toolbox options.
- 24358
- 24359 1) A supplier that uses the watershed control program toolbox option must
- 24360 submit the following information on the indicated schedule:
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- A) A notice of intention to develop a new or continue an existing watershed control program no later than two years before the applicable treatment compliance date in Section 611.1013;
 - B) A watershed control plan no later than one year before the applicable treatment compliance date in Section 611.1013;
 - C) An annual watershed control program status report every 12 months, beginning one year after the applicable treatment compliance date in Section 611.1013; and
 - D) A watershed sanitary survey report: for a CWS supplier, every three years beginning three years after the applicable treatment compliance date in Section 611.1013 or, for a non-CWS supplier, every five years beginning five years after the applicable treatment compliance date in Section 611.1013.
- 2) A supplier that uses the alternative source or intake management toolbox option must submit verification that it has relocated the intake or adopted the intake withdrawal procedure reflected in monitoring results no later than the applicable treatment compliance date in Section 611.1013.
- 3) A supplier that uses the presedimentation toolbox option must submit monthly verification of the information ~~set forth~~ in each of subsections (f)(3)(A) through (f)(3)(D), subject to the limitations of subsection (f)(3)(E).
- A) Continuous basin operation;
 - B) Treatment of 100% of the flow;
 - C) Continuous addition of a coagulant; and
 - D) At least 0.5-log mean reduction of influent turbidity or compliance with alternative Agency-approved performance criteria.
 - E) Monthly reporting must occur within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in Section 611.1013.
- 4) A supplier that uses the two-stage lime softening toolbox option must submit monthly verification of the information ~~set forth~~ in each of

- 24404 subsections (f)(4)(A) and (f)(4)(B), subject to the limitations of subsection
24405 (f)(4)(C).
24406
24407 A) That chemical addition and hardness precipitation occurred in two
24408 separate and sequential softening stages prior to filtration; and
24409
24410 B) That both stages treated 100% of the plant flow.
24411
24412 C) Monthly reporting must occur within 10 days following the month
24413 in which the monitoring was conducted, beginning on the
24414 applicable treatment compliance date in Section 611.1013.
24415
- 24416 5) A supplier that uses the bank filtration toolbox option must submit the
24417 following information on the indicated schedule:
24418
24419 A) An initial demonstration of the following no later than the
24420 applicable treatment compliance date in Section 611.1013:
24421
24422 i) The existence of unconsolidated, predominantly sandy
24423 aquifer; and
24424
24425 ii) A setback distance of at least 25 ft. (0.5-log credit) or 50 ft.
24426 (1.0-log credit).
24427
24428 B) If the monthly average of daily maximum turbidity is greater than
24429 1 NTU, then the supplier must report that result and submit an
24430 assessment of the cause within 30 days following the month in
24431 which the monitoring was conducted, beginning on the applicable
24432 treatment compliance date in Section 611.1013.
24433
- 24434 6) A supplier that uses the combined filter performance toolbox option must
24435 submit monthly verification of combined filter effluent (CFE) turbidity
24436 levels less than or equal to 0.15 NTU in at least 95 percent of the four-
24437 hour CFE measurements taken each month. Monthly reporting must occur
24438 within 10 days following the month in which the monitoring was
24439 conducted, beginning on the applicable treatment compliance date in
24440 Section 611.1013.
24441
- 24442 7) A supplier that uses the individual filter performance toolbox option must
24443 submit monthly verification of the information ~~set forth~~ in each of
24444 subsections (f)(7)(A) and (f)(7)(B), subject to the limitations of subsection
24445 (f)(7)(C).
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- A) That individual filter effluent (IFE) turbidity levels were less than or equal to 0.15 NTU in at least 95 percent of samples each month in each filter; and
 - B) That no individual filter measured greater than 0.3 NTU in two consecutive readings 15 minutes apart.
 - C) Monthly reporting must occur within 10 days following the month in which the monitoring was conducted, beginning on the applicable treatment compliance date in Section 611.1013.
- 8) A supplier that uses the demonstration of performance toolbox option must submit the information ~~set forth~~ in each of subsections (f)(8)(A) and (f)(8)(B) on the indicated schedule:
- A) Results from testing following an Agency-approved protocol no later than the applicable treatment compliance date in Section 611.1013; and
 - B) As required by the Agency, monthly verification of operation within conditions of Agency approval for demonstration of performance credit within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in Section 611.1013.
- 9) A supplier that uses the bag filters and cartridge filters toolbox option must submit the information ~~set forth~~ in each of subsections (f)(9)(A) and (f)(9)(B) on the indicated schedule:
- A) A demonstration, no later than the applicable treatment compliance date in Section 611.1013, that the following criteria are met:
 - i) It must demonstrate that the process meets the definition of bag or cartridge filtration; and
 - ii) It must demonstrate that the removal efficiency established through challenge testing that meets criteria in this Subpart Z; and
 - B) Monthly verification, within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in Section 611.1013, that 100% of plant flow was filtered.

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- 10) A supplier that uses the membrane filtration toolbox option must submit the following information on the indicated schedule:
 - A) Results of verification testing no later than the applicable treatment compliance date in Section 611.1013 that demonstrate the following:
 - i) It must demonstrate that the removal efficiency established through challenge testing that meets criteria ~~set forth~~ in this Subpart Z; and
 - ii) It must demonstrate the integrity test method and parameters, including resolution, sensitivity, test frequency, control limits, and associated baseline; and
 - B) A monthly report within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in Section 611.1013, that summarizes the following:
 - i) It must summarize all direct integrity tests above the control limit; and
 - ii) If applicable, it must summarize any turbidity or alternative Agency-approved indirect integrity monitoring results triggering direct integrity testing and the corrective action that was taken.
- 11) A supplier that uses the second stage filtration toolbox option must submit monthly verification within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in Section 611.1013, that 100% of flow was filtered through both stages and that first stage was preceded by coagulation step.
- 12) A supplier that uses the slow sand filtration (as secondary filter) toolbox option must submit monthly verification within 10 days following the month in which monitoring was conducted, beginning on the applicable treatment compliance date in Section 611.1013, that both a slow sand filter and a preceding separate stage of filtration treated 100% of flow from Subpart B sources.

- 24532 13) A supplier that uses the chlorine dioxide toolbox option must submit a
24533 monthly summary of CT values for each day within 10 days following the
24534 month in which monitoring was conducted, beginning on the applicable
24535 treatment compliance date in Section 611.1013, as described in Section
24536 611.1020.
24537
- 24538 14) A supplier that uses the ozone toolbox option must submit a monthly
24539 summary of CT values for each day within 10 days following the month in
24540 which monitoring was conducted, beginning on the applicable treatment
24541 compliance date in Section 611.1013, as described in Section 611.1020.
24542
- 24543 15) A supplier that uses the UV toolbox option must submit the following
24544 information on the indicated schedule:
24545
- 24546 A) Validation test results no later than the applicable treatment
24547 compliance date in Section 611.1013, that demonstrate operating
24548 conditions that achieve required UV dose.
24549
- 24550 B) A monthly report summarizing the percentage of water entering
24551 the distribution system that was not treated by UV reactors
24552 operating within validated conditions for the required dose within
24553 10 days following the month in which monitoring was conducted,
24554 beginning on the applicable treatment compliance date in Section
24555 611.1013, as specified in Section 611.1020(d).
24556

24557 BOARD NOTE: Derived from 40 CFR 141.721 ~~(2016)~~.

24558 (Source: Amended at 50 Ill. Reg. _____, effective _____)
24559
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24561 **Section 611.1023 Requirements to Respond to Significant Deficiencies Identified in**
24562 **Sanitary Surveys Performed by USEPA or the Agency**
24563

- 24564 a) A "sanitary survey" is an onsite review of the water source (identifying sources of
24565 contamination by using results of source water assessments ~~if~~^{where} available),
24566 facilities, equipment, operation, maintenance, and monitoring compliance of a
24567 PWS to evaluate the adequacy of the PWS, its sources and operations, and the
24568 distribution of safe drinking water.
24569
- 24570 b) For the purposes of this Section, a "significant deficiency" includes a defect in
24571 design, operation, or maintenance, or a failure or malfunction of the sources,
24572 treatment, storage, or distribution supplier that USEPA or the Agency determines
24573 to be causing, or has the potential for causing, the introduction of contamination
24574 into the water delivered to consumers.

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- c) For sanitary surveys performed by USEPA or the Agency, the supplier must respond in writing to significant deficiencies identified in sanitary survey reports no later than 45 days after receipt of the report, indicating how and on what schedule the supplier will address significant deficiencies noted in the survey.
- d) A supplier must correct significant deficiencies identified in sanitary survey reports according to the schedule approved by USEPA or the Agency, or if there is no approved schedule, according to the schedule reported ~~underpursuant to~~ subsection (c) if ~~thesuch~~ deficiencies are within the control of the supplier.

BOARD NOTE: Derived from 40 CFR 141.723 ~~(2016)~~.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

SUBPART AA: REVISED TOTAL COLIFORM RULE

Section 611.1052 Analytical Methods and Laboratory Certification

- a) Analytical Methodology
 - 1) The standard sample volume required for analysis is 100 mL, regardless of analytical method the supplier uses.
 - 2) A supplier needs only determine the presence or absence of total coliforms and E. coli; a supplier needs not determine density.
 - 3) The time from sample collection to initiating test medium incubation may not exceed 30 hours. Suppliers should but need not hold samples below 10 °C during transit.
 - 4) If the supplier is to analyze water having residual chlorine (measured as free, combined, or total chlorine), the supplier must add sufficient sodium thiosulfate (Na₂S₂O₃) to the sample bottle before sterilization to neutralize any residual chlorine in the water sample. Section 2 of SM 9060 A (97), incorporated by reference in Section 611.102, addresses dichlorination procedures.
 - 5) The supplier must conduct total coliform and E. coli analyses in using certain analytical methods, each incorporated by reference in Section 611.102:

24617 BOARD NOTE: The supplier must monitor and analyze only using the
24618 version of the approved method in this subsection (a) and incorporated by
24619 reference in Section 611.102. The methods listed are the only versions the
24620 supplier may use for compliance with this Subpart AA. Laboratories
24621 should carefully use only the approved versions of methods, as product
24622 package inserts may not be the same as the approved versions of the
24623 methods.

24624
24625 A) Total Coliforms, Lactose Fermentation Methods

- 24626
24627 i) Total Coliform Fermentation Technique. Sections 1 and 2
24628 of SM 9221 B (94) (only the 20th ed.), SM 9221 B (99), SM
24629 9221 B (06), [sections 1 through 2 of SM 9221 B \(06\)](#), or
24630 sections 1 through 4 of SM 9221 B (14).

24631
24632 BOARD NOTE: The supplier may use commercially
24633 available lactose broth in lieu of lauryl tryptose broth if the
24634 supplier conducts at least 25 parallel tests between lactose
24635 broth and lauryl tryptose broth using the water normally
24636 tested and this comparison demonstrates false-positive and
24637 false-negative rates for total coliforms are less than ten
24638 percent using lactose broth.

- 24639
24640 ii) Presence-Absence (P-A) Coliform Test. Sections 1 and 2
24641 of SM 9221 D (94), SM 9221 D (99), or sections 1 through
24642 3 of SM 9221 D (14).

24643
24644 BOARD NOTE: A supplier may use a multiple tube
24645 enumerative format, as SM 9221 D (94), SM 9221 D (99),
24646 or SM 9221 D (14) describes, for presence-absence
24647 determination under this Subpart AA.

24648
24649 B) Total Coliforms, Membrane Filtration Methods

- 24650
24651 i) Standard Total Coliform Membrane Filter Procedure Using
24652 Endo Medium. SM 9222 B (97), SM 9222 B (15), [SM](#)
24653 [9222 B \(22\)](#), SM 9222 C (97), or SM 9222 C (15), [SM](#)
24654 [9222 C \(22\)](#).

- 24655
24656 ii) Membrane Filtration Using MI Medium. USEPA 1604
24657 (02).

- 24658
24659 iii) Hach 10029 (99) (m-ColiBlue24[®]).

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BOARD NOTE: A supplier must begin all filtration series with membrane filtration equipment the supplier sterilized by autoclaving. Exposing filtration equipment to UV light is not adequate to ensure sterilization. Subsequent to the initial autoclaving, the supplier may expose the filtration equipment to UV light to sanitize the funnels between filtrations within a filtration series. Alternatively, the supplier may use manufacturer-pre-sterilized membrane filtration equipment (i.e., disposable funnel units).

iv) Chromocult® (00).

v) RAPID'E. coli (20).

BOARD NOTE: A supplier must begin all filtration series with membrane filtration equipment the supplier sterilized by autoclaving. Exposing filtration equipment to UV light is not adequate to ensure sterilization. Subsequent to the initial autoclaving, the supplier may expose the filtration equipment to UV light to sanitize the funnels between filtrations within a filtration series. Alternatively, the supplier may use manufacturer-pre-sterilized membrane filtration equipment (i.e., disposable funnel units).

C) Total Coliforms, Enzyme Substrate Methods

i) Colilert®. SM 9223 B (97), SM 9223 B (04), or SM 9223 B (16).

BOARD NOTE: A supplier may use multiple-tube and multi-well enumerative formats for this method in presence-absence determination under this Subpart AA.

ii) Colilert®-18. SM 9223 B (97), SM 9223 B (04), or SM 9223 B (16).

iii) Colisure®. SM 9223 B (97), SM 9223 B (04), or SM 9223 B (16).

BOARD NOTE: A supplier may use multiple-tube and multi-well enumerative formats for this method in presence-absence determination under this Subpart AA. A

- 24703 supplier may read Colisure™ Test results after an
 24704 incubation time of 24 hours.
 24705
 24706 iv) E*Colite® (98).
 24707
 24708 v) ReadyCult® (07).
 24709
 24710 vi) Modified Colitag™ (09) or Modified Colitag™ (20).
 24711
 24712 vii) Tecta (14) or Tecta (17).
 24713
 24714 D) E. coli (following lactose fermentation methods), EC-MUG
 24715 Medium. Section 1 of SM 9221 F (94), section 1 of SM 9221 F
 24716 (01), section 1 of SM 9221 F (06), or section 1 of SM 9221 F (14).
 24717
 24718 E) E. coli, Partition Methods (following membrane filtration methods)
 24719
 24720 i) EC Broth with MUG (EC-MUG). Section 1.c(2) of SM
 24721 9222 G (97), ~~SM 9222 H (15)~~, [SM 9222 H \(22\)](#).
 24722
 24723 BOARD NOTE: The supplier must make certain changes
 24724 to the EC broth with MUG (EC-MUG) formulation: 1.5 g
 24725 potassium dihydrogen phosphate (KH₂PO₄) and 0.05 g 4-
 24726 methylumbelliferyl-β-D-glucuronide.
 24727
 24728 ii) NA-MUG Medium. Section 1.c(1) of SM 9222 G (97), ~~SM~~
 24729 9222 I (15), [SM 9222 I \(22\)](#).
 24730
 24731 F) E. coli, Membrane Filtration Methods
 24732
 24733 i) Membrane Filtration Using MI Medium. USEPA 1604
 24734 (02).
 24735
 24736 ii) Hach 10029 (99) (m-ColiBlue24®).
 24737
 24738 BOARD NOTE: A supplier must begin all filtration series
 24739 with membrane filtration equipment the supplier sterilized
 24740 by autoclaving. Exposing filtration equipment to UV light
 24741 is not adequate to ensure sterilization. Subsequent to the
 24742 initial autoclaving, the supplier may expose the filtration
 24743 equipment to UV light to sanitize the funnels between
 24744 filtrations within a filtration series. Exposure of filtration
 24745 equipment to UV light is not adequate to ensure

24746 sterilization. Alternatively, the supplier may use
24747 manufacturer-pre-sterilized membrane filtration equipment
24748 (i.e., disposable funnel units).

24749
24750 iii) Chromocult[®] (00).

24751
24752 iv) RAPID'E. coli (20).

24753
24754 BOARD NOTE: A supplier must begin all filtration series with
24755 membrane filtration equipment the supplier sterilized by
24756 autoclaving. Exposing filtration equipment to UV light is not
24757 adequate to ensure sterilization. Subsequent to the initial
24758 autoclaving, the supplier may expose the filtration equipment to
24759 UV light to sanitize the funnels between filtrations within a
24760 filtration series. Exposure of filtration equipment to UV light is
24761 not adequate to ensure sterilization. Alternatively, the supplier
24762 may use manufacturer-pre-sterilized membrane filtration
24763 equipment (i.e., disposable funnel units).

24764
24765 G) E. coli, Enzyme Substrate Methods

24766
24767 i) Colilert[®]. SM 9223 B (97), SM 9223 B (04), SM 9223 B
24768 (16).

24769
24770 BOARD NOTE: Multiple-tube and multi-well enumerative
24771 formats for this method are approved for use in presence-
24772 absence determination under this Subpart AA.

24773
24774 ii) Colilert[®]-18. SM 9223 B (97), SM 9223 B (04), SM 9223
24775 B (16).

24776
24777 iii) Colisure[®]. SM 9223 B (97), SM 9223 B (04), SM 9223 B
24778 (16).

24779
24780 BOARD NOTE: A supplier may use multiple-tube and
24781 multi-well enumerative formats for this method in
24782 presence-absence determination under this Subpart AA. A
24783 supplier may read Colisure[™] Test results after an
24784 incubation time of 24 hours.

24785
24786 iv) E*Colite[®] (98).

24787
24788 v) Readycult[®] (07).

- 24789
24790 vi) Modified Colitag™ (09) or Modified Colitag™ (20).
24791
24792 vii) Tecta (14) or Tecta (17).
24793
24794 H) Simultaneous Detection of Total Coliforms and E. coli by Dual
24795 Chromogen Membrane Filter Procedure (using m-ColiBlue24®
24796 medium). SM 9222 J (15) and SM 9222 J (22).
24797
24798 b) Laboratory Certification. A supplier must have a certified laboratory in one of the
24799 categories in Section 611.490(a) analyze all compliance samples this Subpart AA
24800 requires. The laboratory the supplier uses for compliance monitoring under this
24801 Subpart AA must be certified for each method (and associated contaminants).
24802
24803 c) This subsection (c) corresponds with 40 CFR 141.1052(c), a centralized listing of
24804 incorporations by reference for the purposes of subpart Y to 40 CFR 141. The
24805 Board has centrally located all incorporations by reference in Section 611.102.
24806 This statement maintains structural consistency with the federal rules.
24807

24808 BOARD NOTE: This Section derives from 40 CFR 141.852 and appendix A to subpart C of 40
24809 CFR 141. The Board did not separately list approved alternative methods from Standard
24810 Methods Online that are the same version as a method appearing in a printed edition of Standard
24811 Methods. Using the Standard Methods Online copy is acceptable.
24812

24813 Standard Methods Online, Methods 9221 B-99 and 9221 D-99 appear in the 21st
24814 edition as Methods 9221 B and D. This appears in this Section as Methods 9221
24815 B and 9221 D. In this Section, these appear as SM 9221 B (99) and SM 9221 D
24816 (99).
24817

24818 Standard Methods Online, Methods 9221 B-06, 9221 D-06, and 9221 F-06 appear
24819 in the 22nd edition as Methods 9221 B, D, and F. These appear in this Section as
24820 SM 9221 B (06), 9221 D (06), and SM 9221 F (06).
24821

24822 Standard Methods Online, Methods 9222 B-97, 9222 C-97, and 9222 G-97 appear
24823 in the 20th edition as Methods 9222 B, 9222 C, and 9222 G. These appear in this
24824 Section as SM 9222 B (97), 9222 C (97), and SM 9222 G (97).
24825

24826 Standard Methods Online, Method 9223 B-97 appears in the 20th and 21st editions
24827 as Method 9223 B. This appears in this Section as SM 9223 B (97).
24828

24829 Standard Methods Online, Method 9223 B-04 appears in the 22nd edition as
24830 Method 9223 B. This appears in this Section as SM 9223 B (04).
24831

24832 (Source: Amended at 50 Ill. Reg. _____, effective _____)

24833

24834 **Section 611.1053 General Monitoring Requirements for all PWSs**

24835

24836

a) Sample Siting Plans

24837

24838

1) A supplier must develop a written sample siting plan that identifies sampling sites and a sample collection schedule that are representative of water throughout the distribution system. These plans are subject to Agency review and revision. The supplier must collect total coliform samples according to the written sample siting plan. Monitoring required by Sections 611.1054 through 611.1058 may take place at a customer's premises, a dedicated sampling station, or another designated compliance sampling location. Routine and repeat sample sites and any sampling points necessary to meet the requirements of Subpart S must be reflected in the sampling plan.

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2) A supplier must collect samples at regular time intervals throughout the month, except that systems that use only ground water and serve 4,900 or fewer people may collect all required samples on a single day if they are taken from different sites.

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3) A supplier must take at least the minimum number of required samples even if the system has had an E. coli MCL violation or has exceeded the coliform treatment technique triggers in Section 611.1059(a).

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4) A supplier may conduct more compliance monitoring than is required by this Subpart AA to investigate potential problems in the distribution system and use monitoring as a tool to assist in uncovering problems. A supplier may take more than the minimum number of required routine samples and must include the results in calculating whether the coliform treatment technique trigger in Section 611.1059(a)(1)(A) and (a)(1)(B) has been exceeded only if the samples are taken in ~~compliance~~ accordance with the existing sample siting plan and are representative of water throughout the distribution system.

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5) A supplier must identify repeat monitoring locations in the sample siting plan. Unless the provisions of subsection (a)(5)(A) or (a)(5)(B) are met, the supplier must collect at least one repeat sample from the sampling tap where the original total coliform-positive sample was taken, and at least one repeat sample at a tap within five service connections upstream and at least one repeat sample at a tap within five service connections downstream of the original sampling site. If a total coliform-positive

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24875 sample is at the end of the distribution system, or one service connection
 24876 away from the end of the distribution system, the supplier must still take
 24877 all required repeat samples. However, the Agency may grant a SEP that
 24878 allows an alternative sampling location in lieu of the requirement to
 24879 collect at least one repeat sample upstream or downstream of the original
 24880 sampling site. Except as provided for in subsection (a)(5)(B), a supplier
 24881 required to conduct triggered source water monitoring under Section
 24882 611.802(a) must take ground water source samples in addition to repeat
 24883 samples required under this Subpart AA.
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24885 A) A supplier may propose repeat monitoring locations to the Agency
 24886 that the supplier believes to be representative of a pathway for
 24887 contamination of the distribution system. A supplier may elect to
 24888 specify either alternative fixed locations or criteria for selecting
 24889 repeat sampling sites on a situational basis in a standard operating
 24890 procedure (SOP) in its sample siting plan. The supplier must
 24891 design its SOP to focus the repeat samples at locations that best
 24892 verify and determine the extent of potential contamination of the
 24893 distribution system area based on specific situations. The Agency
 24894 may, by a SEP, modify the SOP or require alternative monitoring
 24895 locations as the Agency determines is necessary.
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24897 B) A GWS supplier that serves 1,000 or fewer people may propose
 24898 repeat sampling locations to the Agency that differentiate potential
 24899 source water and distribution system contamination (e.g., by
 24900 sampling at entry points to the distribution system). A GWS
 24901 supplier that has a single well and ~~that~~ ~~which~~ is required to conduct
 24902 triggered source water monitoring may, as allowed by a SEP, take
 24903 one of its repeat samples at the monitoring location required for
 24904 triggered source water monitoring under Section 611.802(a). The
 24905 supplier must justify an Agency determination that the sample
 24906 siting plan remains representative of water quality in the
 24907 distribution system. If approved by a SEP, the supplier may use
 24908 that sample result to meet the monitoring requirements in both
 24909 Section 611.802(a) and this Section.
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24911 i) If a repeat sample taken at the monitoring location required
 24912 for triggered source water monitoring is E. coli-positive,
 24913 the supplier has violated the E. coli MCL and must also
 24914 comply with Section 611.802(a)(3). If a supplier takes
 24915 more than one repeat sample at the monitoring location
 24916 required for triggered source water monitoring, the supplier
 24917 may reduce the number of additional source water samples

- 24918 required under Section 611.802(a)(3) by the number of
24919 repeat samples taken at that location that were not E. coli-
24920 positive.
24921
- 24922 ii) If a supplier takes more than one repeat sample at the
24923 monitoring location required for triggered source water
24924 monitoring under Section 611.802(a), and more than one
24925 repeat sample is E. coli-positive, the supplier has violated
24926 the E. coli MCL and must also comply with Section
24927 611.803(a)(1).
24928
- 24929 iii) If all repeat samples taken at the monitoring location
24930 required for triggered source water monitoring are E. coli-
24931 negative and a repeat sample taken at a monitoring location
24932 other than the one required for triggered source water
24933 monitoring is E. coli-positive, the supplier has violated the
24934 E. coli MCL, but is not required to comply with Section
24935 611.802(a)(3).
24936
- 24937 6) The Agency may, by a SEP, review, revise, and approve, as appropriate,
24938 repeat sampling proposed by a supplier under subsections (a)(5)(A) and
24939 (a)(5)(B). The supplier must justify an Agency determination that the
24940 sample siting plan remains representative of the water quality in the
24941 distribution system. The Agency may determine that monitoring at the
24942 entry point to the distribution system (especially for undisinfected ground
24943 water systems) is effective to differentiate between potential source water
24944 and distribution system problems.
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- 24946 b) Special Purpose Samples. Special purpose samples, such as those taken to
24947 determine whether disinfection practices are sufficient following pipe placement,
24948 replacement, or repair, must not be used to determine whether the coliform
24949 treatment technique trigger has been exceeded. Repeat samples taken under
24950 Section 611.1058 are not considered special purpose samples, and must be used to
24951 determine whether the coliform treatment technique trigger has been exceeded.
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- 24953 c) Invalidation of Total Coliform Samples. A total coliform-positive sample
24954 invalidated under this subsection (c) does not count toward meeting the minimum
24955 monitoring requirements of this Subpart AA.
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- 24957 1) The Agency may, by a SEP, invalidate a total coliform-positive sample
24958 only if the conditions of subsection (c)(1)(A), (c)(1)(B), or (c)(1)(C) are
24959 met.
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- A) The laboratory establishes that improper sample analysis caused the total coliform-positive result.
 - B) The Agency, on the basis of the results of repeat samples collected as required under Section 611.1058(a), determines that the total coliform-positive sample resulted from a domestic or other non-distribution system plumbing problem. The Agency cannot invalidate a sample on the basis of repeat sample results unless all repeat samples collected at the same tap as the original total coliform-positive sample are also total coliform-positive, and all repeat samples collected at a location other than the original tap are total coliform-negative (e.g., a Agency cannot invalidate a total coliform-positive sample on the basis of repeat samples if all the repeat samples are total coliform-negative, or if the system has only one service connection).
 - C) The Agency has substantial grounds to believe that a total coliform-positive result is due to a circumstance or condition that does not reflect water quality in the distribution system. In this case, the system must still collect all repeat samples required under Section 611.1058(a), and use them to determine whether a coliform treatment technique trigger in Section 611.1059 has been exceeded. To invalidate a total coliform-positive sample under this subsection (c)(1), the decision and supporting rationale must be documented in writing and approved and signed by the Agency, as a SEP. The Agency must make this document available to USEPA and the public. The written documentation must state the specific cause of the total coliform-positive sample, and what action the supplier has taken, or will take, to correct this problem. The Agency may not invalidate a total coliform-positive sample solely on the grounds that all repeat samples are total coliform-negative.
- 2) A laboratory must invalidate a total coliform sample (unless total coliforms are detected) if the sample produces a turbid culture in the absence of gas production using an analytical method ~~if~~^{where} gas formation is examined (e.g., the multiple-tube fermentation technique), produces a turbid culture in the absence of an acid reaction in the presence-absence (P–A) coliform test, or exhibits confluent growth or produces colonies too numerous to count with an analytical method using a membrane filter (e.g., membrane filter technique). If a laboratory invalidates a sample because of such interference, the supplier must collect another sample from the same location as the original sample within 24 hours after being notified of the interference problem, and have

25004 it analyzed for the presence of total coliforms. The supplier must continue
25005 to re-sample within 24 hours and have the samples analyzed until it
25006 obtains a valid result. The Agency may, by a SEP, waive the 24-hour time
25007 limit on a case-by-case basis. Alternatively, the Agency or any interested
25008 person may file a petition for rulemaking, under Sections 27 and 28 of the
25009 Act, to establish criteria for waiving the 24-hour sampling time limit to
25010 use in lieu of case-by-case extensions.

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25012 BOARD NOTE: Derived from 40 CFR 141.853.

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25014 (Source: Amended at 50 Ill. Reg. _____, effective _____)

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25016 **Section 611.1054 Routine Monitoring Requirements for Non-CWSs That Serve 1,000 or**
25017 **Fewer People Using Only Groundwater**

25018
25019 a) General

- 25020
25021 1) This Section applies to non-CWS suppliers that use only groundwater
25022 (except groundwater under the direct influence of surface water, as
25023 defined in Section 611.102) and ~~that~~**which** serve 1,000 or fewer people.
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25025 2) Following any total coliform-positive sample taken under this Section, a
25026 supplier must comply with the repeat monitoring requirements and E. coli
25027 analytical requirements in Section 611.1058.
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25029 3) Once all monitoring required by this Section and Section 611.1058 for a
25030 calendar month has been completed, a supplier must determine whether
25031 any coliform treatment technique triggers specified in Section 611.1059
25032 have been exceeded. If any trigger has been exceeded, the supplier must
25033 complete assessments as required by Section 611.1059.
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25035 4) For the purpose of determining eligibility for remaining on or qualifying
25036 for quarterly monitoring under the provisions of subsections (f)(4) and
25037 (g)(2), respectively, for transient non-CWS suppliers, the Agency may
25038 elect to not count monitoring violations under Section 611.1060(c)(1) if
25039 the missed sample is collected no later than the end of the monitoring
25040 period following the monitoring period in which the sample was missed.
25041 The supplier must collect the make-up sample in a different week than the
25042 routine sample for that monitoring period and should collect the sample as
25043 soon as possible during the monitoring period. The Agency may not use
25044 this provision under subsection (h). This authority does not affect the
25045 provisions of Sections 611.1060(c)(1) and 611.1061(a)(4).
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- 25047 b) Monitoring Frequency for Total Coliforms. A supplier must monitor each
 25048 calendar quarter that the supplier provides water to the public, except for a
 25049 seasonal system supplier or as provided under subsections (c) through (h) and (j).
 25050 A seasonal system supplier must meet the monitoring requirements of subsection
 25051 (i).
 25052
- 25053 c) Transition to This Subpart AA. The Agency must perform a special monitoring
 25054 evaluation during each sanitary survey to review the status of the supplier's
 25055 system, including the distribution system, to determine whether the supplier is on
 25056 an appropriate monitoring schedule. After the Agency has performed the special
 25057 monitoring evaluation during each sanitary survey, the Agency may modify the
 25058 supplier's monitoring schedule, as the Agency determines is necessary, or the
 25059 Agency may allow the supplier to stay on its existing monitoring schedule,
 25060 consistent with the provisions of this Section. The Agency may not allow a
 25061 supplier to begin less frequent monitoring under the special monitoring evaluation
 25062 unless the supplier has already met the applicable criteria for less frequent
 25063 monitoring in this Section. For a seasonal system supplier on quarterly or annual
 25064 monitoring, this evaluation must include review of the approved sample siting
 25065 plan, which must designate the time periods for monitoring based on site-specific
 25066 considerations (e.g., during periods of highest demand or highest vulnerability to
 25067 contamination). The seasonal system supplier must collect compliance samples
 25068 during these time periods.
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- 25070 d) Annual Site Visits. A supplier on annual monitoring, including a seasonal system
 25071 supplier, must have an initial and recurring annual site visit by the Agency that is
 25072 equivalent to a Level 2 assessment or an annual voluntary Level 2 assessment that
 25073 meets the criteria in Section 611.1059(b) to remain on annual monitoring. The
 25074 periodic required sanitary survey may be used to meet the requirement for an
 25075 annual site visit for the year in which the sanitary survey was completed.
 25076
- 25077 e) Criteria for Annual Monitoring. The Agency may, by a SEP, reduce the
 25078 monitoring frequency for a well-operated GWS supplier from quarterly routine
 25079 monitoring to no less than annual monitoring, if the supplier demonstrates that it
 25080 meets the criteria for reduced monitoring in subsections (e)(1) through (e)(3),
 25081 except for a supplier that has been on increased monitoring under the provisions
 25082 of subsection (f). A supplier on increased monitoring under subsection (f) must
 25083 meet the provisions of subsection (g) to go to quarterly monitoring and must meet
 25084 the provisions of subsection (h) to go to annual monitoring.
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- 25086 1) The supplier's system has a clean compliance history for a minimum of 12
 25087 months;
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- 25089 2) The most recent sanitary survey shows that the supplier's system is free of
25090 sanitary defects or has corrected all identified sanitary defects, has a
25091 protected water source, and meets Agency-approved construction
25092 standards; and
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- 25094 3) The Agency has conducted an annual site visit within the last 12 months,
25095 and the supplier has corrected all identified sanitary defects. The supplier
25096 may substitute a Level 2 assessment that meets the criteria in Section
25097 611.1059(b) for the Agency annual site visit.
25098
- 25099 f) Increased Monitoring Requirements for Suppliers on Quarterly or Annual
25100 Monitoring. A supplier on quarterly or annual monitoring that experiences any of
25101 the events identified in subsections (f)(1) through (f)(4) must begin monthly
25102 monitoring the month following the event. A supplier on annual monitoring that
25103 experiences the event identified in subsections (f)(5) must begin quarterly
25104 monitoring the quarter following the event. The supplier must continue monthly
25105 or quarterly monitoring until the requirements in subsection (g) for quarterly
25106 monitoring or subsection (h) for annual monitoring are met. A supplier on
25107 monthly monitoring for reasons other than those identified in subsections (f)(1)
25108 through (f)(4) is not considered to be on increased monitoring for the purposes of
25109 subsections (g) and (h).
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- 25111 1) The supplier's system triggers a Level 2 assessment or two Level 1
25112 assessments under the provisions of Section 611.1059 in a rolling 12-
25113 month period.
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- 25115 2) The supplier's system has an E. coli MCL violation.
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- 25117 3) The supplier's system has a coliform treatment technique violation.
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- 25119 4) The supplier's system has two Subpart AA monitoring violations or one
25120 Subpart AA monitoring violation and one Level 1 assessment under the
25121 provisions of Section 611.1059 in a rolling 12-month period for a system
25122 on quarterly monitoring.
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- 25124 5) The supplier's system has one Subpart AA monitoring violation for a
25125 system on annual monitoring.
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- 25127 g) Requirements for Returning to Quarterly Monitoring. The Agency may, by a
25128 SEP, reduce the monitoring frequency for a supplier on monthly monitoring
25129 triggered under subsection (f) to quarterly monitoring if the supplier's system
25130 meets the criteria in subsections (g)(1) and (g)(2).
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- 1) Within the last 12 months, the supplier must have a completed sanitary survey or a site visit of its system by the Agency or a voluntary Level 2 assessment of its system by a party approved by the Agency, the supplier's system must be free of sanitary defects, and the supplier's system must have a protected water source; and
 - 2) The supplier's system must have a clean compliance history for a minimum of 12 months.
- h) Requirements for a Supplier on Increased Monitoring to Qualify for Annual Monitoring. The Agency may, by a SEP, reduce the monitoring frequency for a supplier on increased monitoring under subsection (f) if the supplier's system meets the criteria in subsection (g) and the criteria in subsections (h)(1) and (h)(2).
- 1) An annual site visit by the Agency and correction of all identified sanitary defects. The supplier may substitute a voluntary Level 2 assessment by a party approved by the Agency for the Agency annual site visit in any given year.
 - 2) The supplier must have in place or adopt one or more of the following additional enhancements to the water system barriers to contamination:
 - A) Cross connection control, as approved by the Agency.
 - B) An operator certified by an appropriate Agency certification program or regular visits by a circuit rider certified by an appropriate Agency certification program.
 - C) Continuous disinfection entering the distribution system and a residual in the distribution system in ~~compliance~~ ~~accordance~~ with criteria specified by the Agency.
 - D) Demonstration of maintenance of at least a four-log removal or inactivation of viruses as provided for under Section 141.403(b)(3).
 - E) Other equivalent enhancements to water system barriers as approved by the State.
- i) Seasonal Systems

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- 1) All seasonal system suppliers must demonstrate completion of an Agency-approved start-up procedure, which may include a requirement for startup sampling prior to serving water to the public.
 - 2) A seasonal system supplier must monitor every month that it is in operation unless it meets the criteria in subsections (i)(2)(i) through (iii) to be eligible for monitoring less frequently than monthly, except as provided under subsection (c).
 - A) Seasonal a system supplier monitoring less frequently than monthly must have an approved sample siting plan that designates the time period for monitoring based on site-specific considerations (e.g., during periods of highest demand or highest vulnerability to contamination). A seasonal system supplier must collect compliance samples during this time period.
 - B) To be eligible for quarterly monitoring, the supplier must meet the criteria in subsection (g).
 - C) To be eligible for annual monitoring, the supplier must meet the criteria under subsection (h).
 - 3) The Agency may, by a SEP, exempt any seasonal system supplier from some or all of the requirements for seasonal system suppliers if the entire distribution system remains pressurized during the entire period that the supplier's system is not operating, except that a supplier that monitors less frequently than monthly must still monitor during the vulnerable period designated by the Agency.
- j) Additional Routine Monitoring the Month Following a Total Coliform-Positive Sample. A supplier that collects samples on a quarterly or annual frequency must conduct additional routine monitoring the month following one or more total coliform-positive samples (with or without a Level 1 treatment technique trigger). The supplier must collect at least three routine samples during the next month, except that the Agency may, by a SEP, waive this requirement if the conditions of subsection (j)(1), (j)(2), or (j)(3) are met. The supplier may either collect samples at regular time intervals throughout the month or may collect all required routine samples on a single day if samples are taken from different sites. The supplier must use the results of additional routine samples in coliform treatment technique trigger calculations under Section 611.1059(a).
- 1) The Agency may, by a SEP, waive the requirement to collect three routine samples the next month in which the supplier provides water to the public

25217 if the Agency, or an agent approved by the Agency, performs a site visit
25218 before the end of the next month in which the supplier's system provides
25219 water to the public. Although a sanitary survey need not be performed,
25220 the site visit must be sufficiently detailed to allow the Agency to
25221 determine whether additional monitoring or any corrective action is
25222 needed. The Agency cannot approve an employee of the supplier to
25223 perform this site visit, even if the employee is an agent approved by the
25224 Agency to perform sanitary surveys.
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25226 2) The Agency may, by a SEP, waive the requirement to collect three routine
25227 samples the next month in which the supplier provides water to the public
25228 if the Agency has determined why the sample was total coliform-positive
25229 and has established that the supplier has corrected the problem or will
25230 correct the problem before the end of the next month in which the
25231 supplier's system serves water to the public. In this case, the Agency must
25232 document this decision to waive the following month's additional
25233 monitoring requirement in writing, have it approved and signed by the
25234 supervisor of the Agency official who recommends such a decision, and
25235 make this document available to USEPA and public. The written
25236 documentation must describe the specific cause of the total coliform-
25237 positive sample and what action the supplier has taken or will take to
25238 correct this problem.
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25240 3) The Agency may not waive the requirement to collect three additional
25241 routine samples the next month in which the supplier's system provides
25242 water to the public solely on the grounds that all repeat samples are total
25243 coliform-negative. If the Agency determines that the supplier has
25244 corrected the contamination problem before the supplier takes the set of
25245 repeat samples required in Section 611.1058, and all repeat samples were
25246 total coliform-negative, the Agency may, by a SEP, waive the requirement
25247 for additional routine monitoring the next month.
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25249 BOARD NOTE: Derived from 40 CFR 141.854.

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25251 (Source: Amended at 50 Ill. Reg. _____, effective _____)
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25253 **Section 611.1055 Routine Monitoring Requirements for CWSs That Serve 1,000 or Fewer**
25254 **People Using Only Groundwater**
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25256 a) General
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- 1) This Section applies to CWS suppliers that use only ground water (except ground water under the direct influence of surface water, as defined in Section 611.102) and ~~that~~~~which~~ serve 1,000 or fewer people.
 - 2) Following any total coliform-positive sample taken under the provisions of this Section, the supplier must comply with the repeat monitoring requirements and E. coli analytical requirements in Section 611.1058.
 - 3) Once all monitoring required by this Section and Section 611.1058 for a calendar month has been completed, the supplier must determine whether any coliform treatment technique triggers specified in Section 611.1059 have been exceeded. If any trigger has been exceeded, the supplier must complete assessments as required by Section 611.1059.
- b) Monitoring Frequency for Total Coliforms. The monitoring frequency for total coliforms is one sample per month, except as provided for under subsections (c) through (f).
- c) Transition to Subpart AA. The Agency must perform a special monitoring evaluation during each sanitary survey to review the status of the supplier's system, including the distribution system, to determine whether the system is on an appropriate monitoring schedule. After the Agency has performed the special monitoring evaluation during each sanitary survey, the Agency may, by a SEP issued under Section 611.110, modify the supplier's monitoring schedule, as necessary. Alternatively, the Agency may allow the supplier to stay on its existing monitoring schedule, consistent with the provisions of this Section. The Agency may not allow a supplier to begin less frequent monitoring under the special monitoring evaluation unless the supplier has already met the applicable criteria for less frequent monitoring in this Section.
- d) Criteria for Reduced Monitoring
- 1) The Agency may, by a SEP, reduce the monitoring frequency from monthly monitoring to no less than quarterly monitoring if the supplier is in compliance with Agency-certified operator provisions and demonstrates that it meets the criteria in subsections (d)(1)(A) through (d)(1)(C). A supplier that loses its certified operator must return to monthly monitoring the month following that loss.
 - A) The supplier has a clean compliance history for a minimum of 12 months.

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- B) The most recent sanitary survey shows the supplier is free of sanitary defects (or has an approved plan and schedule to correct them and is in compliance with the plan and the schedule), has a protected water source, and meets Agency-approved construction standards.
 - C) The supplier meets at least one of the following criteria:
 - i) An annual site visit by the Agency that is equivalent to a Level 2 assessment or an annual Level 2 assessment by a party approved by the Agency and correction of all identified sanitary defects (or an approved plan and schedule to correct them and is in compliance with the plan and schedule).
 - ii) Cross connection control, as approved by the Agency.
 - iii) Continuous disinfection entering the distribution system and a residual in the distribution system in ~~compliance~~ ~~accordance~~ with criteria specified by the Agency.
 - iv) Demonstration of maintenance of at least a 4-log removal or inactivation of viruses as provided for under Section 611.803(b)(3).
 - v) Other equivalent enhancements to water system barriers as approved by the Agency.
 - 2) This subsection (d)(2) corresponds with 40 CFR 141.855(d)(2), which USEPA has marked "reserved". This statement maintains structural consistency with the corresponding federal provision.
 - e) Return to Routine Monthly Monitoring Requirements. A supplier on quarterly monitoring that experience any of the events in subsections (e)(1) through (e)(4) must begin monthly monitoring the month following the event. The supplier must continue monthly monitoring until it meets the reduced monitoring requirements in subsection (d).
 - 1) The supplier triggers a Level 2 assessment or two Level 1 assessments in a rolling 12-month period.
 - 2) The supplier has an E. coli MCL violation.

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- 3) The supplier has a coliform treatment technique violation.
 - 4) The supplier has two Subpart AA monitoring violations in a rolling 12-month period.
- f) Additional Routine Monitoring the Month Following a Total Coliform-Positive Sample. A supplier collecting samples on a quarterly frequency must conduct additional routine monitoring the month following one or more total coliform-positive samples (with or without a Level 1 treatment technique trigger). A supplier must collect at least three routine samples during the next month, except that the Agency may, by a SEP, waive this requirement if the conditions of subsection (f)(1), (f)(2), or (f)(3) are met. A supplier may either collect samples at regular time intervals throughout the month or may collect all required routine samples on a single day if samples are taken from different sites. A supplier must use the results of additional routine samples in coliform treatment technique trigger calculations.
- 1) The Agency may, by a SEP, waive the requirement to collect three routine samples the next month in which the supplier's system provides water to the public if the Agency, or an agent approved by the Agency, performs a site visit before the end of the next month in which the supplier's system provides water to the public. Although a sanitary survey need not be performed, the site visit must be sufficiently detailed to allow the Agency to determine whether additional monitoring or any corrective action is needed. The Agency cannot approve an employee of the supplier to perform this site visit, even if the employee is an agent approved by the Agency to perform sanitary surveys.
 - 2) The Agency may, by a SEP, waive the requirement to collect three routine samples the next month in which the supplier's system provides water to the public if the Agency has determined why the sample was total coliform-positive and has established that the supplier has corrected the problem or will correct the problem before the end of the next month in which the supplier's system serves water to the public. In this case, the Agency must document this decision to waive the following month's additional monitoring requirement in writing, have it approved and signed by the supervisor of the Agency official who recommends such a decision, and make this document available to USEPA and the public. The written documentation must describe the specific cause of the total coliform-positive sample and what action the supplier has taken or will take to correct this problem.

- 25386 3) The Agency may not waive the requirement to collect three additional
25387 routine samples the next month in which the supplier's system provides
25388 water to the public solely on the grounds that all repeat samples are total
25389 coliform-negative. If the Agency determines that the supplier has
25390 corrected the contamination problem before the supplier takes the set of
25391 repeat samples required in Section 611.1058, and all repeat samples were
25392 total coliform-negative, the Agency may, by a SEP, waive the requirement
25393 for additional routine monitoring the next month.
25394

25395 BOARD NOTE: Derived from 40 CFR 141.855.

25396 (Source: Amended at 50 Ill. Reg. _____, effective _____)
25397
25398

25399 **Section 611.1059 Coliform Treatment Technique Triggers and Assessment Requirements**
25400 **for Protection Against Potential Fecal Contamination**
25401

- 25402 a) Treatment Technique Triggers. A supplier must conduct assessments in
25403 compliance~~accordance~~ with subsection (b) after exceeding treatment technique
25404 triggers in subsections (a)(1) and (a)(2).
25405
- 25406 1) Level 1 Treatment Technique Triggers
25407
- 25408 A) For a supplier taking 40 or more samples per month, the supplier
25409 exceeds 5.0% total coliform-positive samples for the month.
25410
- 25411 B) For a supplier taking fewer than 40 samples per month, the
25412 supplier has two or more total coliform-positive samples in the
25413 same month.
25414
- 25415 C) The supplier fails to take every required repeat sample after any
25416 single total coliform-positive sample.
25417
- 25418 2) Level 2 Treatment Technique Triggers
25419
- 25420 A) An E. coli MCL violation, as specified in Section 611.1060(a).
25421
- 25422 B) A second Level 1 trigger as defined in subsection (a)(1), within a
25423 rolling 12-month period, unless the Agency, by a SEP, has
25424 determined a likely reason that the samples that caused the first
25425 Level 1 treatment technique trigger were total coliform-positive
25426 and has established that the supplier has corrected the problem.
25427

25428 C) For a supplier with approved annual monitoring, a Level 1 trigger
25429 in two consecutive years.

25430
25431 b) Requirements for Assessments

25432
25433 1) A supplier must ensure that Level 1 and Level 2 assessments are
25434 conducted in order to identify the possible presence of sanitary defects and
25435 defects in distribution system coliform monitoring practices. Level 2
25436 assessments must be conducted by parties approved by the Agency.

25437
25438 2) When conducting assessments, the supplier must ensure that the assessor
25439 evaluates minimum elements that include review and identification of
25440 inadequacies in sample sites; sampling protocol; sample processing;
25441 atypical events that could affect distributed water quality or indicate that
25442 distributed water quality was impaired; changes in distribution system
25443 maintenance and operation that could affect distributed water quality
25444 (including water storage); source and treatment considerations that bear on
25445 distributed water quality, ~~if~~where appropriate (e.g., small ground water
25446 systems); and existing water quality monitoring data. The supplier must
25447 conduct the assessment consistent with any Agency directives that tailor
25448 specific assessment elements with respect to the size and type of the
25449 system and the size, type, and characteristics of the distribution system.

25450
25451 3) Level 1 Assessments. A supplier must conduct a Level 1 assessment
25452 consistent with Agency requirements if the supplier exceeds one of the
25453 treatment technique triggers in subsection (a)(1).

25454
25455 A) The supplier must complete a Level 1 assessment as soon as
25456 practical after any trigger in subsection (a)(1). In the completed
25457 assessment form, the supplier must describe sanitary defects
25458 detected, corrective actions completed, and a proposed timetable
25459 for any corrective actions not already completed. The assessment
25460 form may also note that no sanitary defects were identified. The
25461 supplier must submit the completed Level 1 assessment form to the
25462 Agency within 30 days after the supplier learns that it has
25463 exceeded a trigger.

25464
25465 B) If the Agency reviews the completed Level 1 assessment and
25466 determines that the assessment is not sufficient (including any
25467 proposed timetable for any corrective actions not already
25468 completed), the Agency must consult with the supplier. If the
25469 Agency, by a SEP, requires revisions after consultation, the
25470 supplier must submit a revised assessment form to the Agency on

- 25471 an agreed-upon schedule not to exceed 30 days from the date of the
25472 consultation.
25473
- 25474 C) Upon completion and submission of the assessment form by the
25475 supplier, the Agency must determine if the supplier has identified a
25476 likely cause for the Level 1 trigger and, if so, establish that the
25477 supplier has corrected the problem, or has included a schedule
25478 acceptable to the Agency for correcting the problem.
25479
- 25480 4) Level 2 Assessments. A supplier must ensure that a Level 2 assessment
25481 consistent with Agency requirements is conducted if the supplier exceeds
25482 one of the treatment technique triggers in subsection (a)(2). The supplier
25483 must comply with any expedited actions or additional actions required by
25484 the Agency, by a SEP, in the case of an E. coli MCL violation.
25485
- 25486 A) The supplier must ensure that a Level 2 assessment is completed
25487 by the Agency or by a party approved by the Agency as soon as
25488 practical after any trigger in subsection (a)(2). The supplier must
25489 submit a completed Level 2 assessment form to the Agency within
25490 30 days after the supplier learns that it has exceeded a trigger. The
25491 assessment form must describe sanitary defects detected, corrective
25492 actions completed, and a proposed timetable for any corrective
25493 actions not already completed. The assessment form may also note
25494 that no sanitary defects were identified.
25495
- 25496 B) The supplier may conduct Level 2 assessments if the supplier has
25497 staff or management with the certification or qualifications
25498 specified by the Agency unless otherwise directed by the Agency,
25499 by a SEP.
25500
- 25501 C) If the Agency reviews the completed Level 2 assessment and
25502 determines that the assessment is not sufficient (including any
25503 proposed timetable for any corrective actions not already
25504 completed), the Agency must consult with the system. If the
25505 Agency requires revisions after consultation, the supplier must
25506 submit a revised assessment form to the Agency on an agreed-upon
25507 schedule not to exceed 30 days.
25508
- 25509 D) Upon completion and submission of the assessment form by the
25510 supplier, the Agency must determine if the system has identified a
25511 likely cause for the Level 2 trigger and determine whether the
25512 supplier has corrected the problem, or has included a schedule
25513 acceptable to the Agency for correcting the problem.

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- c) Corrective Action. A supplier must correct sanitary defects found through either Level 1 or 2 assessments conducted under subsection (b). For corrections not completed by the time of submission of the assessment form, the supplier must complete the corrective actions in compliance with a timetable approved by the Agency, by a SEP, in consultation with the supplier. The supplier must notify the Agency when each scheduled corrective action is completed.
- d) Consultation. At any time during the assessment or corrective action phase, either the water supplier or the Agency may request a consultation with the other party to determine the appropriate actions to be taken. The supplier may consult with the Agency on all relevant information that may impact on its ability to comply with a requirement of this Subpart AA, including the method of accomplishment, an appropriate timeframe, and other relevant information.

BOARD NOTE: Derived from 40 CFR 141.859.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

Section 611.1061 Reporting and Recordkeeping

- a) Reporting
 - 1) E. coli
 - A) A supplier must notify the Agency by the end of the day when the system learns of an E. coli MCL violation, unless the supplier learns of the violation after the Agency office is closed and the Agency does not have either an after-hours phone line or an alternative notification procedure, in which case the supplier must notify the Agency before the end of the next business day, and the supplier notifies the public in compliance~~accordance~~ with Subpart V.
 - B) A supplier must notify the Agency by the end of the day when the supplier is notified of an E. coli-positive routine sample, unless the supplier is notified of the result after the Agency office is closed and the Agency does not have either an after-hours phone line or an alternative notification procedure, in which case the supplier must notify the Agency before the end of the next business day.
 - 2) A supplier that has violated the treatment technique for coliforms in Section 611.1059 must report the violation to the Agency no later than the

25557 end of the next business day after it learns of the violation, and notify the
25558 public in compliance ~~accordance~~ with Subpart V.

25559
25560 3) A supplier required to conduct an assessment under the provisions of
25561 Section 611.1059 must submit the assessment report within 30 days. The
25562 supplier must notify the Agency in compliance ~~accordance~~ with Section
25563 611.1059(c) when each scheduled corrective action is completed for
25564 corrections not completed by the time of submission of the assessment
25565 form.

25566
25567 4) A supplier that has failed to comply with a coliform monitoring
25568 requirement must report the monitoring violation to the Agency within ten
25569 days after the supplier discovers the violation, and notify the public in
25570 compliance ~~accordance~~ with Subpart V.

25571
25572 5) A seasonal system supplier must certify, prior to serving water to the
25573 public, that it has complied with the Agency-approved start-up procedure.

25574
25575 b) Recordkeeping

25576
25577 1) The supplier must maintain any assessment form, regardless of who
25578 conducts the assessment, and documentation of corrective actions
25579 completed as a result of those assessments, or other available summary
25580 documentation of the sanitary defects and corrective actions taken under
25581 Section 611.1059 for Agency review. This record must be maintained by
25582 the supplier for a period not less than five years after completion of the
25583 assessment or corrective action.

25584
25585 2) The supplier must maintain a record of any repeat sample taken that meets
25586 Agency criteria for an extension of the 24-hour period for collecting repeat
25587 samples as provided for under Section 611.1058(a)(1).

25588
25589 BOARD NOTE: Derived from 40 CFR 141.861.

25590
25591 (Source: Amended at 50 Ill. Reg. _____, effective _____)

25592
25593 SUBPART AG: INTERIM LEAD AND COPPER RULES

25594
25595 **Section 611.1350 General Requirements**

25596
25597 a) Applicability and Scope
25598

- 25599 1) Applicability and Complying with this Subpart AG. Subpart G and this
25600 Subpart AG constitute NPDWRs for lead and copper. Subpart G and this
25601 Subpart AG apply to all community water systems (CWSs) and non-
25602 transient, non-community water systems (NTNCWSs).
25603
25604 A) A supplier must comply with this Subpart AG until the earlier of
25605 when the supplier complies with Subpart AG or October 16, 2024.
25606
25607 B) If the Agency issued a SEP prior to December 16, 2021, exempting
25608 a supplier under any rule in former Subpart G (now this Subpart
25609 AG), the supplier must comply with this Subpart AG until that SEP
25610 expires.
25611
25612 C) The Agency may issue a SEP requiring a supplier to comply with
25613 specified rules in Subpart G before Section 611.350(a)(1)(A) or
25614 (a)(1)(B) otherwise requires or as necessary to address issues in a
25615 notice the Agency received from USEPA under 40 CFR 142.23 or
25616 142.30. The SEP must specify the rules in Subpart G with which
25617 the supplier must comply and their counterparts in this Subpart AG
25618 with which the supplier needs no longer comply. The supplier
25619 must comply with the SEP-specified Subpart G rules in lieu of
25620 their counterparts in this Subpart AG.
25621
25622 D) Relationship Between Subpart G and Subpart AG Rules
25623
25624 i) The rules in this Subpart AG are based on Subpart G as it
25625 existed on December 16, 2021, the effective date of
25626 USEPA's Lead and Copper Rule Revisions.
25627
25628 ii) Each rule in this Subpart AG corresponds with a rule in
25629 Subpart G by adding the digit "1" immediately after "611."
25630 in the Section number. Removing that "1" from the Section
25631 number of a rule in this Subpart AG gives the
25632 corresponding rule in Subpart G.
25633
25634 iii) Any action under a rule that was in Subpart G before
25635 December 16, 2021, satisfies the corresponding rule in this
25636 Subpart AG.
25637
25638 BOARD NOTE: USEPA's LCRR apply to all suppliers on December 16,
25639 2021. However, USEPA delays requiring compliance with LCRR until
25640 October 16, 2024, when any previously granted exemption expires, or as
25641 provided otherwise by any of several specified rules for corrosion control

25642 treatment; lead service line replacement; public education, supplemental
25643 monitoring, and mitigation; monitoring; and reporting (corresponding with
25644 35 Ill. Adm. Code 611.351, 611.354, 611.355, 611.356, or 611.360). Until
25645 a supplier must comply with the LCRR, USEPA requires the supplier to
25646 comply with subpart I of 40 CFR 141 (2020). This requires the Board to
25647 codify two versions of the Lead and Copper Rule: one in this Subpart AG,
25648 representing the Lead and Copper Rules prior to the LCRR (40 CFR 141
25649 (2020)), and the other in Subpart G, representing 40 CFR 141
25650 incorporating the LCRR.

25651
25652 2) Scope. This Subpart G establishes a treatment technique including
25653 corrosion control treatment, source water treatment, lead service line
25654 replacement, and public education. Lead and copper action levels the
25655 supplier measures in samples collected at consumers' taps trigger some of
25656 these requirements.

25657
25658 b) Definitions. For this Subpart AG only, this subsection (b) defines certain terms:
25659

25660 "Action level" means the computed concentration of lead or copper in
25661 water under subsection (c) determining applicability of some treatment
25662 requirements under this Subpart AG. The action level for lead is 0.015
25663 mg/L. The action level for copper is 1.3 mg/L.

25664
25665 "Corrosion inhibitor" means a substance that can reduce corrosivity of
25666 water toward metal plumbing materials, especially lead and copper, by
25667 forming a protective film on the interior surface of those materials.

25668
25669 "Effective corrosion inhibitor residual" means a concentration of corrosion
25670 inhibitor in the drinking water sufficient to form a passivating film on the
25671 interior walls of pipe.

25672
25673 "Exceed" or "exceedance", relative to either the lead or the copper action
25674 level, means that the 90th percentile level of the samples the supplier
25675 collected during a six-month monitoring period is greater than the lead or
25676 copper action level.

25677
25678 "~~First-liter sample~~~~First-draw tap sample~~" means a one-liter sample of tap
25679 water, a supplier collects under Section 611.1356(b)(2), that stood in
25680 plumbing pipes for at least six hours and the supplier collects without
25681 flushing the tap.

25682
25683 "Large system" means a water system regularly serving water to more
25684 than 50,000 persons.

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"Lead service line" means a service line made of lead connecting the water main to the building inlet, including any lead pigtail, gooseneck, or other fitting that is connected to such lead line.

"Maximum permissible concentration" or "MPC" means the concentration of lead or copper in finished water entering the supplier's distribution system, which the Agency designates in a SEP based on the contaminant removal ability of the treatment properly operated and maintained.

BOARD NOTE: This definition derives from 40 CFR 141.83(b)(4) (2020). (See Section 611.1353(b)(4)(B).)

"Medium-sized water system" means a water system regularly serving water to 3,301 to 50,000 persons.

"Meet" or "comply with", relating to either the lead or the copper action level, means that the 90th percentile level of the supplier's samples collected during a six-month monitoring period is less than or equal to the lead or copper action level.

"Monitoring period" means any of the six-month periods during which a supplier must complete a cycle of monitoring under this Subpart AG.

"Multiple-family residence" means a building that is currently used as a multiple-family residence, but not one that is also a "single-family structure".

"90th percentile level" means the concentration of lead or copper that ten percent or fewer of all samples tap water samples under Section 611.1356 exceed during a six-month monitoring period (i.e., that contaminant concentration greater than or equal to the results obtained from 90 percent of the samples). The supplier must determine the 90th percentile levels for copper and lead under subsection (c)(3).

BOARD NOTE: This definition derives from 40 CFR 141.80(c) (2020).

"Optimal corrosion control treatment" means the corrosion control treatment minimizing the lead and copper concentrations at users' taps while ensuring that the treatment will not violate any national primary drinking water regulations.

25727 "Practical quantitation limit" or "PQL" means the lowest concentration of
25728 a contaminant that a well-operated laboratory can reliably analyze within
25729 specified limits of precision and accuracy during routine laboratory
25730 operating conditions. The PQL for lead is 0.005 mg/L. The PQL for
25731 copper is 0.050 mg/L.

25732
25733 BOARD NOTE: This definition derives from 40 CFR 141.89(a)(1)(ii)
25734 and (a)(1)(iv) (2020).

25735
25736 "Service line sample" means a one-liter sample of water under Section
25737 611.1356(b)(3) that stood for at least six hours in a service line.

25738
25739 "Single-family structure" means a building constructed as a residence for a
25740 single-family that the occupant currently uses as a residence or place of
25741 business.

25742
25743 "Small system" means a water system regularly serving water to 3,300 or
25744 fewer persons.

25745 BOARD NOTE: A small system for purposes of a small system variance
25746 under Section 611.131 is distinct from small-sized water system under this
25747 Subpart AG.

25748
25749 BOARD NOTE: This subsection (b) derives from 40 CFR 141.2 (2020).

25750

25751 c) Lead and Copper Action Levels

25752

25753 1) The supplier exceeds the lead action level if the 90th percentile lead level
25754 is greater than 0.015 mg/L.

25755

25756 2) The supplier exceeds the copper action level if the 90th percentile copper
25757 level is greater than 1.3 mg/L.

25758

25759 3) Suppliers must compute the 90th percentile lead and copper levels using
25760 the specified procedure:

25761

25762 A) The supplier must list the results of all lead or copper samples it
25763 took during the six-month monitoring period in ascending order,
25764 ranging from the sample with the lowest concentration to the
25765 sample with the highest concentration. The supplier must assign
25766 each sampling result an ordinal number, ascending by single
25767 integers, assigning the number 1 for the sample with the lowest
25768 contaminant level. The number the supplier assigns to the sample

- 25769 with the highest contaminant level must equal the total number of
25770 samples the supplier took.
25771
- 25772 B) To determine the 90th percentile sample, the supplier must multiply
25773 the total number of samples taken during the six-month monitoring
25774 period times 0.9.
25775
- 25776 C) The contaminant concentration in the sample corresponding with
25777 the ordinal number calculating under subsection (c)(3)(B) yields is
25778 the 90th percentile contaminant level.
25779
- 25780 D) For a supplier collecting five samples per six-month monitoring
25781 period, the 90th percentile is the average of the highest and second
25782 highest concentrations.
25783
- 25784 E) For a supplier the Agency allows to collect fewer than five samples
25785 under Section 611.1356(c), the result for the sample with the
25786 highest concentration is the 90th percentile value.
25787
- 25788 d) Corrosion Control Treatment Requirements
25789
- 25790 1) Every supplier must install and operate optimal corrosion control
25791 treatment.
25792
- 25793 2) Any supplier complying with the applicable corrosion control treatment
25794 requirements the Agency specifies under Sections 611.1351 and 611.1352
25795 is deemed as complying with subsection (d)(1).
25796
- 25797 e) Source Water Treatment Requirements. Any supplier whose system exceeds the
25798 lead or copper action level must implement all applicable source water treatment
25799 requirements the Agency specifies under Section 611.1353.
25800
- 25801 f) Lead Service Line Replacement Requirements. Any supplier whose system
25802 exceeds the lead action level after implementing applicable corrosion control and
25803 source water treatment must complete the lead service line replacement under
25804 Section 611.1354.
25805
- 25806 g) Public Education Requirements. Under Section 611.1355, the supplier must
25807 provide a consumer notice of the lead tap water monitoring results to the persons
25808 served at each tested site (tap). Any supplier exceeding the lead action level must
25809 implement the public education requirements.
25810

- 25811 h) Monitoring and Analytical Requirements. A supplier must complete all tap water
25812 monitoring for lead and copper, monitoring for water quality parameters, and
25813 source water monitoring for lead and copper and analyze the monitoring results
25814 under this Subpart AG as Sections 611.1356, 611.1357, 611.1358, and 611.1359
25815 require.
25816
- 25817 i) Reporting Requirements. A supplier must report any information the treatment
25818 provisions of this Subpart AG and Section 611.1360 require to the Agency.
25819
- 25820 j) Recordkeeping Requirements. A supplier must maintain records as Section
25821 611.1361 requires.
25822
- 25823 k) Violation of National Primary Drinking Water Regulations. Failing to comply
25824 with this Subpart AG, including conditions the Agency imposes in a SEP, violates
25825 the lead or copper NPDWRs.
25826
- 25827 BOARD NOTE: This Section corresponds with Section 611.1350 and derives
25828 from 40 CFR 141.80 (2020).
25829

25830 (Source: Amended at 50 Ill. Reg. _____, effective _____)
25831

25832 **Section 611.1351 Applicability of Corrosion Control**
25833

- 25834 a) Corrosion Control Required. A supplier must complete the applicable corrosion
25835 control treatment under Section 611.1352 ~~by on or before~~ the deadlines in this
25836 Section.
25837
- 25838 1) Large Systems. Each large system supplier (one regularly serving more
25839 than 50,000 persons) must complete the corrosion control treatment steps
25840 subsection (d) specifies, unless subsection (b)(2) or (b)(3) deems the
25841 supplier to have optimized corrosion control.
25842
- 25843 2) Small and Medium-Sized Systems. Each small system supplier (one
25844 regularly serving 3,300 or fewer persons) and each medium-sized water
25845 system (one regularly serving 3,301 to 50,000 persons) must complete the
25846 corrosion control treatment steps subsection (e) specifies, unless
25847 subsection (b)(1), (b)(2), or (b)(3) deems the supplier to have optimized
25848 corrosion control.
25849
- 25850 b) Suppliers Deemed to Have Optimized Corrosion Control. Subsection (b)(1),
25851 (b)(2), or (b)(3) deems a supplier to have optimized corrosion control treatment if
25852 the supplier satisfies the criterion the subsection specifies, freeing the supplier
25853 from the obligation to complete the applicable corrosion control treatment steps in

25854 this Section. Any system subsection (b)(1), (b)(2), or (b)(3) deems to have
25855 optimized corrosion control having treatment in place must continue operating
25856 and maintaining optimal corrosion control treatment and meeting any
25857 requirements the Agency determines are appropriate to ensure that the supplier
25858 maintains optimal corrosion control treatment.
25859

- 25860 1) Small and Medium-Sized Systems Meeting Action Levels. Meeting the
25861 lead and copper action levels during each of two consecutive six-month
25862 monitoring periods under Section 611.1356 deems a small or medium-
25863 sized system supplier to have optimized corrosion control.
25864
- 25865 2) SEP for Activities Equivalent to Corrosion Control. The Agency must
25866 issue a SEP deeming a supplier to have optimized corrosion control
25867 treatment upon determining that the supplier conducts activities equivalent
25868 to the corrosion control steps under this Section. In making this
25869 determination, the Agency must specify the water quality control
25870 parameters representing optimal corrosion control under Section
25871 611.1352(f). A water supplier the Agency deems as having optimized
25872 corrosion control under this subsection (b)(2) must operate in compliance
25873 with the Agency-designated optimal water quality control parameters
25874 under Section 611.1352(g) and must continue to conduct lead and copper
25875 tap and water quality parameter sampling under Sections 611.1356(d)(3)
25876 and 611.1357(d). A supplier must provide the Agency with the following
25877 information to support the Agency issuing a SEP under this subsection
25878 (b)(2):
25879
- 25880 A) The results of all test samples the supplier collected for each of the
25881 water quality parameters in Section 611.1352(c)(3);
25882
- 25883 B) A report explaining the test methods the supplier used to evaluate
25884 the corrosion control treatments in Section 611.1352(c)(1), the
25885 results of all tests conducted, and the basis for the supplier
25886 selecting the optimal corrosion control treatment;
25887
- 25888 C) A report explaining how the supplier installed corrosion control
25889 and how the supplier maintains the corrosion control to insure
25890 minimal lead and copper concentrations at consumers' taps; and
25891
- 25892 D) The results of tap water samples the supplier collected under
25893 Section 611.1356 at least once every six months for one year after
25894 the supplier installed corrosion control.
25895

- 25896 3) Results Less Than Practical Quantitation Level (PQL) for Lead.
25897 Monitoring results deem supplier to have optimized corrosion control if
25898 the supplier submits results of tap water monitoring under Section
25899 611.1356 and source water monitoring under Section 611.1358
25900 demonstrating that for two consecutive six-month monitoring periods the
25901 difference between the 90th percentile tap water lead level, computed
25902 under Section 611.1350(c)(3), and the highest source water lead
25903 concentration is less than the PQL that Section 611.1359(a)(2)(A)
25904 specifies.
25905
- 25906 A) Having a highest source water lead level below the MDL deems a
25907 supplier to have optimized corrosion control under this subsection
25908 (b)(3) if the 90th percentile tap water lead level is less than or
25909 equal to the lead PQL for two consecutive six-month monitoring
25910 periods.
25911
- 25912 B) Any supplier this subsection (b)(3) deems to have optimized
25913 corrosion control must continue tap water monitoring for lead and
25914 copper no less frequently than once every three calendar years
25915 using the reduced number of sites Section 611.1356(c) specifies
25916 and collecting the samples at times and locations Section
25917 611.1356(d)(4)(D) specifies.
25918
- 25919 C) Any supplier this subsection (b)(3) deems to have optimized
25920 corrosion control must notify the Agency in writing under Section
25921 611.1360(a)(3) of any upcoming long-term change in treatment or
25922 the addition of a new source, as that Section describes. The
25923 Agency must review and approve the addition of a new source or
25924 any long-term change in water treatment before the supplier adds
25925 the source or implements the long-term change.
25926
- 25927 D) A supplier is not deemed to have optimized corrosion control
25928 under this subsection (b)(3) and must implement corrosion control
25929 treatment under subsection (b)(3)(E), unless the supplier meets the
25930 copper action level.
25931
- 25932 E) Any supplier this subsection (b)(3) no longer deems to have
25933 optimized corrosion control must implement corrosion control
25934 treatment under subsection (e). Any large system supplier this
25935 subsection (b)(3) no longer deems to have optimized corrosion
25936 control must adhere to the schedule that subsection (e) specifies for
25937 a medium-sized water system supplier, with the time periods for
25938 completing each step being triggered by the date the supplier is no

25939 longer deemed to have optimized corrosion control under this
25940 subsection (b)(3).

25941
25942 c) Suppliers Not Required to Complete Corrosion Control Steps for Having Met
25943 Both Action Levels

25944
25945 1) Any small or medium-sized water system supplier, otherwise required to
25946 complete the corrosion control steps because it exceeded the lead or
25947 copper action level, may cease completing the treatment steps after
25948 fulfilling specific conditions:

25949
25950 A) The supplier meets both the copper and lead action levels during
25951 each of two consecutive six-month monitoring periods under
25952 Section 611.1356; and

25953
25954 B) The supplier submits the results for those two consecutive six-
25955 month monitoring periods to the Agency.

25956
25957 2) A supplier that ceases completing the corrosion control steps under
25958 subsection (c)(1) (or the Agency, if appropriate) must resume completion
25959 of the applicable treatment steps, beginning with the first treatment step
25960 that the supplier previously did not complete in its entirety, if the supplier
25961 ~~thereafter~~ exceeds the lead or copper action level during any monitoring
25962 period.

25963
25964 3) The Agency may issue a SEP requiring a supplier to repeat treatment steps
25965 the supplier previously completed if the Agency determines that this is
25966 necessary to properly implement the treatment requirements of this
25967 Section. The Agency must explain the basis for its decision in any SEP.

25968
25969 4) A small or medium-sized water system supplier exceeding the lead or
25970 copper action level triggers the requirement to implement corrosion
25971 control treatment steps under subsection (e) (including systems deemed to
25972 have optimized corrosion control under subsection (b)(1)).

25973
25974 d) Treatment Steps for Large Systems. Except as subsections (b)(2) and (b)(3)
25975 provide otherwise, a large system must complete certain corrosion control
25976 treatment steps as specific rules provide).

25977
25978 1) Step 1: Initial monitoring during two consecutive six-month monitoring
25979 periods (under Sections 611.1356(d)(1) and 611.1357(b)).

25980
25981 2) Step 2: Corrosion control studies (under Section 611.1352(c)).

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- 3) Step 3: The Agency approving optimal corrosion control treatment in a SEP (under Section 611.1352(d)).
 - 4) Step 4: Installing optimal corrosion control treatment (under Section 611.1352(e)).
 - 5) Step 5: Completing follow-up sampling (under Sections 611.1356(d)(2) and 611.1357(c)).
 - 6) Step 6: The Agency reviewing installed treatment and approving optimal water quality control parameters (under Section 611.1352(f)).
 - 7) Step 7: Complying with the Agency-specified optimal water quality control parameters (under Section 611.1352(g)) and continuing tap sampling (under Sections 611.1356(d)(3) and 611.1357(d)).
- e) Treatment Steps and Deadlines for Small and Medium-Sized Water Systems. Except as subsection (b) provides otherwise, a small and medium-sized system supplier must complete certain corrosion control treatment steps as specific rules provide before the indicated time periods.
- 1) Step 1: The supplier must conduct initial tap sampling (under Sections 611.1356(d)(1) and 611.1357(b)) until the supplier either exceeds the lead or copper action level or becomes eligible for reduced monitoring under Section 611.1356(d)(4). A supplier exceeding the lead or copper action level must recommend optimal corrosion control treatment (under Section 611.1352(a)) within six months after the end of the monitoring period during which the exceedance occurred.
 - 2) Step 2: Within 12 months after the end of the monitoring period during which a supplier exceeds the lead or copper action level, the Agency may require the supplier to perform corrosion control studies (under Section 611.1352(b)). If the Agency does not require the supplier to perform corrosion control studies, the Agency must issue a SEP specifying optimal corrosion control treatment (under Section 611.1352(d)) within the appropriate of specific timeframes:
 - A) For a medium-sized water system, within 18 months after the end of the monitoring period during which the supplier exceeded the lead or copper action level; or

- 26024 B) For a small system, within 24 months after the end of the
26025 monitoring period during which the supplier exceeded the lead or
26026 copper action level.
- 26027
- 26028 3) Step 3: If the Agency requires a supplier to perform corrosion control
26029 studies under step 2 (subsection (e)(2)), the supplier must complete the
26030 studies (under Section 611.1352(c)) within 18 months after the Agency
26031 requires the supplier to conduct the studies.
- 26032
- 26033 4) Step 4: If a supplier performs corrosion control studies under step 2
26034 (subsection (e)(2)), the Agency must issue a SEP approving optimal
26035 corrosion control treatment (under Section 611.1352(d)) within six months
26036 after the supplier completes step 3 (under subsection (e)(3)).
- 26037
- 26038 5) Step 5: The supplier must install optimal corrosion control treatment
26039 (under Section 611.1352(e)) within 24 months after the Agency approves
26040 that treatment.
- 26041
- 26042 6) Step 6: The supplier must complete follow-up sampling (under Sections
26043 611.1356(d)(2) and 611.1357(c)) within 36 months after the Agency
26044 approves optimal corrosion control treatment.
- 26045
- 26046 7) Step 7: The Agency must review the supplier's installation of treatment
26047 and issue a SEP approving optimal water quality control parameters
26048 (under Section 611.1352(f)) within six months after the supplier completes
26049 step 6 (under subsection (e)(6)).
- 26050
- 26051 8) Step 8: The supplier must comply with the Agency-approved optimal
26052 water quality control parameters (under Section 611.1352(g)) and continue
26053 tap sampling (under Sections 611.1356(d)(3) and 611.1357(d)).
- 26054

26055 BOARD NOTE: This Section corresponds with Section 611.1351 and derives from 40 CFR
26056 141.81 (2020).

26057 (Source: Amended at 50 Ill. Reg. _____, effective _____)

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26059

26060 **Section 611.1353 Source Water Treatment**

26061

26062 A supplier must complete source water monitoring and treatment requirements (under subsection
26063 (b) and Sections 611.1356 and 611.1358) before specific deadlines.

- 26064
- 26065 a) Deadlines for Completing Source Water Treatment Steps
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- 1) Step 1: A supplier exceeding the lead or copper action level must complete lead and copper and source water monitoring (under Section 611.1358(b)) and recommend treatment to the Agency (under subsection (b)(1)) within 180 days after the end of the tap monitoring period during which the supplier exceeded the action level.
 - 2) Step 2: The Agency must issue a SEP determining source water treatment (under subsection (b)(2)) within six months after the supplier submits monitoring results under step 1.
 - 3) Step 3: If the Agency requires installing source water treatment, the supplier must install that treatment (under subsection (b)(3)) within 24 months after the Agency completes step 2.
 - 4) Step 4: The supplier must complete follow-up tap water monitoring (under Section 611.1356(d)(2)) and source water monitoring (under Section 611.1358(c)) within 36 months after completion of step 2.
 - 5) Step 5: The Agency must issue a SEP reviewing the supplier's installation and operation of source water treatment and specify MPCs for lead and copper (under subsection (b)(4)) within six months after the Agency completes step 4.
 - 6) Step 6: The supplier must comply with the Agency-specified lead and copper MPCs (under subsection (b)(4)) and continue source water monitoring (under Section 611.1358(d)).
- b) Source Water Treatment Requirements
- 1) System Treatment Recommendation. Any supplier exceeding the lead or copper action level must recommend to the Agency in writing one of the source water treatments in subsection (b)(2). A supplier may recommend installing no treatment based on a demonstration that source water treatment is not necessary to minimize lead and copper levels at users' taps.
 - 2) Agency Determination Regarding Source Water Treatment
 - A) The Agency must evaluate the results of all source water samples the supplier submitted to determine whether source water treatment is necessary to minimize lead or copper levels in water the supplier delivers to users' taps.

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- B) If the Agency determines treatment necessary, the Agency must issue a SEP requiring the supplier to install and operate either the source water treatment the supplier recommended (if any) or another from among specific source water treatment techniques:
 - i) ion exchange;
 - ii) reverse osmosis;
 - iii) lime softening; or
 - iv) coagulation/filtration.
 - C) The Agency may require the supplier to submit, ~~by~~~~on or before~~ a certain date, any additional information as the Agency determines is necessary to aid its review.
 - D) The Agency must notify the supplier in writing of its determination, stating the basis for its decision.
- 3) Installing Source Water Treatment. A supplier must properly install and operate the source water treatment the Agency approves under subsection (b)(2).
- 4) Agency Reviewing Source Water Treatment and Specifying Maximum Permissible Source Water Levels (MPCs)
- A) The Agency must review the source water samples the supplier took both before and after the supplier installs source water treatment and determine whether the supplier properly installs and operates the approved source water treatment.
 - B) Based on its review, the Agency must issue a SEP approving the lead and copper MPCs for finished water entering the supplier's distribution system. The MPC levels must reflect the contaminant removal capability of the treatment when properly operated and maintained.
 - C) The Agency must explain the basis for its decision under subsection (b)(4)(B).
- 5) Continued Operation and Maintenance. A supplier must maintain lead and copper levels below the MPCs the Agency approved at every

26153 sampling point the supplier monitors under Section 611.1358. The
26154 supplier does not comply with this subsection (b) if the level of lead or
26155 copper at any sampling point is greater than the MPC the Agency
26156 approved under subsection (b)(4)(B).
26157

26158 6) Modifying Agency Treatment Decisions
26159

26160 A) On its own initiative, or in response to a request by the supplier,
26161 the Agency may issue a SEP modifying its determination of the
26162 source water treatment under subsection (b)(2) or the lead and
26163 copper MPCs under subsection (b)(4).
26164

26165 B) A supplier must make a request to modify in writing, explaining
26166 the propriety of the modification, and providing supporting
26167 documentation.
26168

26169 C) The Agency may issue a SEP modifying its determination if it
26170 concludes that the change is necessary to ensure that the supplier
26171 continues minimizing lead and copper concentrations in source
26172 water.
26173

26174 D) A revised determination under subsection (b)(6)(C) must state the
26175 new treatment requirements, explain the basis for the Agency's
26176 decision, and provide a schedule for completing the treatment
26177 modifications.
26178

26179 E) Any interested person may submit information to the Agency in
26180 writing bearing on whether the Agency should exercise its
26181 discretion and issue a SEP modifying its determination under
26182 subsection (b)(2). An Agency determination not to act on
26183 information an interested person submits is not an Agency
26184 determination for the purposes of Sections 39 and 40 of the Act.
26185

26186 7) USEPA Treatment Decisions. Under 40 CFR 142.19, USEPA reserves
26187 the prerogative to review Agency treatment determinations under
26188 subsections (b)(2), (b)(4), or (b)(6) and issue federal treatment
26189 determinations consistent with 40 CFR 141.83(b)(2), (b)(4), and (b)(6)
26190 (2020) if USEPA finds that certain conditions exist:
26191

26192 A) the Agency fails to issue a treatment determination by the
26193 applicable deadline in subsection (a);
26194

- 26195 B) the Agency abuses its discretion in a substantial number of
- 26196 instances or in instances affecting a substantial population; or
- 26197
- 26198 C) the technical aspects of the Agency's determination would be
- 26199 indefensible in a federal enforcement action taken against the
- 26200 supplier.
- 26201

26202 BOARD NOTE: This Section corresponds with Section 611.1353 and derives from 40 CFR
26203 141.83 (2020).

26204 (Source: Amended at 50 Ill. Reg. _____, effective _____)

26207 **Section 611.1354 Lead Service Line Replacement**

26208

26209 a) Suppliers That Must Replace Lead Service Lines

- 26210
- 26211 1) If the results from tap samples the supplier took under Section
- 26212 611.1356(d)(2) exceed the lead action level after the supplier installs
- 26213 corrosion control or source water treatment (whichever sampling occurs
- 26214 later), the supplier must recommence replacing lead service lines under
- 26215 subsection (b).
- 26216
- 26217 2) If a supplier violates Section 611.1351 or 611.1353 by failing to install
- 26218 source water or corrosion control treatment, the Agency may issue a SEP
- 26219 requiring the supplier to begin lead service line replacement under this
- 26220 Section after the date when Section 611.1356(d)(2) required the supplier
- 26221 to conduct monitoring.
- 26222

26223 b) Annually Replacing Lead Service Lines

26224

26225 1) Initiating a Lead Service Line Replacement Program

- 26226
- 26227 A) A supplier that subsection (a) requires to begin replacing lead
- 26228 service lines must annually replace at least seven percent of the
- 26229 initial number of lead service lines in its distribution system.
- 26230
- 26231 B) The initial number of lead service lines in a distribution system is
- 26232 the number of lead lines in place when the supplier begins its
- 26233 replacement program.
- 26234
- 26235 C) The supplier must identify the initial number of lead service lines
- 26236 in its distribution system, indicating the portions of the system the
- 26237 supplier owns, based on a materials evaluation, including the

- 26238 evaluation Section 611.1356(a) requires and relevant legal
26239 authorities (e.g., contracts, local ordinances, etc.) regarding the
26240 portion the supplier owns.
26241
- 26242 D) The first year of lead service line replacement must begin on the
26243 first day after the end of the monitoring period during which the
26244 supplier exceeded the action level under subsection (a).
26245
- 26246 E) If the supplier must monitor annually or less frequently, the end of
26247 the monitoring period is September 30 of the calendar year in
26248 which the supplier took the sample exceeding the action level.
26249
- 26250 F) If the Agency establishes an alternative monitoring period in a
26251 SEP, the end of the monitoring period is the last day of that period.
26252
- 26253 2) Resuming a Lead Service Line Replacement Program after Cessation
26254
- 26255 A) A supplier resuming after ceasing its lead service line replacement
26256 program, as subsection (f) allows, must update its remaining lead
26257 service lines inventory to include the sites the supplier previously
26258 determined did not require replacement under subsection (c).
26259
- 26260 B) The supplier must divide its updated remaining lead service lines
26261 inventory by the number of remaining years in the program to
26262 determine the number of lines that the supplier must replace each
26263 year. (Seven percent lead service line replacement is based on a
26264 15-year replacement program, so that, for example, a supplier
26265 resuming lead service line replacement after previously conducting
26266 two years of replacement would divide its updated inventory by
26267 13.)
26268
- 26269 C) For a supplier completing a 15-year lead service line replacement
26270 program, the Agency must issue a SEP determining a schedule for
26271 replacing or retesting lines under the completed program that the
26272 supplier previously tested, whenever the supplier re-exceeds the
26273 action level.
26274
- 26275 c) Service Lines Not Needing Replacement. A supplier is not required to replace
26276 any individual lead service line for which the lead concentrations in all tap
26277 samples taken under Section 611.1356(b)(3) are less than or equal to the lead
26278 action level (0.015 mg/L).
26279

- 26280 d) A water supplier must replace that portion of the lead service line that it owns. If
26281 the supplier does not own the entire lead service line, the supplier must notify the
26282 owner of the line, or the owner's authorized agent, that the supplier will replace
26283 the portion of the service line that it owns and offer to replace the owner's portion
26284 of the line at the owner's expense. A supplier needs not bear the cost of replacing
26285 the privately-owned portion of the service line, nor needs the supplier replace the
26286 privately-owned portion of the service line if the owner chooses not to pay the
26287 cost of replacing that portion of the line or if State, local, or common law
26288 precludes replacing the privately-owned portion of the line. A water supplier that
26289 does not replace the entire length of the service line also must complete certain
26290 tasks:
- 26291
- 26292 1) Notice Prior to Beginning Work
- 26293
- 26294 A) At least 45 days prior to beginning partial replacement of a lead
26295 service line, the water supplier must notify the residents of all
26296 buildings the line serves explaining that the residents may
26297 experience a temporary increase of lead levels in their drinking
26298 water, along with guidance on measures consumers can take to
26299 minimize their exposure to lead.
- 26300
- 26301 B) The Agency may issue a SEP allowing the water supplier to
26302 provide notice under the previous sentence less than 45 days before
26303 beginning partial ~~lead~~-service line replacement if the Agency
26304 determines that the replacement is together with emergency
26305 repairs.
- 26306
- 26307 C) The supplier must also inform the residents the line serves that the
26308 supplier will, at the supplier's expense, collect a representative
26309 sample of the water from the partially replaced service line for
26310 analysis of lead content, as Section 611.1356(b)(3) requires, within
26311 72 hours after partially replacing the service line. The supplier
26312 must collect the sample and report the results of the analysis to the
26313 owner and the residents the line serves within three business days
26314 after receiving the results.
- 26315
- 26316 D) Mailed notices post-marked within three business days after the
26317 supplier receives the results are timely.
- 26318
- 26319 2) The water supplier must provide the information subsection (d)(1) requires
26320 to the residents of individual dwellings by mail or by other methods the
26321 Agency approved in a SEP. If the service line serves multi-family

- 26322 dwellings, the Agency must allow the water supplier to post the
26323 information at a conspicuous location.
26324
- 26325 e) Agency Determining a Shorter Replacement Schedule
26326
- 26327 1) The Agency must issue a SEP requiring a supplier to replace lead service
26328 lines on a shorter schedule than this Section otherwise requires if the
26329 Agency determines, taking into account the number of lead service lines in
26330 the system, that the supplier's shorter replacement schedule is feasible.
26331
- 26332 2) The Agency must notify the supplier of its finding under subsection (e)(1)
26333 within six months after monitoring triggers the supplier into beginning
26334 lead service line replacement under subsection (a).
26335
- 26336 f) Ceasing Service Line Replacement
26337
- 26338 1) Any supplier may cease replacing lead service lines whenever the supplier
26339 fulfills both two conditions:
26340
- 26341 A) ~~First-liter~~~~First-draw tap~~ samples the supplier collected under
26342 Section 611.1356(b)(2) meet the lead action level during each of
26343 two consecutive six-month monitoring periods; and
26344
- 26345 B) The supplier submitted those results to the Agency.
26346
- 26347 2) If any of the supplier's ~~first-liter~~~~first-draw tap~~ samples later exceeds the
26348 lead action level, the supplier must resume replacing lead service lines
26349 under subsection (b)(2).
26350
- 26351 g) To demonstrate that it complies with subsections (a) through (d), a supplier must
26352 report to the Agency the information Section 611.1360(e) specifies.
26353

26354 BOARD NOTE: This Section corresponds with Section 611.1354 and derives from 40 CFR
26355 141.84 (2020).
26356

26357 (Source: Amended at 50 Ill. Reg. _____, effective _____)
26358

26359 **Section 611.1355 Public Education and Supplemental Monitoring** 26360

26361 A supplier exceeding the lead action level based on tap water samples under Section 611.1356
26362 must deliver the public education materials subsection (a) requires under subsection (b). A
26363 supplier exceeding the lead action level must sample the tap water of any customer requesting
26364 sampling under subsection (c). A supplier must deliver a consumer notice of lead tap water

26365 monitoring results to persons the supplier serves at each site that the supplier tests, as subsection
26366 (d) specifies.

26367

26368 a) Content of Written Public Education Materials

26369

26370 1) Community Water Systems and Non-Transient Non-Community Water
26371 Systems. A CWS or NTNCWS supplier must include the following
26372 elements in printed materials (e.g., brochures and pamphlets) in the same
26373 order as listed in subsections (a)(1)(A) through (a)(1)(F). In addition, the
26374 supplier must use the verbatim language in subsections (a)(1)(A),
26375 (a)(1)(B), and (a)(1)(F), except for replacing the text in brackets with the
26376 system-specific information. Any additional information a supplier
26377 presents must be consistent with the information in subsections (a)(1)(A)
26378 through (a)(1)(F), and the supplier must present the additional information
26379 in plain language that the general public can understand. The supplier
26380 must submit all written public education materials to the Agency.

26381

26382 A) IMPORTANT INFORMATION ABOUT LEAD IN YOUR
26383 DRINKING WATER. [INSERT NAME OF SUPPLIER] found
26384 elevated levels of lead in drinking water in some homes/buildings.
26385 Lead can cause serious health problems, especially for pregnant
26386 women and young children. Please read this information closely to
26387 see what you can do to reduce lead in your drinking water.

26388

26389 B) Health Effects of Lead. Lead can cause serious health problems if
26390 too much enters your body from drinking water or other sources.
26391 It can cause damage to the brain and kidneys and can interfere with
26392 the production of red blood cells that carry oxygen to all parts of
26393 your body. The greatest risk of lead exposure is to infants, young
26394 children, and pregnant women. Scientists have linked the effects
26395 of lead on the brain with lowered IQ in children. Adults with
26396 kidney problems and high blood pressure can be affected by low
26397 levels of lead more than healthy adults. Lead is stored in the
26398 bones, and it can be released later in life. During pregnancy, the
26399 child receives lead from the mother's bones, which may affect
26400 brain development.

26401

26402 C) Sources of Lead

26403

26404 i) Explain what lead is.

26405

26406 ii) Explain possible sources of lead in drinking water and how
26407 lead enters drinking water. Include information on home

26408 and building plumbing materials and service lines that may
26409 contain lead.

26410
26411 iii) Discuss other important sources of lead exposure in
26412 addition to drinking water (e.g., paint).
26413

26414 BOARD NOTE: The supplier must use text providing the
26415 information this subsection (a)(1)(C) describes.
26416

26417 D) Discuss the steps the consumer can take to reduce exposure to lead
26418 in drinking water.

26419
26420 i) Encourage running the water to flush out the lead.
26421

26422 ii) Explain concerns with using hot water from the tap and
26423 specifically caution against the use of hot water for
26424 preparing baby formula.
26425

26426 iii) Explain that boiling water does not reduce lead levels.
26427

26428 iv) Discuss other options consumers can take to reduce
26429 exposure to lead in drinking water, such as alternative
26430 sources or water treatment.
26431

26432 v) Suggest that parents have their child's blood tested for lead.
26433

26434 BOARD NOTE: The supplier must use text providing the
26435 information this (a)(1)(D) describes.
26436

26437 E) Explain why there are elevated levels of lead in the supplier's
26438 drinking water (if known) and what the supplier is doing to reduce
26439 the lead levels in homes and buildings in this area.
26440

26441 BOARD NOTE: The supplier must use text providing the
26442 information this (a)(1)(E) describes.
26443

26444 F) For more information, call us at [INSERT THE SUPPLIER'S
26445 NUMBER] [(IF APPLICABLE), or visit our Web site at [INSERT
26446 THE SUPPLIER'S WEB SITE HERE]]. For more information on
26447 reducing lead exposure around your home/building and the health
26448 effects of lead, visit USEPA's Web site at www.epa.gov/lead or
26449 contact your health care provider.
26450

- 26451 2) Community Water Systems. In addition to including the elements
- 26452 subsection (a)(1) specifies, a CWS supplier must include two information
- 26453 items:
- 26454
- 26455 A) The supplier must tell consumers how to get their water tested; and
- 26456
- 26457 B) The supplier must discuss lead in plumbing components and the
- 26458 difference between low-lead and lead-free components.
- 26459

26460 BOARD NOTE: At corresponding 40 CFR 141.85(a)(1) (2020), USEPA allowed

26461 the State to require prior approval of written public information materials. Rather

26462 than require prior Agency approval, the Board chooses to allow the Agency to

26463 raise any deficiencies that it may perceive using its existing procedure for review

26464 of public education materials. The Agency outlines its standard practice for

26465 review of public information materials: The Agency provides a comprehensive

26466 public education packet to the supplier together with the notice that the supplier

26467 exceeds the lead action level. That packet includes guidance and templates for the

26468 supplier to use in preparing and distributing its public education materials. The

26469 supplier must send a copy of the public education materials that it distributes to

26470 the Agency, and the Agency reviews the copy of the materials after their

26471 distribution to the public. The Agency directly communicates to the supplier any

26472 perceived defects in the materials. The Agency will request correction when it

26473 perceives minor defects in future distributions of the public education materials,

26474 or the Agency will request a redistribution of corrected public education materials

26475 when it perceives major defects in the materials the supplier already distributed.

26476

26477 b) Delivering Public Education Materials

26478

- 26479 1) The public education materials of a supplier serving a large proportion of
- 26480 non-English-speaking consumers must contain information in the
- 26481 appropriate languages regarding the importance of the notice, or the
- 26482 materials must contain a telephone number or address where a water
- 26483 consumer may contact the supplier to obtain a translated copy of the
- 26484 public education materials or to request assistance in the appropriate
- 26485 language.
- 26486
- 26487 2) A CWS supplier exceeding the lead action level on the basis of tap water
- 26488 samples under Section 611.1356 not already conducting public education
- 26489 tasks under this Section must complete public education tasks within 60
- 26490 days after the end of the monitoring period in which the exceedance
- 26491 occurred:
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- A) The CWS supplier must deliver printed materials complying with subsection (a) to all of its bill-paying customers.

 - B) Methods of Delivery for a CWS Supplier
 - i) The CWS supplier must contact customers who are most at risk by delivering education materials complying with subsection (a) to local public health agencies, even if those agencies not located within the supplier's service area, along with an informational notice encouraging distribution to all of the agencies' potentially affected customers or the supplier's consumers. The supplier must contact the local public health agencies directly by phone or in person. The local public health agencies may provide a specific list of additional community-based organizations serving the target populations, which may include organizations outside the service area of the supplier. If local health agencies provide lists, the supplier must deliver education materials that comply with subsection (a) to each of the organizations on the provided lists.

 - ii) The CWS supplier must contact customers who are most at risk by delivering materials complying with subsection (a) to the organizations in subsections (b)(2)(H)(i) through (b)(2)(H)(vi) that are located within the supplier's service area, along with an informational notice encouraging distribution to all the organization's potentially affected customers or supplier's users.

BOARD NOTE: The Board moved the text of 40 CFR 141.85(b)(2)(ii)(B)(1) through (b)(2)(ii)(B)(6) (2020) to appear as subsections (b)(2)(H)(i) through (b)(2)(H)(vi) to comport with allowed indent levels.

 - iii) The CWS supplier must make a good faith effort to locate the organizations in subsections (b)(2)(I)(i) through (b)(2)(I)(iii) that are located within the service area and deliver materials complying with subsection (a) to those organizations, along with an informational notice encouraging distribution to all potentially affected customers or users. The good faith effort to contact at-risk customers may include requesting a specific contact list of these organizations from the local public health agencies,

26536 even if those organizations are not located within the
26537 supplier's service area.

26538
26539 BOARD NOTE: The Board moved the text of 40 CFR
26540 141.85(b)(2)(ii)(C)(1) through (b)(2)(ii)(C)(3) (2020) to
26541 appear as subsections (b)(2)(I)(i) through (b)(2)(I)(iii) to
26542 comport with allowed indent levels.
26543

26544 C) No less often than quarterly, the CWS supplier must provide
26545 information on or in each water bill as long as the system exceeds
26546 the action level for lead. The message on the water bill must
26547 include the verbatim text of the paragraph below, except replacing
26548 the text in brackets with system-specific information:
26549

26550 [INSERT NAME OF SUPPLIER] found high levels of lead
26551 in drinking water in some homes. Lead can cause serious
26552 health problems. For more information please call
26553 [INSERT NAME OF SUPPLIER] [or visit (INSERT
26554 SUPPLIER'S WEB SITE HERE)]. The message or
26555 delivery mechanism can be modified in consultation with
26556 the Illinois Environmental Protection Agency, Division of
26557 Public Water Supply; specifically, the Agency may allow a
26558 separate mailing of public education materials to customers
26559 if the water system cannot place the information on water
26560 bills.
26561

26562 D) The CWS supplier must post material complying with subsection
26563 (a) on the supplier's website if the CWS supplier serves a
26564 population greater than 100,000.
26565

26566 E) The CWS supplier must submit a press release to newspaper,
26567 television, and radio stations.
26568

26569 F) In addition to subsections (b)(2)(A) through (b)(2)(E), the CWS
26570 supplier must implement at least three activities from one or more
26571 of the categories listed below. The supplier must determine the
26572 educational content and selection of these activities consulting with
26573 the Agency.
26574

26575 i) Public service announcements.
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26577 ii) Paid advertisements.
26578

- 26579 iii) Public area information displays.
- 26580
- 26581 iv) E-mails to customers.
- 26582
- 26583 v) Public meetings.
- 26584
- 26585 vi) Household deliveries.
- 26586
- 26587 vii) Targeted individual customer contact.
- 26588
- 26589 viii) Direct material distribution to all multi-family homes and
- 26590 institutions.
- 26591
- 26592 ix) Other Agency-approved methods.
- 26593
- 26594 G) For a CWS supplier that must monitor annually or less frequently,
- 26595 the end of the monitoring period is September 30 of the calendar
- 26596 year in which the sampling occurs, or on the last day of an
- 26597 alternative monitoring period the Agency sets in a SEP.
- 26598
- 26599 H) Organizations That the CWS Supplier Must Contact When
- 26600 Required to Do So under Subsection (b)(2)(B)(iii)
- 26601
- 26602 i) Public and private schools or school boards.
- 26603
- 26604 ii) Women, Infants and Children (WIC) and Head Start
- 26605 programs.
- 26606
- 26607 iii) Public and private hospitals and medical clinics.
- 26608
- 26609 ~~vi~~iv) Pediatricians.
- 26610
- 26611 v) Family planning clinics.
- 26612
- 26613 vi) Local welfare agencies.
- 26614
- 26615 BOARD NOTE: This subsection (b)(2)(H) derives from 40 CFR
- 26616 141.85(b)(2)(ii)(B)(1) through (b)(2)(ii)(B)(6) (2020), moved here
- 26617 to comport with allowed indent levels.
- 26618
- 26619 I) Organizations That the CWS Supplier Must Contact When
- 26620 Required to Do So Under Subsection (b)(2)(B)(iii)
- 26621

- i) Licensed childcare centers.
- ii) Public and private preschools.
- iii) Obstetricians-gynecologists and midwives.

BOARD NOTE: This subsection (b)(2)(H) derives from 40 CFR 141.85(b)(2)(ii)(C)(1) through (b)(2)(ii)(C)(3) (2020), moved here to comport with allowed indent levels.

- 3) As long as a CWS supplier exceeds the action level, it must repeat the activities in subsection (b)(2), as subsections (b)(3)(A) through (b)(3)(D) require.
 - A) The CWS supplier must repeat the tasks in subsections (b)(2)(A), (b)(2)(B), and (b)(2)(D) every 12 months.
 - B) The CWS supplier must repeat tasks in subsection (b)(2)(C) with each billing cycle.
 - C) The CWS supplier serving a population greater than 100,000 must post and ~~keep~~retain material on a publicly accessible website under subsection (b)(2)(D).
 - D) The CWS supplier must repeat the task in subsection (b)(2)(E) twice every 12 months on a schedule agreed by the Agency in a SEP. The Agency must, on a case-by-case basis, issue a SEP extending the time for the supplier to complete the public education tasks in subsection (b)(2) beyond the 60-day limit if the Agency determines that the supplier needs the extended time to implement; however, the Agency must issue the SEP granting any extension before the 60-day deadline expires.
- 4) Within 60 days after the end of the monitoring period in which a NTNCWS supplier exceeds the lead action level (unless it already is repeating public education tasks under subsection (b)(5)), the supplier must deliver the public education materials subsection (a) specifies.
 - A) The supplier must deliver the public education materials by certain means:

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- i) The NTNCWS supplier must post informational posters on lead in drinking water in a public place or common area in each of the buildings the supplier serves; and
 - ii) The NTNCWS supplier must distribute informational pamphlets or brochures on lead in drinking water to each person the NTNCWS supplier serves. The Agency may issue a SEP allowing the system to use electronic transmission in lieu of or combined with printed materials as long as the electronic transmission achieves the same or better coverage.
- B) For a NTNCWS supplier that must monitor annually or less frequently, the end of the monitoring period is September 30 of the calendar year in which the sampling occurs, or on the last day of an alternative monitoring period the Agency sets in a SEP.
- 5) A NTNCWS supplier must repeat the tasks in subsection (b)(4) at least once during each calendar year in which the supplier exceeds the lead action level. The Agency must, on a case-by-case basis, issue a SEP extending the time for the supplier to complete the public education tasks in subsection (b)(2) beyond the 60-day limit if the Agency determines that the extended time is needed for implementation purposes; however, the Agency must issue any SEP granting any extension prior to when the 60-day deadline expires.
- 6) A supplier may stop delivering public education materials after the supplier meets the lead action level during the most recent six-month monitoring period under Section 611.1356. The supplier must begin public education anew under this Section if the supplier subsequently exceeds the lead action level during any six-month monitoring period.
- 7) A CWS supplier may apply to the Agency in writing to use only the text in subsection (a)(1) in lieu of the text in subsections (a)(1) and (a)(2) and to perform the tasks in subsections (b)(4) and (b)(5) in lieu of the tasks in subsections (b)(2) and (b)(3) under specific circumstances:
- A) The supplier is a facility, such as a prison or a hospital, where the population served is not capable of or is prevented from making improvements to plumbing or installing point of use treatment devices; and

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- B) The supplier provides water as part of the cost of services provided, not separately charging for water consumption.
 - 8) A CWS supplier serving 3,300 or fewer people may limit certain aspects of its public education programs:
 - A) For notice under subsection (b)(2)(F), a supplier serving 3,300 or fewer people must implement at least one of the activities.
 - B) For notice under subsection (b)(2)(B), a supplier serving 3,300 or fewer people may limit the distribution of the public education materials to facilities and organizations pregnant women and children are most likely to visit.
 - C) For notice under subsection (b)(2)(E), the Agency may issue a SEP waiving this requirement for a supplier serving 3,300 or fewer persons, as long as the supplier distributes notices to every household the supplier serves.
 - c) Supplemental Monitoring and Notification of Results. A supplier failing to meet the lead action level in tap samples under Section 611.1356 must offer to sample the tap water of any customer requesting it. The supplier needs not pay for collecting or analyzing the sample, nor must the supplier itself collect and analyze the sample.
 - d) Requirement for Consumer Notice of Tap Water Monitoring Results
 - 1) Consumer Notice Requirement. A supplier must provide a notice of the individual tap results from lead tap water monitoring under Section 611.1356 to the persons the water system serves at the specific sampling site from which the supplier took the sample (e.g., the occupants of the residence where the supplier tested the tap).
 - 2) Timing of Consumer Notice. The supplier must provide the consumer notice as soon as practical, but no later than 30 days after the supplier learns of the tap monitoring results.
 - 3) Content of Consumer Notice. The consumer notice must include the results of lead tap water monitoring for the tap the supplier tested, an explanation of the health effects of lead, a list of steps consumers can take to reduce exposure to lead in drinking water, and contact information for the water utility. The notice must also provide the maximum contaminant

26747 level goal and the action level for lead and the definitions for these two
26748 terms from Section 611.883(c).

26749
26750 4) Delivery of Consumer Notice. The supplier must provide the consumer
26751 notice to persons it serves at the tap the supplier tested, either by mail or
26752 by another method the Agency approves in a SEP. For example, upon
26753 Agency approval, a NTNCWS supplier could post the results on a bulletin
26754 board in the facility enabling users to review the information. The
26755 supplier must provide the notice to customers at sample taps the supplier
26756 tested, including consumers who do not receive water bills.
26757

26758 BOARD NOTE: This Section corresponds with Section 611.1355 and derives from 40 CFR
26759 141.85 (2020).

26760
26761 (Source: Amended at 50 Ill. Reg. _____, effective _____)
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26763 **Section 611.1356 Tap Water Monitoring for Lead and Copper**

26764
26765 a) Sampling Site Location

26766
26767 1) Selecting a Pool of Targeted Sampling Sites

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26769 A) Before the applicable date for beginning monitoring under
26770 subsection (d)(1), a supplier must complete evaluating the
26771 materials in its distribution system to identify a pool of targeted
26772 sampling sites complying with this Section.
26773

26774 B) The pool of targeted sampling sites must be large enough to ensure
26775 that the supplier can collect the number of lead and copper tap that
26776 the supplier can collect the number of lead and copper tap samples
26777 subsection (c) requires.
26778

26779 C) The supplier must select the sites for collecting first-liter samples
26780 ~~first-draw tap samples~~ from this pool of targeted sampling sites.
26781

26782 D) The supplier must not select as sampling sites any faucets having
26783 point-of-use or point-of-entry treatment devices designed to
26784 remove or capable of removing inorganic contaminants.
26785

26786 2) Materials Evaluation

26787
26788 A) A supplier must use the information on lead, copper, and
26789 galvanized steel it collected under 40 CFR 141.42(d) (special

26790 monitoring for corrosivity characteristics) when conducting a
26791 materials evaluation.

26792
26793 B) When evaluating the information collected under 40 CFR
26794 141.42(d) is insufficient to locate the requisite number of lead and
26795 copper sampling sites under subsection (a), the supplier must
26796 review other sources of information to identify sufficient sampling
26797 sites:

26798
26799 i) All plumbing codes, permits, and records in building
26800 department files indicating the installed plumbing materials
26801 in publicly- and privately-owned structures connected to
26802 the distribution system;

26803
26804 ii) All inspections and records of the distribution system
26805 indicating the material composition of the service
26806 connections connecting a structure to the distribution
26807 system;

26808
26809 iii) All existing water quality information, including the results
26810 of all prior analyses of the system or individual structures
26811 connected to the system, that would indicate locations
26812 particularly susceptible to high lead or copper
26813 concentrations; and

26814
26815 iv) The supplier must seek to collect this information when
26816 possible in the course of its normal operations (e.g.,
26817 checking service line materials when reading water meters
26818 or performing maintenance activities).

26819
26820 3) Tiers of Sampling Sites. A supplier must categorize the sampling sites
26821 within its pool according to tiers:

26822
26823 A) CWS Tier 1 Sampling Sites. "CWS Tier 1 sampling sites" must
26824 include certain single-family structures:

26825
26826 i) Those containing copper pipes with lead solder installed
26827 after 1982 or containing lead pipes; or

26828
26829 ii) Those having a lead service line.

26830
26831 BOARD NOTE: This subsection (a)(3)(A) derives from segments
26832 of 40 CFR 141.86(a)(3) (2020). This allows the pool of CWS tier

26833 1 sampling sites to consist exclusively of structures having lead
26834 service lines.

26835
26836 B) CWS Tier 2 Sampling Sites. "CWS Tier 2 sampling sites" must
26837 include certain buildings, including multiple-family structures:

26838
26839 i) Those containing copper pipes with lead solder installed
26840 after 1982 or containing lead pipes; or

26841
26842 ii) Those having a lead service line.

26843
26844 BOARD NOTE: This subsection (a)(3)(B) derives from segments
26845 of 40 CFR 141.86(a)(4) (2020). This allows the pool of CWS tier
26846 2 sampling sites to consist exclusively of structures having lead
26847 service lines.

26848
26849 C) CWS Tier 3 Sampling Sites. "CWS Tier 3 sampling sites" must
26850 include certain single-family structures: those containing copper
26851 pipes with lead solder installed before 1983.

26852
26853 BOARD NOTE: This subsection (a)(3)(C) derives from segments
26854 of 40 CFR 141.86(a)(5) (2020).

26855
26856 D) NTNCWS Tier 1 Sampling Sites. "NTNCWS Tier 1 sampling
26857 sites" must include certain buildings:

26858
26859 i) Those containing copper pipes with lead solder installed
26860 after 1982 or containing lead pipes; or

26861
26862 ii) Those having a lead service line.

26863
26864 BOARD NOTE: This subsection (a)(3)(D) derives from segments
26865 of 40 CFR 141.86(a)(6) (2020). This allows the pool of NTNCWS
26866 tier 1 sampling sites to consist exclusively of buildings having lead
26867 service lines.

26868
26869 E) Alternative NTNCWS Sampling Sites. "Alternative NTNCWS
26870 sampling sites" must include certain buildings: those containing
26871 copper pipes with lead solder installed before 1983.

26872
26873 BOARD NOTE: This subsection (a)(3)(E) derives from segments
26874 of 40 CFR 141.86(a)(7) (2020).

26875

26876 4) Selection of Sampling Sites. A supplier must select sampling sites for its
26877 sampling pool using specific criteria:

26878
26879 A) CWS Suppliers. A CWS supplier must use CWS tier 1 sampling
26880 sites, except that the supplier may include CWS tier 2 or CWS tier
26881 3 sampling sites in its sampling pool under certain circumstances:

26882
26883 i) If multiple-family residences comprise at least 20 percent
26884 of the structures the supplier serves, the supplier may use
26885 CWS tier 2 sampling sites in its sampling pool; or
26886

26887 BOARD NOTE: This subsection (a)(4)(A)(i) derives from
26888 a segment of 40 CFR 141.86(a)(3)(ii) (2020).
26889

26890 ii) If the CWS supplier does not have a sufficient number of
26891 CWS tier 1 sampling sites on its distribution system, the
26892 supplier may use CWS tier 2 sampling sites in its sampling
26893 pool; or
26894

26895 BOARD NOTE: This subsection (a)(4)(A)(ii) derives from
26896 a segment of 40 CFR 141.86(a)(4) (2020).
26897

26898 iii) If the CWS supplier does not have a sufficient number of
26899 CWS tier 1 and CWS tier 2 sampling sites on its
26900 distribution system, the supplier may complete its sampling
26901 pool with CWS tier 3 sampling sites.
26902

26903 BOARD NOTE: This subsection (a)(4)(A)(iii) derives
26904 from a segment of 40 CFR 141.86(a)(5) (2020).
26905

26906 iv) If the CWS supplier does not have a sufficient number of
26907 CWS tier 1 sampling sites, CWS tier 2 sampling sites, and
26908 CWS tier 3 sampling sites, the supplier must use those
26909 CWS tier 1 sampling sites, CWS tier 2 sampling sites, and
26910 CWS tier 3 sampling sites that it has and complete its
26911 sampling pool with representative sites throughout its
26912 distribution system for the balance of its sampling sites.
26913 For this subsection (a)(4)(A)(iv), a representative site is a
26914 site having plumbing materials commonly found at other
26915 sites the water system serves.
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26917 BOARD NOTE: This subsection (a)(4)(A)(iv) derives
26918 from segments of 40 CFR 141.86(a)(5) (2020).

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B) NTNCWS Suppliers

- i) An NTNCWS supplier must select NTNCWS tier 1 sampling sites for its sampling pool.

BOARD NOTE: This subsection (a)(4)(B)(i) derives from segments of 40 CFR 141.86(a)(6) (2020).

- ii) If the NTNCWS supplier has an insufficient number of NTNCWS tier 1 sampling sites, the supplier may complete its sampling pool with alternative NTNCWS sampling sites.

BOARD NOTE: This subsection (a)(4)(B)(ii) derives from segments of 40 CFR 141.86(a)(7) (2020).

- iii) If the NTNCWS supplier has an insufficient number of NTNCWS tier 1 sampling sites and NTNCWS alternative sampling sites, the supplier must use representative sites throughout its distribution system. For the purpose of this subsection (a)(4)(B)(ii), a representative site is a site where the plumbing materials are commonly found at other sites served by the water system serves.

BOARD NOTE: This subsection (a)(4)(B)(iii) derives from segments of 40 CFR 141.86(a)(7) (2020).

C) Suppliers with Lead Service Lines. Any supplier whose distribution system contains lead service lines must draw samples during each six-month monitoring period from specific sampling sites:

- i) 50 percent of the samples from sampling sites containing lead pipes or having copper pipes with lead solder; and
- ii) 50 percent of those samples from sites having a lead service line.
- iii) A supplier that cannot identify a sufficient number of sampling sites having a lead service line must collect first-liter samples~~first draw tap samples~~ from all of the sites identified as having lead service lines.

BOARD NOTE: This subsection (a)(4)(C) derives from segments of 40 CFR 141.86(a)(8) (2020). This allows the pool of sampling sites to consist exclusively of structures or buildings having lead service lines.

b) Sample Collection Methods

- 1) All tap samples a supplier collects for lead and copper under this Subpart AG, with the exception of lead service line samples under Section 611.1354(d) and samples under subsection (b)(5), must be first-liter samples~~first draw tap samples~~.
- 2) First-liter samples~~First-Draw Tap Samples~~
 - A) Every first-liter sample~~first draw tap sample~~ for lead and copper must be one liter in volume and have stood motionless in the plumbing system of the sampling site for at least six hours.
 - B) For residential buildings, the supplier must collect first-liter samples~~first draw tap samples~~ from residential housing from the cold-water kitchen or bathroom sink tap.
 - C) For non-residential buildings, the supplier must collect first-liter samples~~first draw tap samples~~ one-liter in volume from an interior tap occupants typically use for consuming water.
 - D) The supplier must collect non-first-liter samples~~non first liter draw tap samples~~ that it collects in lieu of first-liter samples~~first draw tap samples~~ under subsection (b)(5) one liter in volume from an interior tap occupants typically use for consuming water.
 - E) The supplier may collect first-liter samples~~first draw tap samples~~ or allow residents to collect first-liter samples~~first draw tap samples~~ after instructing the residents in the sampling procedures this subsection (b) specifies.
 - i) To avoid problems of residents handling nitric acid, the supplier may acidify first-liter samples~~first draw tap samples~~ up to 14 days after the supplier or a resident collects the sample.

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- ii) After adding acid to resolubilize the metals, a sample must stand in its original container for the time the USEPA-approved method specifies before the laboratory analyzes the sample.
 - F) If a supplier allows residents to perform sampling under subsection (b)(2)(D), the supplier may not challenge the accuracy of sampling results based on alleged errors in sample collection.
 - 3) Service Line Samples
 - A) Each service line sample must be one liter in volume and have stood motionless in the lead service line for at least six hours.
 - B) Lead service line samples must be collected in one of three ways:
 - i) At the tap after flushing the calculated volume of water between the tap and the lead service line (based on the interior diameter and length of the pipe between the tap and the lead service line);
 - ii) Tapping directly into the lead service line; or
 - iii) If the sampling site is a single-family structure, allowing the water to run until there is a significant change in temperature indicating water that stood in the lead service line.
 - 4) Follow-Up ~~First-Draw Tap Samples~~ First-liter samples
 - A) A supplier must collect each follow-up ~~first-draw tap sample~~ first-liter sample from the same sampling site where the previous samples originated.
 - B) If, for any reason, the supplier cannot access a sampling site to collect a follow-up tap sample, the supplier 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 and is within reasonable proximity of the original site.
 - 5) Substitute Non-~~First-Draw Tap Samples~~ First-liter samples

27046 A) A NTNCWS supplier or a CWS supplier meeting the criteria in
27047 Sections 611.1355(b)(7)(A) and (b)(7)(B) not having enough taps
27048 for first-liter samples~~first-draw tap samples~~, as Section 611.102
27049 defines the term, may apply to the Agency in writing for a SEP
27050 allowing the supplier to substitute non- first-liter samples~~first-~~
27051 ~~draw tap samples~~.

27052
27053 B) A supplier approved to substitute non- first-liter samples~~first-draw~~
27054 ~~tap samples~~ must collect as many first-liter samples~~first-draw tap~~
27055 ~~samples~~ from appropriate taps as possible and identify sampling
27056 times and locations that likely give the longest standing time for
27057 the remaining sites.

27058
27059 C) The Agency may grant a SEP waiving the requirement for prior
27060 Agency approval of a supplier's chosen non-first-draw sampling
27061 sites.

27062
27063 c) Number of Samples

27064
27065 1) A supplier must collect at least one sample each from the number of sites
27066 in the first column of Table D (labelled "standard monitoring") during
27067 each six-month monitoring period subsection (d) specifies.

27068
27069 2) A supplier conducting reduced monitoring under subsection (d)(4) must
27070 collect one sample each from the number of sites in the second column of
27071 Table D (labelled "reduced monitoring") during each reduced monitoring
27072 period subsection (d)(4) specifies. The reduced monitoring sites must
27073 represent the sites standard monitoring requires. A supplier whose system
27074 has fewer than five drinking water taps capable of use for human
27075 consumption that meet the sampling site criteria of subsection (a) must
27076 collect multiple samples from individual taps to reach the required number
27077 of sampling sites Table D requires. To accomplish this, the supplier must
27078 collect at least one sample from each tap, then additional samples from
27079 those taps on different days during the monitoring period, to collect a total
27080 number of samples meeting the required number of sampling sites.
27081 Alternatively, the Agency may issue a SEP allowing the supplier whose
27082 system has fewer than five drinking water taps to collect a number of
27083 samples that is fewer than the number of sites this subsection (c) specifies
27084 if the Agency determines that the supplier samples 100 percent of all taps
27085 capable of use for human consumption and that the reduced number of
27086 samples will produce the same results as collecting multiple samples from
27087 some taps. The Agency must base any approval of reducing the minimum
27088 number of samples on a request from the supplier or Agency on on-site

27089 verification. The Agency may specify sampling locations in a SEP when a
27090 system conducts reduced monitoring.

27091
27092 d) Timing of Monitoring

27093
27094 1) Six-Month Sampling Periods. Six-month sampling periods begin on
27095 January 1 and July 1 of each year.

27096
27097 A) A large system must monitor during each consecutive six-month
27098 period, except as subsection (d)(4)(B) provides otherwise.

27099
27100 B) A small or medium-sized system must monitor during each
27101 consecutive six-month monitoring period until either of two
27102 occurrences:

27103
27104 i) The supplier exceeds the lead or copper action level and
27105 must, therefore, implement the corrosion control treatment
27106 requirements under Section 611.1351 and continue
27107 monitoring under subsection (d)(2); or

27108
27109 ii) The supplier meets the lead and copper action levels during
27110 each of two consecutive six-month monitoring periods,
27111 which allows the supplier to reduce monitoring under
27112 subsection (d)(4).

27113
27114 2) Monitoring after Installation of Corrosion Control and Source Water
27115 Treatment

27116
27117 A) Any large system supplier installing optimal corrosion control
27118 treatment under Section 611.1351(d)(4) must monitor during two
27119 consecutive six-month monitoring periods.

27120
27121 B) Any small or medium-sized system supplier installing optimal
27122 corrosion control treatment under Section 611.1351(e)(5) must
27123 monitor during two consecutive six-month monitoring periods
27124 within 36 months after the Agency approves optimal corrosion
27125 control treatment, as Section 611.1351(e)(6) specifies.

27126
27127 C) Any supplier installing source water treatment under Section
27128 611.1353(a)(3) must monitor during two consecutive six-month
27129 monitoring periods within 36 months after completing step 2, as
27130 Section 611.1353(a)(4) specifies.

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- 3) Monitoring after the Agency Specifies Water Quality Parameter Values for Optimal Corrosion Control. After the Agency specifies the values for water quality control parameters under Section 611.1352(f), the supplier must monitor during each subsequent six-month monitoring period, with the first six-month monitoring period beginning on the date the Agency specifies the optimal values.
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- 4) Reduced Monitoring
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- A) Reducing to Annual Monitoring for Small and Medium-Sized System Suppliers Meeting the Lead and Copper Action Levels. A small or medium-sized system supplier meeting the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce the number of samples under subsection (c) and sampling frequency to once per year. A small or medium-sized system supplier collecting fewer than five samples as subsection (c) specifies and meeting the lead and copper action levels during each of two consecutive six-month monitoring periods may reduce its frequency of sampling to once per year. In no instance may the supplier reduce the number of samples below the minimum of one sample per available tap. The supplier may begin this reduced sampling only during the calendar year immediately following the end of the second consecutive six-month monitoring period.
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- B) SEP Allowing Reduction to Annual Monitoring for Suppliers Maintaining Water Quality Control Parameters
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- i) The Agency may issue a SEP allowing a supplier meeting the lead action level and maintaining the range of values for water quality control parameters reflecting optimal corrosion control treatment that the Agency specifies under Section 611.1352(f) during each of two consecutive six-month monitoring periods to reduce its monitoring frequency to once per year and its number of lead and copper samples to that subsection (c) specifies. This reduced sampling may only begin during the calendar year immediately following the end of the second consecutive six-month monitoring period.
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- ii) The Agency must review monitoring, treatment, and other relevant information the supplier submits under Section 611.1360, and the Agency must issue a SEP upon

- 27175 determining that the supplier is eligible to reduce its
27176 monitoring frequency to once every three years under this
27177 subsection (d)(4).
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- 27179 iii) The Agency must review its determination under
27180 subsection (d)(4)(B)(i) when the supplier submits new
27181 monitoring or treatment data, or when other data relevant to
27182 the number and frequency of tap sampling becomes
27183 available to the Agency. The Agency must revise its
27184 determination if the Agency deems this appropriate based
27185 on its review.
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- 27187 C) Reduction to Triennial for Small and Medium-Sized System
27188 Suppliers
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- 27190 i) Small- and Medium-Sized Water System Suppliers
27191 Meeting Lead and Copper Action Levels. A small or
27192 medium-sized system supplier meeting the lead and copper
27193 action levels during three consecutive years of monitoring
27194 may reduce the frequency of monitoring for lead and
27195 copper from annually to once every three years.
27196
- 27197 ii) SEP for Suppliers Meeting Optimal Corrosion Control
27198 Treatment. The Agency may issue a SEP allowing any
27199 supplier meeting the range of values for the water quality
27200 control parameters reflecting optimal corrosion control
27201 treatment the Agency specifies under Section 611.1352(f)
27202 during three consecutive years of monitoring may reduce
27203 its monitoring frequency from annual to once every three
27204 years. A supplier collecting samples once every three years
27205 must collect the samples no later than every third calendar
27206 year.
27207
- 27208 iii) The Agency must review its determination under
27209 subsection (d)(4)(C)(ii) when the supplier submits new
27210 monitoring or treatment data, or when other data relevant to
27211 the number and frequency of tap sampling becomes
27212 available to the Agency. The Agency must revise its
27213 determination if the Agency deems this appropriate based
27214 on its review.
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- 27216 D) Sampling at a Reduced Frequency. A supplier reducing the
27217 number and frequency of sampling must collect these samples

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from the pool of targeted sampling sites the supplier selected under subsection (a), preferentially using those sampling sites from the highest tier first. A supplier sampling annually or less frequently must conduct lead and copper tap sampling during June, July, August, or September, unless the Agency approves a different sampling period under subsection (d)(4)(D)(i).

i) The Agency may grant a SEP approving a different period for a supplier to conduct lead and copper tap sampling to a system collecting a reduced number of samples. The duration of the period must not exceed four consecutive months and must represent a time of normal operation when the highest lead levels are most likely to occur. For a NTNCWS supplier not operating during any of June through September and whose normal operating period when the highest levels of lead are most likely to occur is not known, the Agency must designate a period that represents a time of normal operation for the system. This reduced sampling may only begin during the Agency-designated period in the calendar year immediately following the end of the second consecutive six-month monitoring period, for a system initiating annual monitoring, or in the three-year period following the end of the third consecutive calendar year of annual monitoring, for a supplier initiating triennial monitoring.

ii) A supplier monitoring annually and collecting samples during the months of June through September that receives Agency approval to alter its sampling period under subsection (d)(4)(D)(i) must collect its next round of samples during a time period ending no later than 21 months after its previous round of sampling. A supplier monitoring once every three years and collecting samples during the months of June through September that receives Agency approval to alter the sampling collection period under subsection (d)(4)(D)(i) must collect its next round of samples during a time period ending no later than 45 months after the previous round of sampling. The supplier must collect subsequent rounds of sampling annually or once every three years, as this Section requires. A small system supplier collecting samples during the months of June through September, receiving a waiver under subsection (g) and receiving Agency approval to alter its

27261 sample collection period under subsection (d)(4)(D)(i) must
27262 collect its next round of samples before the end of the nine-
27263 year compliance cycle (as Section 611.101 defines the
27264 term).
27265

27266 E) Any water system demonstrating for two consecutive six-month
27267 monitoring periods that the tap water lead level computed under
27268 Section 611.1350(c)(3) is less than or equal to 0.005 mg/L and that
27269 the tap water copper level computed under Section 611.1350(c)(3)
27270 is less than or equal to 0.65 mg/L may reduce its number of
27271 samples under subsection (c) and reduce its sampling frequency to
27272 once every three calendar years.
27273

27274 F) Resumption of Standard Monitoring
27275

27276 i) Small or Medium-Sized Suppliers Exceeding the Lead or
27277 Copper Action Level. A small or medium-sized system
27278 supplier subject to reduced monitoring exceeding the lead
27279 or copper action level must resume sampling under
27280 subsection (d)(3) and collect the number of samples that
27281 subsection (c) specifies for standard monitoring. The small
27282 or medium-sized system supplier exceeding the lead or
27283 copper action level must also conduct water quality
27284 parameter monitoring under Section 611.1357 (b), (c), or
27285 (d) (as appropriate) during the six-month monitoring period
27286 during which the supplier exceeded the action level. The
27287 small or medium-sized system supplier may resume annual
27288 tap monitoring for lead and copper at the reduced number
27289 of sites subsection (c) specifies after the supplier completes
27290 two subsequent consecutive six-month rounds of
27291 monitoring complying with subsection (d)(4)(A). The
27292 small or medium-sized system supplier may resume
27293 monitoring once every three years for lead and copper at
27294 the reduced number of sites after demonstrating through
27295 subsequent rounds of monitoring that comply with
27296 subsection (d)(4)(C) or (d)(4)(E).
27297

27298 ii) Suppliers Failing to Operate within Water Quality Control
27299 Parameters. Any supplier subject to reduced monitoring
27300 frequency failing to meet the lead action level during any
27301 four-month monitoring period or failing to operate within
27302 the range of values for the water quality control parameters
27303 Section 611.1352(f) specifies for more than nine days in

27304 any six-month period Section 611.1357(d) specifies must
27305 conduct tap water sampling for lead and copper at the
27306 frequency subsection (d)(3) specifies, must collect the
27307 number of samples subsection (c) specifies for standard
27308 monitoring, and must resume monitoring for water quality
27309 parameters within the distribution system under Section
27310 611.1357(d). This standard tap water sampling must begin
27311 no later than the six-month period beginning January 1 of
27312 the calendar year after the supplier exceeds the lead action
27313 level or deviates from a water quality parameter. A
27314 supplier may resume reduced monitoring for lead and
27315 copper at the tap and for water quality parameters within
27316 the distribution system only if the supplier fulfills the
27317 conditions in subsection (d)(4)(H).
27318

27319 BOARD NOTE: The Board moved the last sentence of 40 CFR
27320 141.86(d)(4)(vi)(B) and 40 CFR 141.86(d)(4)(vi)(B)(I) through
27321 (d)(4)(vi)(B)(3) (2020) to subsections (d)(4)(H) and (d)(4)(H)(i)
27322 through (d)(4)(H)(iii) to comport with allowed indent levels.
27323

27324 G) Any supplier subject to reduced monitoring under subsection (d)(4)
27325 must notify the Agency in writing under Section 611.1360(a)(3) of
27326 any upcoming long-term change in treatment or adding a new
27327 source as that Section describes. The Agency must review and
27328 approve the addition of a new source or long-term change in water
27329 treatment before the supplier may implement it. The Agency may
27330 issue a SEP requiring the system to resume sampling under
27331 subsection (d)(3) and collecting the number of samples for
27332 standard monitoring under subsection (c) or take other appropriate
27333 steps, such as increased water quality parameter monitoring or re-
27334 evaluating its corrosion control treatment, considering the
27335 potentially different water quality considerations.
27336

27337 H) A supplier that subsection (d)(4)(F) requires to resume monitoring
27338 under Section 611.1357(d) may resume reduced monitoring for
27339 lead and copper at the tap and water quality parameters within the
27340 distribution system under the specific conditions:
27341

27342 i) The supplier may resume annual monitoring for lead and
27343 copper at the tap at the reduced number of sites subsection
27344 (c) specifies after the supplier completes two subsequent
27345 six-month rounds of monitoring complying with subsection
27346 (d)(4)(B) and the supplier receives written approval from

27347 the Agency in a SEP appropriate to resuming reduced
27348 monitoring on an annual frequency. The supplier must
27349 begin this sampling during the calendar year immediately
27350 following the end of the second consecutive six-month
27351 monitoring period.

27352
27353 ii) The supplier may resume tap monitoring for lead and
27354 copper once every three years at the reduced number of
27355 sites after demonstrating through subsequent rounds of
27356 monitoring that the supplier complies with either
27357 subsection (d)(4)(C) or (d)(4)(E) and the Agency issues a
27358 SEP allowing the supplier to resume monitoring once every
27359 three years.

27360
27361 iii) The supplier may reduce the number of water quality
27362 parameter tap water samples it collects under Section
27363 611.1357(e)(1) and its sampling frequency under Section
27364 611.1357(e)(2). The supplier may not resume triennial tap
27365 water monitoring for water quality parameters until after
27366 the supplier demonstrates requalifying for triennial
27367 monitoring under Section 611.1357(e)(2).
27368

27369 BOARD NOTE: Subsections (d)(4)(H) and (d)(4)(H)(i) through
27370 (d)(4)(H)(iii) derive from the last sentence of 40 CFR
27371 141.86(d)(4)(vi)(B) and (d)(4)(vi)(B)(I) through (d)(4)(vi)(B)(3)
27372 (2020), moved here to comport with allowed indent levels.
27373

27374 e) Additional Monitoring. The supplier and the Agency must consider the results of
27375 any monitoring the supplier conducts in addition to the minimum requirements in
27376 this Section in making any determinations (i.e., calculating the 90th percentile lead
27377 action level or the copper level) under this Subpart G.
27378

27379 f) Invalidation of Lead or Copper Tap Water Samples. A sample the Agency
27380 invalidates under this subsection (f) does not count toward determining lead or
27381 copper 90th percentile levels under Section 611.1350(c)(3) or toward complying
27382 with subsection (c).
27383

27384 1) The Agency must invalidate a lead or copper tap water sample if it
27385 determines that any of certain conditions exists:

27386 A) The laboratory establishes that improper sample analysis caused
27387 erroneous results;
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- B) The supplier took the sample from a site that did not meet the site selection criteria in this Section;
 - C) The sample container sustained damage in transit; or
 - D) There is substantial reason to believe that someone tampered with the sample.
- 2) The supplier must report the results from all samples to the Agency and submit all supporting documentation for samples the supplier believes the Agency should invalidate.
- 3) To invalidate a sample under subsection (f)(1), the Agency must document its decision and rationale for the decision in writing. The Agency may not invalidate a sample solely because a follow-up sample result is higher or lower than that of the original sample.
- 4) The supplier must collect replacement samples for any samples the Agency invalidates under this Section if the supplier has too few samples to meet the minimum requirements of subsection (c) after the Agency invalidates samples. The supplier must take any replacement samples as soon as possible but no later than the latter of 20 days after the Agency invalidates the original sample or before the end of the applicable monitoring period. The supplier must not use replacement samples it takes after the end of the applicable monitoring period to meet the monitoring requirements of a subsequent monitoring period. The supplier must take replacement samples at the same locations where it took the invalidated samples or, if that is not possible, at other locations the supplier did not use for sampling during the monitoring period.
- g) Monitoring Waivers for Small System Suppliers. Any small system supplier complying with the criteria in this subsection (g) may apply to the Agency for a SEP reducing its lead and copper monitoring frequency under this Section to once every nine years (i.e., a "full waiver") if the supplier meets all of the materials criteria subsection (g)(1) specifies and all of the monitoring criteria subsection (g)(2) specifies. Any small system supplier that meets the criteria subsections (g)(1) and (g)(2) only for lead or copper may apply to the Agency for a SEP reducing its tap water monitoring frequency to once every nine years for that contaminant only (i.e., a "partial waiver").
- 1) Materials Criteria. The supplier must demonstrate that its distribution system, 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 or copper-containing materials, as this subsection (g)(1) defines these terms:

- A) Lead. To qualify for a SEP granting a full waiver or a partial waiver of the tap water monitoring requirements for lead (i.e., a "lead waiver"), the supplier must provide certification and supporting documentation to the Agency demonstrating that its system is free of all lead-containing materials:
 - i) The system has no plastic pipes or service lines containing lead plasticizers; and
 - ii) The system is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass- or bronze-alloy fittings and fixtures, unless those fittings and fixtures comply with Section 611.126(b).

BOARD NOTE: Corresponding 40 CFR 141.86(g)(1)(i)(B) (2020) specifies "any standard established ~~underpursuant to~~ 42 U.S.C. 300g-6(e) (SDWA section 1417(e))". Congress changed the lead standards for fittings and fixtures in the Reduction of Lead in Drinking Water Act, P.L. 111-380, section 2(a)(2) and (b), 124 Stat. 4131 (Jan. 4, 2011). The Board incorporated the statutory changes into this Section by referencing Section 611.126(b).

- B) Copper. To qualify for a SEP granting a full waiver or a partial waiver of the tap water monitoring requirements for copper (i.e., a "copper waiver"), the supplier must provide certification and supporting documentation to the Agency demonstrating that its system contains no copper pipes or copper service lines.
- 2) Monitoring Criteria for Waiver Issuance. The supplier must have completed at least one six-month round of standard tap water monitoring for lead and copper at Agency-approved sites and from the number of sites subsection (c) requires and demonstrate to the Agency that the 90th percentile levels for any and all rounds of monitoring conducted since the system became free of all lead-containing or copper-containing materials, as appropriate, meet certain criteria:

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- A) Lead Levels. To qualify for a full waiver or a lead partial waiver, the supplier must demonstrate that its 90th percentile lead level does not exceed 0.005 mg/L.
 - B) Copper Levels. To qualify for a full waiver or a copper partial waiver, the supplier must demonstrate that its 90th percentile copper level does not exceed 0.65 mg/L.
- 3) Agency Approval of Waiver Application. The Agency must notify the supplier of its waiver determination in a SEP stating the basis of its decision and any condition on the waiver. As a condition on the waiver, the Agency may require the supplier 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, etc.) to avoid the risk of lead or copper concentration of concern in tap water. The small system supplier must continue monitoring for lead and copper at the tap as subsections (d)(1) through (d)(4) require, as appropriate, until the supplier receives written notification from the Agency approving the waiver.
- 4) Monitoring Frequency for Suppliers with Waivers
- A) A supplier with a full waiver must conduct tap water monitoring for lead and copper under subsection (d)(4)(D) at the reduced number of sampling sites subsection (c) identifies at least once every nine years and provide to the Agency the materials certification subsection (g)(1) specifies for both lead and copper together with the monitoring results. The supplier must collect samples every nine years no later than the ninth calendar year.
 - B) A supplier with a partial waiver must conduct tap water monitoring for the waived contaminant under subsection (d)(4)(D) at the reduced number of sampling sites subsection (c) specifies at least once every nine years and provide to the Agency the materials certification subsection (g)(1) specifies pertaining to the waived contaminant together with the monitoring results. ~~The~~Such a supplier also must continue to monitor for the non-waived contaminant in under the applicable of subsections (d)(1) through (d)(4).
 - C) A supplier with a full or partial waiver must notify the Agency in writing under Section 611.1360(a)(3) of any upcoming long-term change in treatment or adding a new source, as that rule describes. The Agency must review and approve adding a new source or

27517 long-term change in water treatment before the supplier
27518 implements it. The Agency may add or modify waiver conditions
27519 (e.g., require recertification that the supplier's system is free of
27520 lead-containing or copper-containing materials, require additional
27521 rounds of monitoring, etc.) if the Agency determines that the
27522 modifications are necessary to address system treatment or source
27523 water changes.

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27525 D) If a supplier with a full or partial waiver becomes aware that its
27526 system is no longer free of lead- or copper-containing materials, as
27527 appropriate (e.g., as a result of new construction or repairs), the
27528 supplier must notify the Agency in writing no later than 60 days
27529 after becoming aware of the change.

27530
27531 5) Continued Eligibility. If the supplier continues to comply with subsection
27532 (g)(4), the waiver will renew automatically, unless any of the conditions in
27533 subsections (g)(5)(A) through (g)(5)(C) occur. A supplier whose waiver
27534 the Agency revokes may re-apply for a waiver when the supplier again
27535 meets the appropriate materials and monitoring criteria of subsections
27536 (g)(1) and (g)(2).

27537
27538 A) A full waiver or a lead partial waiver does not renew if the supplier
27539 no longer satisfies the materials criteria of subsection (g)(1)(A) or
27540 has a 90th percentile lead level greater than 0.005 mg/L.

27541
27542 B) A full waiver or a copper partial waiver does not renew if the
27543 supplier no longer satisfies the materials criteria of subsection
27544 (g)(1)(B) or has a 90th percentile copper level greater than 0.65
27545 mg/L.

27546
27547 C) A waiver terminates when the Agency notifies the supplier that the
27548 Agency revokes the waiver, in writing and describing the basis of
27549 its decision.

27550
27551 6) Requirements Following Waiver Revocation. A supplier whose full or
27552 partial waiver the Agency revokes must comply with specific corrosion
27553 control treatment and lead and copper tap water monitoring requirements:

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27555 A) If the supplier exceeds the lead or copper action level, the supplier
27556 must implement corrosion control treatment within the deadlines
27557 Section 611.1351(e) specifies and any other applicable
27558 requirements under this Subpart AG.

27559

- 27560 B) If the supplier meets both the lead and the copper action levels, the
27561 supplier must monitor for lead and copper at the tap no less
27562 frequently than once every three years using the reduced number of
27563 sampling sites subsection (c) specifies.
27564
- 27565 7) Pre-Existing Waivers. A small system supplier waiver the Agency
27566 granted in writing prior to April 11, 2000 remains in effect under certain
27567 conditions:
27568
 - 27569 A) If the supplier demonstrates that its system is free of both lead-
27570 containing and copper-containing materials, as subsection (g)(1)
27571 requires, and that its 90th percentile lead levels and 90th percentile
27572 copper levels comply with subsection (g)(2), the waiver remains in
27573 effect so long as the supplier continues to be eligible for a waiver
27574 under subsection (g)(5). The supplier must complete its first round
27575 of tap water monitoring under subsection (g)(4) no later than nine
27576 years after the supplier last monitored for lead and copper at the
27577 tap.
27578
 - 27579 B) If the supplier complies with the materials criteria of subsection
27580 (g)(1) but has not complied with the monitoring criteria of
27581 subsection (g)(2), the supplier must conduct a round of monitoring
27582 for lead and copper at the tap demonstrating that it complied with
27583 subsection (g)(2). ~~Then~~ ~~Thereafter~~, the waiver remains in effect as
27584 long as the supplier complies with the continued eligibility criteria
27585 in subsection (g)(5). The supplier must complete its first round of
27586 tap water monitoring under subsection (g)(4) no later than nine
27587 years after the supplier conducts the monitoring under subsection
27588 (g)(2).
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27590 BOARD NOTE: This Section corresponds with Section 611.1356 and derives from 40 CFR
27591 141.86 (2020).

27592
27593 (Source: Amended at 50 Ill. Reg. _____, effective _____)
27594

27595 **Section 611.1357 Monitoring for Water Quality Parameters**

27596
27597 A large system supplier or any small or medium-sized system supplier exceeding the lead or
27598 copper action level must monitor water quality parameters in addition to lead and copper under
27599 this Section.

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- 27601 a) General Requirements
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- 1) Sample Collection Methods
 - A) Using Tap Samples. In totality, all tap samples a supplier collects must represent water quality throughout the supplier's distribution system, considering the number of persons served, the different sources of water, the different treatment methods the supplier ~~uses~~**employs**, and seasonal variability. Although a supplier may conveniently conduct tap sampling for water quality parameters at sites it uses for coliform sampling under Subpart L, the supplier needs not do so, and the supplier needs not perform tap sampling under this Section at taps it targeted for lead and copper sampling under Section 611.1356(a).
 - B) Using Entry Point Samples. A supplier must collect samples at entry points to the distribution system from locations representing each source after treatment. If a supplier draws water from more than one source and combines the sources before distribution, the supplier must sample at an entry point to the distribution system during normal operating conditions (i.e., when the supplier uses water representing all sources).
 - 2) Number of Samples
 - A) Tap Samples. A supplier must collect two tap samples for applicable water quality parameters during each six-month monitoring period under subsections (b) through (e) from the number of sites the first column of Table F (labelled "standard monitoring") indicates.
 - B) Entry Point Samples
 - i) Initial Monitoring. Except as subsection (c)(3) provides otherwise, a supplier must collect two samples for each applicable water quality parameter at each entry point to its distribution system during each six-month monitoring period subsection (b) specifies.
 - ii) Subsequent Monitoring. A supplier must collect one sample for each applicable water quality parameter at each entry point to its distribution system during each six-month monitoring period subsections (c) through (e) specify.
 - b) Initial Sampling

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- 1) Large Systems. A large system supplier must measure the applicable water quality parameters subsection (b)(3) specifies at taps and at each entry point to its distribution system during each six-month monitoring period Section 611.1356(d)(1) specifies.
 - 2) Small and Medium-Sized Systems. A small or medium-sized water system supplier must measure the applicable water quality parameters subsection (b)(3) specifies at the locations this subsection (b) specifies during each six-month monitoring period Section 611.1356(d)(1) specifies during which the supplier exceeds the lead or copper action level.
 - 3) Water Quality Parameters
 - A) pH;
 - B) Alkalinity;
 - C) Orthophosphate, when the supplier uses an inhibitor containing a phosphate compound;
 - D) Silica, when the supplier uses an inhibitor containing a silicate compound;
 - E) Calcium;
 - F) Conductivity; and
 - G) Water temperature.
- c) Monitoring after Installing Corrosion Control
- 1) Large Systems. A large system supplier installing optimal corrosion control treatment under Section 611.1351(d)(4) must measure the water quality parameters at the locations and frequencies subsections (c)(4) and (c)(5) specify during each six-month monitoring period Section 611.1356(d)(2)(A) specifies.
 - 2) Small and Medium-Sized Systems. A small or medium-sized system installing optimal corrosion control treatment under Section 611.1351(e)(5) must measure the water quality parameters at the locations and frequencies subsections (c)(4) and (c)(5) specify during each six-

- 27688 month monitoring period Section 611.1356(d)(2)(B) specifies during
27689 which the supplier exceeds the lead or copper action level.
27690
- 27691 3) Groundwater Systems. A groundwater system supplier can limit entry
27692 point sampling under subsection (c)(5) to those entry points representing
27693 water quality and treatment conditions throughout the system. If water
27694 from untreated groundwater sources mixes with water from treated
27695 groundwater sources, the system must monitor for water quality
27696 parameters at both representative entry points receiving treatment and
27697 representative entry points not receiving treatment. Prior to starting
27698 monitoring under this subsection (c)(3), the supplier must provide written
27699 information to the Agency identifying the selected entry points and
27700 documentation sufficient to demonstrate that the sites represent water
27701 quality and treatment conditions throughout the system, including
27702 information on seasonal variability.
27703
- 27704 4) Tap Water Samples. The supplier must collect two water samples at each
27705 tap for each of five water quality parameters:
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- 27707 A) pH;
 - 27708
 - 27709 B) Alkalinity;
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 - 27711 C) Orthophosphate if the supplier uses an inhibitor containing a
27712 phosphate compound;
 - 27713
 - 27714 D) Silica if the supplier uses an inhibitor containing a silicate
27715 compound; and
 - 27716
 - 27717 E) Calcium if the supplier uses calcium carbonate stabilization as part
27718 of corrosion control.
27719
- 27720 5) Entry Point Samples. Except as subsection (c)(3) provides otherwise, a
27721 supplier must collect one sample at each entry point to its distribution
27722 system every two weeks (bi-weekly) for three water quality parameters:
27723
- 27724 A) pH;
 - 27725
 - 27726 B) If the supplier adjusts alkalinity as part of optimal corrosion
27727 control, a reading of the chemical dosage rate the supplier uses to
27728 adjust alkalinity and the alkalinity concentration; and
27729

27730 C) If the supplier uses a corrosion inhibitor as part of optimal
27731 corrosion control, a reading of the inhibitor dosage rate the
27732 supplier uses and the orthophosphate or silica concentration.
27733

27734 BOARD NOTE: Subsections (c)(1) and (c)(2) derive from 40 CFR 141.87(c)
27735 (2020), subsection (c)(3) derives from 40 CFR 141.87(c)(3) (2020), subsection
27736 (c)(4) derives from 40 CFR 141.87(c)(1) (2020), and subsection (c)(5) derives
27737 from 40 CFR 141.87(c)(2) (2020).
27738

27739 d) Monitoring after the Agency Specifies Water Quality Parameter Values for
27740 Optimal Corrosion Control
27741

27742 1) Large-Sized Water Systems. After the Agency specifies the values for
27743 water quality control parameters reflecting optimal corrosion control
27744 treatment under Section 611.1352(f), a large-sized water system supplier
27745 must monitor the applicable water quality parameters under subsection (c)
27746 and determine whether the supplier complies with Section 611.1352(g)
27747 every six months, with the first six-month period to begin on the sooner of
27748 January 1 or July 1 after the Agency specifies the optimal values under
27749 Section 611.1352(f).
27750

27751 2) Small and Medium-Sized System Suppliers. A small or medium-sized
27752 system supplier must monitor during each six-month monitoring period
27753 this subsection (d) specifies during which the supplier exceeds the lead or
27754 copper action level. For a small or medium-sized system supplier subject
27755 to a reduced monitoring frequency under Section 611.1356(d)(4) at the
27756 time it exceeds the action level, the start of the applicable six-month
27757 monitoring period under this subsection (d) coincides with the start of the
27758 applicable monitoring period under Section 611.1356(d)(4).
27759

27760 3) A supplier must determine whether it complies with Agency-designated
27761 optimal water quality parameter as Section 611.1352(g) specifies.
27762

27763 e) Reduced Monitoring
27764

27765 1) Reduced Tap Monitoring. A supplier maintaining the range of values for
27766 the water quality parameters reflecting optimal corrosion control treatment
27767 during each of two consecutive six-month monitoring periods under
27768 subsection (d) must continue monitoring at the entry points to the
27769 distribution system as subsection (c)(5) specifies. The supplier may
27770 collect two samples from each tap for applicable water quality parameters
27771 from the reduced number of sites the second column of Table F (Standard

27772 Monitoring) indicates during each subsequent six-month monitoring
27773 period.

27774
27775 2) Reduced Monitoring Frequency
27776

27777 A) Staged Reductions in Monitoring Frequency
27778

27779 i) Annual Monitoring. A supplier maintaining the range of
27780 values for the water quality parameters reflecting optimal
27781 corrosion control treatment under Section 611.1352(f)
27782 during three consecutive years of monitoring may reduce
27783 its tap sampling frequency for applicable water quality
27784 parameters subsection (e)(1) specifies from every six
27785 months to annually. The supplier may only begin this
27786 reduced sampling during the calendar year immediately
27787 following the end of the monitoring period in which the
27788 third consecutive year of six-month monitoring occurs.
27789

27790 ii) Triennial Monitoring. A supplier maintaining the range of
27791 values for the water quality parameters reflecting optimal
27792 corrosion control treatment under Section 611.1352(f)
27793 during three consecutive years of annual monitoring under
27794 subsection (e)(2)(A)(i) may reduce its tap sampling
27795 frequency for applicable water quality parameters
27796 subsection (e)(1) specifies from annually to once every
27797 three years. The supplier must conduct this triennial
27798 monitoring no later than every third calendar year.
27799

27800 B) A supplier may reduce its tap sampling frequency for applicable
27801 water quality parameters in subsection (e)(1) to once every three
27802 years if the supplier demonstrates that it complies with subsections
27803 (e)(2)(B)(i) through (e)(2)(B)(iii) during two consecutive
27804 monitoring periods, subject to subsection (e)(2)(B)(iv).
27805

27806 i) The supplier must demonstrate that its tap water 90th
27807 percentile level for lead is less than or equal to the PQL for
27808 lead in Section 611.1359(a)(1)(B).
27809

27810 ii) The supplier must demonstrate that its tap water 90th
27811 percentile level for copper is less than or equal to 0.65
27812 mg/L for copper in Section 611.1350(c)(2).
27813

27856 water samples under specific requirements for sample location, number of
27857 samples, and collection methods:

27858
27859 A) A groundwater supplier must take a minimum of one sample at
27860 every entry point to the distribution system representing each well
27861 after treatment (a “sampling point”). The supplier must take one
27862 sample at the same sampling point unless conditions make another
27863 sampling point more closely represent a source or treatment plant.

27864
27865 B) A surface water supplier must take a minimum of one sample at
27866 every entry point to the distribution system after treatment or in the
27867 distribution system at a sampling point. The supplier must take
27868 each sample at the same sampling point unless conditions make
27869 another sampling point more closely represent a source or
27870 treatment plant.

27871
27872 BOARD NOTE: For this subsection (a)(1)(B), a system using a
27873 combination of surface water and groundwater sources is a surface
27874 water system.

27875
27876 C) If a supplier draws water from more than one source and combines
27877 the sources before distribution, the supplier must sample at an
27878 entry point to the distribution system during periods of normal
27879 operating conditions (i.e., when water represents all sources being
27880 used).

27881
27882 D) The Agency may issue a SEP reducing the total number of samples
27883 a supplier must analyze by allowing the supplier to composite
27884 samples. Certified laboratory personnel must composite the
27885 samples. A composite sample may include a maximum of five
27886 samples. However, if the lead concentration in the composite
27887 sample is greater than or equal to 0.001 mg/L or the copper
27888 concentration is greater than or equal to 0.160 mg/L, the supplier
27889 must do either of two things:

27890
27891 i) The supplier must take and analyze a follow-up sample
27892 within 14 days at each sampling point included in the
27893 composite sample; or

27894
27895 ii) If duplicate samples or sufficient volumes of the original
27896 samples are available from each sampling point the
27897 certified laboratory used in the composite sample, the
27898 supplier may use those instead of resampling.

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- 2) SEP Requiring an Additional Sample
 - A) Upon determining that sampling indicates exceedance of the lead or copper MPC under Section 611.1353(b)(4), the Agency must issue a SEP requiring the supplier to collect one additional sample as soon as possible after the initial sample at the same sampling point but before two weeks after the supplier took the initial sample.
 - B) If a supplier takes an Agency-required confirmation sample for lead or copper, the supplier must average the results obtained from the initial sample with those from the confirmation sample to determine whether it complies with the Agency-specified lead and copper MPCs.
 - i) For averaging, consider any analytical result below the MDL as zero.
 - ii) Consider any value above the MDL but below the PQL either as the measured value or one-half the PQL.
- b) Monitoring Frequency after System Exceeds Tap Water Action Level. A supplier exceeding the lead or copper action level in tap sampling must collect one source water sample from each entry point to its distribution system no later than six months after the end of the monitoring period during which the supplier exceeds the lead or copper action level. For annual or less frequent monitoring periods, the end of the monitoring period is September 30 of the calendar year during which the sampling occurs or the last day of any alternate period the Agency establishes in a SEP.
- c) Monitoring Frequency after Installation of Source Water Treatment. A supplier installing source water treatment under Section 611.1353(a)(3) must collect an additional source water sample from each entry point to its distribution system during each of two consecutive six-month monitoring periods ~~within or before~~ 36 months after completing step 2, as Section 611.1353(a)(4) specifies.
- d) Monitoring Frequency after the Agency Specifies the Lead and Copper MPCs or Determines That Source Water Treatment Is Not Needed
 - 1) A supplier must monitor at the frequency subsection (d)(1)(A) or (d)(1)(B) specifies if the Agency specifies the MPCs under Section 611.1353(b)(4)

27941 or determines that the supplier needs not install source water treatment
27942 under Section 611.1353(b)(2).

27943
27944 A) GWS Suppliers

27945
27946 i) A GWS supplier sampling under subsection (d)(1) must
27947 collect samples once during the three-year compliance
27948 period (as Section 611.101 defines the term) during which
27949 the Agency makes its determination under Section
27950 611.1353(b)(4) or 611.1353(b)(2).

27951
27952 ii) A GWS supplier sampling under subsection (d)(1) must
27953 sample once during each subsequent compliance period.

27954
27955 iii) A supplier must collect triennial samples every third
27956 calendar year.

27957
27958 B) A SWS or mixed system supplier must collect samples once during
27959 each calendar year, the first annual monitoring period to begin
27960 during the year in which the Agency makes its determination under
27961 Section 611.1353(b)(4) or 611.1353(b)(2).

27962
27963 2) A supplier needs not sample source water for lead or copper if the supplier
27964 meets the action level for the specific contaminant in all tap water samples
27965 during the entire source water sampling period under subsection (d)(1)(A)
27966 or (d)(1)(B).

27967
27968 e) Reduced Monitoring Frequency

27969
27970 1) A GWS supplier may reduce its source water monitoring frequency for
27971 lead and copper to once during each nine-year compliance cycle (as
27972 Section 611.101 defines the term) ~~if provided~~ the supplier collects the
27973 samples no later than every ninth calendar year, and only if the supplier
27974 meets one of certain criteria:

27975
27976 A) The supplier demonstrates that finished drinking water entering the
27977 distribution system remains below the MPCs for lead and copper
27978 the Agency specifies under Section 611.1353(b)(4) during at least
27979 three consecutive compliance periods under subsection (d)(1); or

27980
27981 B) The Agency determines in a SEP that the supplier does not need
27982 source water treatment, and the supplier demonstrates that its
27983 source water concentrations of lead was less than or equal to 0.005

27984 mg/L and copper was less than or equal to 0.65 mg/L during at
27985 least three consecutive compliance periods during which the
27986 supplier sampled under subsection (d)(1).
27987

27988 2) A SWS or mixed system supplier may reduce its monitoring frequency
27989 subsection (d)(1) requires to once during each nine-year compliance cycle
27990 (as Section 611.101 defines the term) if the supplier collects the samples
27991 no later than every ninth calendar year, and only if the supplier meets one
27992 of certain criteria:
27993

27994 A) The supplier demonstrates that finished drinking water entering its
27995 distribution system remains below the MPCs for lead and copper
27996 the Agency specifies under Section 611.1353(b)(4) for at least
27997 three consecutive years; or
27998

27999 B) The Agency issues a SEP determining that the supplier does not
28000 need source water treatment, and the supplier demonstrates that its
28001 source water concentrations of lead was less than or equal to 0.005
28002 mg/L and copper was less than or equal to 0.65 mg/L during at
28003 least three consecutive years.
28004

28005 3) A supplier using a new source of water may not reduce its monitoring for
28006 lead or copper until after the supplier demonstrates by samples it collected
28007 from the new source during three consecutive monitoring periods of the
28008 appropriate duration subsection (d)(1) provides that lead or copper levels
28009 are below the MPC the Agency specifies under Section 611.1353(a)(4).
28010

28011 BOARD NOTE: This Section corresponds with Section 611.358 and derives from 40 CFR
28012 141.88 (2020).

28013 (Source: Amended at 50 Ill. Reg. _____, effective _____)
28014
28015

28016 **Section 611.1360 Reporting**

28017 A supplier must report specific information to the Agency as this Section provides.
28018
28019

28020 a) Reporting for Tap, Lead, and Copper, and Water Quality Parameter Monitoring
28021

28022 1) Except as subsection (a)(1)(H) provides otherwise, a supplier must report
28023 certain information for all samples Section 611.1356 specifies and for all
28024 water quality parameter samples Section 611.1357 specifies within ten
28025 days after the end of each applicable sampling period Sections 611.1356
28026 and 611.1357 specify (i.e., every six months, annually, triennially, or

- 28027 every nine years). For a monitoring period shorter than six months, the
 28028 end of the monitoring period is the last date on which the supplier may
 28029 collect samples during that period, as Sections 611.1356 and 611.1357
 28030 specify.
- 28031
- 28032 A) The results of all tap samples for lead and copper, including the
 28033 location of each site and the criteria under Section 611.1356(a)(3)
 28034 through (a)(7) under which the supplier selected the site for the
 28035 supplier's sampling pool;
- 28036
- 28037 B) Supporting documents for each tap water lead or copper sample the
 28038 supplier requests the Agency invalidate under Section
 28039 611.1356(f)(2);
- 28040
- 28041 C) This subsection (a)(1)(C) corresponds with 40 CFR
 28042 141.90(a)(1)(iii) (2020), a provision that USEPA removed and
 28043 marked "reserved". This statement preserves structural parity with
 28044 the federal rules;
- 28045
- 28046 D) The 90th percentile lead and copper concentrations the supplier
 28047 measures from among all lead and copper tap samples the supplier
 28048 collects during each sampling period (calculated under Section
 28049 611.1350(c)(3)), unless the Agency calculates the system's 90th
 28050 percentile lead and copper levels under subsection (h);
- 28051
- 28052 E) With the exception of initial tap sampling under Section
 28053 611.1356(d)(1), the supplier must designate any site it did not
 28054 sample during previous sampling periods and explain why
 28055 sampling sites have changed;
- 28056
- 28057 F) The results of all tap samples for pH and the applicable of
 28058 alkalinity, calcium, conductivity, temperature, and orthophosphate,
 28059 and silica the supplier collects under Section 611.1357(b) through
 28060 (e);
- 28061
- 28062 G) The results of all samples the supplier collects at entry points for
 28063 applicable water quality parameters under Section 611.1357(b)
 28064 through (e); and
- 28065
- 28066 H) A supplier must report the results of all water quality parameter
 28067 samples the supplier collects under Section 611.1357(c) through (f)
 28068 during each six-month monitoring period Section 611.1357(d)
 28069 specifies within the first ten days following the end of the

28070 monitoring period, unless the Agency specifies a more frequent
28071 reporting requirement in a SEP.

28072
28073 2) For an NTNCWS supplier, or a CWS supplier in Section
28074 611.1355(b)(7)(A) and (b)(7)(B) that does not have enough taps for first-
28075 liter samples, ~~first draw tap samples~~, the supplier must do one of two
28076 things:

28077
28078 A) The supplier must identify to the Agency in writing standing times
28079 and locations for enough non- first-liter samples, ~~first draw tap~~
28080 ~~samples~~ to make up its sampling pool under Section
28081 611.1356(b)(5), unless the Agency waives prior Agency approval
28082 of non-first-draw sampling sites the supplier selects under Section
28083 611.1356(b)(5); or

28084
28085 B) If the Agency waives prior approval of non-first-draw sampling
28086 sites the supplier selects, the supplier must identify each site that
28087 did not meet the six-hour minimum standing time and the length of
28088 standing time for that particular substitute sample collected under
28089 Section 611.1356(b)(5) in writing and include this information
28090 with the lead and copper tap sample results the supplier must
28091 submit under subsection (a)(1)(A).

28092
28093 3) At a time the Agency specifies in a SEP, a supplier deemed by rule to have
28094 optimized corrosion control under Section 611.1351(b)(3), a water
28095 supplier subject to reduced monitoring under Section 611.1356(d)(4), or a
28096 water supplier the Agency grants a monitoring waiver under Section
28097 611.1356(g), must document adding a new source or any change in water
28098 treatment to the Agency describing the change or addition. If the Agency
28099 does not specify a time in a SEP, the supplier must document the changes
28100 to the Agency as early as possible prior to adding a new source or any
28101 change in water treatment.

28102
28103 4) A small system supplier applying for a monitoring waiver under Section
28104 611.1356(g) or subject to a waiver granted under Section 611.1356(g)(3)
28105 must provide certain information to the Agency in writing before the
28106 applicable deadline:

28107
28108 A) Before the start of the first applicable monitoring period in Section
28109 611.1356(d), any small water system supplier applying for a
28110 monitoring waiver must provide the documents demonstrating that
28111 the supplier qualifies for a waiver under Section 611.1356(g)(1)
28112 and (g)(2).

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- B) No later than nine years after the monitoring the supplier previously conducted under Section 611.1356(g)(2) or Section 611.1356(g)(4)(A), a small system supplier wanting to maintain its monitoring waiver must provide the information Section 611.1356(g)(4)(A) and (g)(4)(B) requires.
 - C) No later than 60 days after the small-sized system water supplier becomes aware that it is no longer free of lead-containing or copper-containing material, a small system supplier having a monitoring waiver must notify the Agency in writing, stating the circumstances introducing lead- or copper-containing materials into the system and describing any corrective action the supplier plans to remove these materials.
- 5) A GWS supplier limiting its water quality parameter monitoring to a subset of entry points under Section 611.1357(c)(3) must identify its selected entry points to the Agency in writing, including information sufficiently demonstrating that the sites represent water quality and treatment conditions throughout the supplier's system.
- b) Reporting for Source Water Monitoring
- 1) A supplier must report its sampling results for all source water samples it collects under Section 611.1358 within ten days after the end of each source water sampling period (i.e., annually, per compliance period (triennially), per compliance cycle (every nine years)) Section 611.1358 specifies.
 - 2) With the exception of the first round of source water sampling a supplier conducts under Section 611.1358(b), a supplier must specify any site it did not sample during previous sampling periods, explaining why the supplier changed the sampling point.
- c) Reporting for Corrosion Control Treatment. Before the applicable dates under Section 611.1351, a supplier must report certain information:
- 1) A supplier demonstrating that it already optimized corrosion control must provide the information Section 611.1352(b)(2) or (b)(3) requires.
 - 2) A supplier that must optimize corrosion control must provide its recommendation regarding optimal corrosion control treatment under Section 611.1352(a).

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- 3) A supplier that must evaluate the effectiveness of corrosion control treatments under Section 611.1352(c) must provide the information Section 611.1352(c) requires.
 - 4) A supplier that must install optimal corrosion control the Agency approves under Section 611.1352(d) must provide a copy of the Agency permit letter, which acts as certification that the supplier completed installing the permitted treatment.
- d) Reporting for Source Water Treatment. Before the applicable dates in Section 611.1353, a supplier must provide certain information to the Agency:
- 1) If Section 611.1353(b)(1) requires, the supplier must provide its recommendation on source water treatment; or
 - 2) A supplier that must install source water treatment under Section 611.1353(b)(2) must provide a copy of the Agency permit letter, which acts as certification that the supplier completed installing the Agency-approved treatment within 24 months after Agency approval.
- e) Reporting for Lead Service Line Replacement. A supplier must report certain information to the Agency demonstrating it complies with Section 611.1354:
- 1) No later than 12 months after the end of a monitoring period during which a supplier exceeds the lead action level in sampling under Section 611.1354(a), the supplier must submit documents to the Agency:
 - A) The material evaluation the supplier conducted as Section 611.1356(a) requires;
 - B) Identify the initial number of lead service lines in its distribution system at the time the supplier exceeds the lead action level; and
 - C) The supplier's schedule for annually replacing at least seven percent of the initial number of lead service lines in its distribution system.
 - 2) No later than 12 months after the end of a monitoring period during which a supplier exceeds the lead action level in monitoring under Section 611.1354(a) and every 12 months after that, the supplier must demonstrate either of two things to the Agency in writing:

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- A) That the supplier replaced at least seven percent of the initial number of lead service lines in its distribution system during the previous 12 months (or any greater number of lines the Agency specifies under Section 611.1354(e)); or
 - B) That the supplier conducted sampling demonstrating that the lead concentration in all service line samples from individual lines under Section 611.1356(b)(3) is less than or equal to 0.015 mg/L. This requires that the total number of lines that the supplier replaced, combined with the total number meeting the criteria of Section 611.1354(c), must equal at least seven percent of the initial number of lead lines the supplier identified under subsection (e)(1) (or the percentage the Agency specifies under Section 611.1354(e)).
- 3) The annual letter the supplier submits to the Agency under subsection (e)(2) must contain certain information:
- A) The number of lead service lines the supplier originally scheduled to replace be replaced during the previous year of its replacement schedule;
 - B) The number and location of each lead service line the supplier actually replaced during the previous year of its replacement schedule; and
 - C) If measured, the tap water lead concentration from each lead service line the supplier sampled under Section 611.1356(b)(3), the location of each lead service line sampled, the sampling method used, and the sampling date.
- 4) Any supplier collecting lead service line samples following [partial service line replacement](#)~~partial lead service line replacement~~ Section 611.1354 requires must report the results to the Agency before the tenth day of the next month after the supplier receives the laboratory results or as the Agency specifies in a SEP. The Agency may issue a SEP waiving the supplier reporting these monitoring results. A supplier must also report any additional information the Agency specifies in a time and manner the Agency prescribes to verify that the supplier completed all [partial service line replacement](#)~~partial lead service line replacement~~ activities.
- f) Reporting for Public Education Program

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- 1) A supplier subject to Section 611.1355 must send documents to the Agency containing certain items within ten days after the end of each period in which the supplier must perform public education under Section 611.1355(b):
 - A) Documents showing that the supplier delivered the public education materials complying with the content requirements in Sections 611.1355(a) and the delivery requirements in Section 611.1355(b); and
 - B) A list of all newspapers, radio stations, television stations, and facilities and organizations to which the supplier delivered public education materials when this Subpart AG required the supplier to perform public education tasks.
 - 2) Unless the Agency issues a SEP requiring a supplier to do so, a supplier that previously submitted the information subsection (f)(1)(B) requires need not resubmit the information subsection (f)(1)(B) requires, as long as no changes in the distribution list occurred, and the supplier certifies that it distributed the public education materials to the same list the supplier previously submitted.
 - 3) No later than three months after the end of the monitoring period, each supplier must mail a sample copy of the consumer notification of tap water monitoring results to the Agency, certifying that the supplier distributed the notification in a manner complying with Section 611.1355(d).
- g) Reporting Additional Monitoring Data. Any supplier collecting sampling data in addition to what this Subpart AG requires must report those sampling data to the Agency within the first ten days following the end of the applicable sampling periods Sections 611.1356 through 611.1358 specify during which the supplier collected the samples.
- h) Reporting 90th Percentile Lead and Copper Concentrations If the Agency Calculates a System's 90th Percentile Concentrations. A water supplier needs not report its 90th percentile lead and copper concentrations during each monitoring period, as subsection (a)(1)(D) requires, under certain circumstances:
 - 1) The Agency previously notified the supplier that the Agency will calculate the water system's 90th percentile lead and copper concentrations based on the lead and copper tap results the supplier submitted under subsection (h)(2)(A), and the Agency specifies a date before the end of the applicable

- 28284 monitoring period when the supplier must provide the results from lead
- 28285 and copper tap water samples;
- 28286
- 28287 2) The supplier provides the specific information to the Agency before the
- 28288 date subsection (h)(1) specifies:
- 28289
- 28290 A) The results from of all tap water samples for lead and copper,
- 28291 including the location of each site and the Section 611.1356(a)(3),
- 28292 (a)(4), (a)(5), (a)(6), or (a)(7) criteria under which the supplier
- 28293 selected the site for its sampling pool under subsection (a)(1)(A);
- 28294 and
- 28295
- 28296 B) The supplier must identify sampling sites it used during the current
- 28297 monitoring period that it did not sample during previous
- 28298 monitoring periods, explaining why the supplier changed sampling
- 28299 sites; and
- 28300
- 28301 3) The Agency provides the written results of the 90th percentile lead and
- 28302 copper calculations to the supplier before the end of the monitoring period.
- 28303

28304 BOARD NOTE: This Section corresponds with Section 611.360 and derives from 40 CFR
28305 141.90 (2020).

28306 (Source: Amended at 50 Ill. Reg. _____, effective _____)

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28308

28309 **Section 611.1361 Recordkeeping**

28310

28311 Any supplier subject to this Subpart AG must ~~keep~~retain original records of all sampling data

28312 and analyses, reports, surveys, letters, evaluations, schedules, Agency determinations, and any

28313 other information Sections 611.1351 through Section 611.1360 require. Each supplier must

28314 ~~keep~~retain the records this Section requires on its premises for at least 12 years.

28315

28316 BOARD NOTE: This Section corresponds with Section 611.361 and derives from 40 CFR

28317 141.91 (2020).

28318

28319 (Source: Amended at 50 Ill. Reg. _____, effective _____)

28320

28321 SUBPART AH: INTERIM LEAD AND COPPER RULE REVISIONS 2024

28322

28323 Section 611.2350 General Requirements

- 28324
- 28325 a) Applicability and Scope
- 28326

- 28327 1) Applicability of and Compliance with this Subpart AH. This Subpart G,
28328 Subpart AG, and Subpart AH constitute NPDWRs for lead and copper.
28329 This Subpart G, Subpart AG, and Subpart AH apply to all community
28330 water systems (CWSs) and non-transient, non-community water systems
28331 (NTNCWSs).
- 28332
- 28333 A) A supplier must comply with this Subpart AH by October 16,
28334 2024, except as otherwise required by Section 611.2351, 611.2354,
28335 611.2355, 611.2356, or 611.2360.
- 28336
- 28337 B) If the Agency issued a SEP before October 30, 2024, that expires
28338 on or after November 1, 2027, and the SEP exempts a supplier
28339 under any rule in former Subpart G (now redesignated Subpart
28340 AH), the supplier must comply with this Subpart AH after the SEP
28341 expires, regardless of subsection (a)(1)(A). If the SEP expires
28342 before November 1, 2027, the supplier must comply with this
28343 Subpart AH as required by subsection (a)(1)(A).
- 28344
- 28345 C) The Agency may issue a SEP requiring a supplier to comply with
28346 specified rules in this Subpart G before subsection (a)(1)(A) or
28347 (a)(1)(B) otherwise requires or as necessary to address issues in a
28348 notice the Agency received from USEPA under 40 CFR 142.23 or
28349 142.30. The SEP must specify the rules in this Subpart G with
28350 which the supplier must comply and their counterparts in Subpart
28351 AH with which the supplier no longer needs to comply. The
28352 supplier must comply with the SEP-specified Subpart G rules in
28353 lieu of their counterparts in Subpart AH.
- 28354
- 28355 BOARD NOTE: This subsection (a)(1) derives from 40 CFR 141.80(a).
28356 USEPA's Lead and Copper Rules Revisions (LCRR) apply to all suppliers
28357 on December 16, 2021. However, USEPA delays complying with LCRR
28358 until October 16, 2024, when any previously granted exemption expires,
28359 or as provided otherwise by any of several specified rules for corrosion
28360 control treatment; lead service line replacement; public education,
28361 supplemental monitoring, and mitigation; monitoring; and reporting
28362 (corresponding with 35 Ill. Adm. Code 611.2351, 622.2354, 611.2355,
28363 611.2356, or 611.2360). Until a supplier must comply with the LCRR,
28364 USEPA requires the supplier to comply with subpart I of 40 CFR 141
28365 (2024). This requires the Board to codify three versions of the Lead and
28366 Copper Rule: one in Subpart G, representing the Lead and Copper Rules
28367 incorporating the LCRI (40 CFR 141(2024) one in Subpart AH,
28368 representing the Lead and Copper Rules prior to the LCRI (40 CFR 141

28369 (2024)), and one in Subpart AG, representing LCRR prior to (40 CFR 141
28370 (2020)).

28371
28372 2) Scope. This Subpart AH establishes a treatment technique including
28373 requirements for corrosion control treatment, source water treatment, lead
28374 service line inventory, replacing lead service lines, public notice,
28375 monitoring for lead in schools and childcare facilities, and public
28376 education. Lead and copper action levels and the lead trigger level in
28377 samples collected at consumers' taps prompt these requirements. The
28378 rules in this Subpart AH requiring lead sampling in schools and childcare
28379 facilities and public education apply to all CWS.

28380
28381 b) Definitions. For this Subpart G only, this subsection (b) defines certain terms:

28382
28383 "Action level" means the computed concentration of lead or copper in
28384 water under subsection (c) determining applicability of some treatment
28385 requirements under this Subpart AH. The action level for lead is 0.015
28386 mg/ L, and the action level for copper is 1.3 mg/ L.

28387
28388 "Aerator" means the device embedded in a water faucet to enhance air
28389 flow in the water stream and prevent splashing.

28390
28391 "Childcare facility" means a facility providing childcare, day care, or early
28392 learning services to children under a license issued by a State or local
28393 agency.

28394 BOARD NOTE: See, e.g., the Childcare Act of 1969 [225 ILCS 10].

28395
28396 "Corrosion inhibitor" means a substance that can reduce corrosivity of
28397 water toward metal plumbing materials, especially lead and copper, by
28398 forming a protective film on the interior surface of those materials.

28399
28400 "Effective corrosion inhibitor residual" means a concentration of corrosion
28401 inhibitor in the drinking water sufficient to form a passivating film on the
28402 interior walls of pipe.

28403
28404 "Elementary school" means a school classified by State and local practice
28405 as elementary and comprising any span of grades (including pre-school)
28406 through grade 8.

28407
28408 "Exceed" or "exceedance", relative to either the lead or the copper action
28409 level, means that the 90th percentile concentration of the samples the
28410 supplier collected during a six-month tap monitoring period is greater than
28411 the lead or copper action level.

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"Fifth-liter tap sample" means a one-liter tap water sample a supplier collects under Section 611.2356(b).

"Find-and-fix" means the requirements under this Subpart AH that water systems must perform at every tap sampling site yielding a lead result above 15 µg/ L.

"First-draw tap sample" means the first one-liter sample of tap water a supplier collects under Section 611.2356(b)(2).

"Full lead service line replacement" means replacing a lead service line (as well as galvanized service lines requiring replacement) resulting in the entire length of the service line, regardless of service line ownership, complying with Section 611.126 at the time of replacement. A full lead service line replacement includes replacing a service line having only one portion that is lead, such as a service line previously subject to a partial lead service line replacement, as long as the entire service line complies with Section 611.126 after the replacement. A full lead service line replacement requires replacing galvanized service lines downstream of a lead service line. A full lead service line replacement could leave a lead service line in place in the ground but out of service if using a new non-lead service line replaces the out-of-service lead service line.

"Galvanized requiring replacement" refers to a galvanized service line Section 611.2354(a)(4)(B) describes.

BOARD NOTE: This definition derives from 40 CFR 141.84(a)(4)(ii) for a term used in various rules.

"Galvanized service line" means iron or steel piping zinc-dipped to prevent corrosion and rusting.

"Gooseneck, pigtail, or connector" is a short section of flexible piping, typically not exceeding two feet, connecting segments of rigid service piping. Lead goosenecks, pigtails, and connectors are not part of the lead service line, but Section 611.2354(c) may require replacing them.

"Large supplier" means a supplier regularly serving water to more than 50,000 persons.

"Lead service line" means a portion of pipe made of lead connecting the water main to the building inlet. A lead service line may be owned by the water system, the property owner, or both. A galvanized service line is a

28455 lead service line if it was or is downstream of any lead service line or
28456 service line of unknown material. If the only lead piping serving a home
28457 is a lead gooseneck, pigtail, or connector, and it is not a galvanized service
28458 line that is considered a lead service line, the service line is not a lead
28459 service line. Under Section 611.2356(a) only, a galvanized service line is
28460 not considered a lead service line.

28461
28462 "Lead status unknown service line" means a service line that has not been
28463 shown to comply with Section 611.126. Physically verifying the material
28464 composition of a service line (e.g., copper or plastic) is not necessary for
28465 its lead status to be identified (e.g., if records demonstrate that the service
28466 line was installed after a municipal, State, or federal lead ban).

28467 BOARD NOTE: See the description of "lead status unknown" in Section
28468 611.2354(a)(4)(D).

28469
28470 "Lead trigger level" means a particular concentration of lead in water that
28471 prompts certain activities under this Subpart AH. The trigger level for
28472 lead is a concentration of 10 µg/L.

28473
28474 "Maximum permissible concentration" or "MPC" means the concentration
28475 of lead or copper in finished water entering the supplier's distribution
28476 system, which the Agency designates in a SEP based on the contaminant
28477 removal ability of the treatment properly operated and maintained.

28478 BOARD NOTE: This definition derives from 40 CFR 141.83(b)(4). (See
28479 Section 611.2353(b)(4)(B).)

28480
28481 "Meet" or "comply with", relating to either the lead or the copper action
28482 level, means that the 90th percentile concentration of the supplier's samples
28483 collected during a six-month tap monitoring period is less than or equal to
28484 the lead or copper action level.

28485
28486 "Mid-sized supplier" means a supplier regularly serving water to more
28487 than 10,000 persons up to 50,000 persons.

28488
28489 "Multiple-family residence" means a building in which multiple families
28490 currently reside, but not one that is also a "single-family structure".

28491
28492 "90th percentile concentration" means the concentration of lead or copper
28493 the supplier computes under subsection (c)(4) using the results of tap
28494 water sampling under Section 611.2356.

28495 BOARD NOTE: This definition derives from 40 CFR 141.80(c)(4).

28496

28497 "Optimal corrosion control treatment" or "OCCT" means the corrosion
28498 control treatment minimizing the lead and copper concentrations at users'
28499 taps while ensuring that the treatment will not violate any national primary
28500 drinking water regulations.

28501
28502 "Partial lead service line replacement" means replacing any portion of a
28503 lead service line or galvanized requiring replacement service line leaving
28504 any length of the lead service line or galvanized requiring replacement
28505 service line in service and requiring replacement upon completion of the
28506 work. 611.354(d) allows partial lead service line replacements under
28507 limited circumstances, but these do not count towards the mandatory or
28508 goal-based lead service line replacement rate under Section 611.2354.

28509
28510 "Pitcher filter" means a non-plumbed water filtration device consisting of
28511 a gravity-fed water filtration cartridge and a filtered drinking water
28512 reservoir that is certified by its manufacturer, importer, or an accredited
28513 third-party certifying body as complying with the version of NSF/ANSI 53
28514 in effect on the date of manufacture or import.

28515 BOARD NOTE: NSF/ANSI 53 is the health-based standard for lead and
28516 several other contaminants for water filter devices, including pitcher filter-
28517 type devices. Identifying a device as certified under NSF/ANSI 53 at the
28518 time of purchase is possible. NSF maintains an on-line list of certified
28519 devices at info.nsf.org/Certified/dwtu/listings_leadreduction.asp. See the
28520 definition of "accredited third-party certifying body" in 35 Ill. Adm. Code
28521 611.126(b) relating to NSF/ANSI 372.

28522
28523 "Practical quantitation limit" or "PQL" means the lowest concentration of
28524 an analyte (substance) that a well-operated laboratory can measure with a
28525 high degree of confidence that the analyte is present at or above that
28526 concentration.

28527 BOARD NOTE: This definition derives from 40 CFR 141.89(a)(1)(ii)
28528 and (a)(1)(iv).

28529
28530 "Pre-stagnation flushing" means opening taps to flush standing water from
28531 plumbing before a minimum six-hour stagnation period before lead and
28532 copper tap sampling under Subpart AH.

28533
28534 "School" means any building or building complex associated with public,
28535 private, or charter institutions that primarily provides teaching and
28536 learning for elementary or secondary students.

28537
28538 "Secondary school" means a school comprising any span of grades
28539 beginning with the next grade following an elementary or middle school

28540 (usually 7, 8, or 9) and ending with or below grade 12. This definition
28541 includes both junior high schools and senior high schools.

28542
28543 "Single-family structure" means a building constructed as a residence for a
28544 single-family that the occupant currently uses as a residence or place of
28545 business.

28546
28547 "Small system supplier" or "small CWS supplier" means a CWS serving
28548 10,000 or fewer persons.
28549 BOARD NOTE: A small CWS is a small supplier that is a CWS. This
28550 definition derives from the preamble of 40 CFR 141.93. Corresponding
28551 Section 611.2363 distinguishes a small CWS supplier from an NTNCWS
28552 supplier.

28553
28554 "Small supplier" means a supplier regularly serving water to 10,000 or
28555 fewer persons.
28556 BOARD NOTE: USEPA did not revise its corresponding definition of
28557 "small water system" in 40 CFR 141.2 from 3,300 or fewer to 10,000 or
28558 fewer persons. This creates an inconsistency the Board corrected.

28559
28560 "Source water monitoring period" means any of the six-month periods
28561 during which a supplier must complete source water monitoring under
28562 Section 611.2358.

28563
28564 BOARD NOTE: The Board added this definition to avoid confusion with
28565 "tap sampling period", "tap monitoring period", and "water quality
28566 monitoring period", as used under this Subpart AH, and "compliance
28567 period" and "compliance cycle", as used elsewhere in this Part and Section
28568 611.101 defines.

28569
28570 "Supplier without corrosion control treatment" means a PWS not fulfilling
28571 either of two conditions or purchasing all of its water from a supplier not
28572 fulfilling either of two conditions:

28573
28574 Neither the PWS nor the supplier providing its water has Agency-
28575 approved optimal corrosion control treatment; or

28576
28577 No other water quality adjustment in either the PWS' or the
28578 supplier's treatment train infrastructure includes adjusting pH or
28579 alkalinity or adding corrosion inhibitor.

28580
28581 "Tap monitoring period" means the period of time during which a supplier
28582 must sample taps for lead and copper analyses. The lead and copper

28583 concentrations in tap samples determine the tap monitoring period, and the
28584 frequency can range from every six months (i.e., semi-annually) to once
28585 every nine years. A supplier semi-annually sampling taps must collect
28586 samples no less frequently than every six months, while a supplier
28587 annually sampling taps must sample no less frequently than every year. A
28588 supplier triennially sampling taps must collect samples no less frequently
28589 than every three years, and a supplier sampling taps under an Agency-
28590 issued waiver must sample no less frequently than every nine years. The
28591 start of each new tap monitoring period, with the exception of semi-annual
28592 monitoring, must begin on January 1.

28593 BOARD NOTE: This term is equivalent to "tap sampling monitoring
28594 period" in 40 CFR 141. "Tap monitoring period" describes sampling
28595 frequency.

28596
28597 "Tap sampling period" means the period within a tap monitoring period
28598 when the supplier must collect samples for lead and copper analysis. For a
28599 supplier sampling at a reduced frequency, the supplier must sample taps
28600 between June and September, unless the Agency issues a SEP approving a
28601 different four-month period.

28602 BOARD NOTE: "Tap sampling period" describes when the supplier
28603 collects samples.

28604
28605 "Tap sampling protocol" means the instructions a supplier gives to
28606 residents or those sampling on the supplier's behalf to sample taps under
28607 this Subpart AH.

28608
28609 "Water quality monitoring period" means any of the six-month periods
28610 during which a supplier must complete a cycle of tap and entry point water
28611 quality monitoring under Section 611.2357.

28612 BOARD NOTE: The Board added this definition. USEPA refers to these
28613 as "monitoring periods". The Board uses "water quality monitoring
28614 period" to avoid confusion with "tap sampling period", "tap monitoring
28615 period", and "source water monitoring period", as used under this Subpart
28616 AH, and "compliance period" and "compliance cycle", as used elsewhere
28617 in this Part and Section 611.101 defines.

28618
28619 "Wide-mouthed bottles" means bottles one liter in volume having a mouth
28620 that is at least 55 mm wide.

28621
28622 BOARD NOTE: This subsection (b) derives from 40 CFR 141.2.

28623
28624 c) Lead Trigger Level and Lead and Copper Action Levels. The supplier determines
28625 the lead trigger levels and lead and copper action levels based on tap water

28626 samples it collects under Section 611.2356 to calculate the 90th percentile
28627 concentration and tests using the analytical methods in 611.2359.

28628
28629 1) The supplier exceeds the lead trigger level if the 90th percentile lead
28630 concentration as subsection (c)(4) specifies is determined to be greater
28631 than 10 µg/ L.

28632
28633 2) The supplier exceeds the lead action level if the 90th percentile lead
28634 concentration is greater than 15 µg/ L.

28635
28636 3) The supplier exceeds the copper action level if the 90th percentile copper
28637 concentration is greater than 1.3 mg/ L.

28638
28639 4) The supplier must compute the 90th percentile lead and copper
28640 concentrations using the specified procedure:

28641
28642 A) Suppliers Not Having Sites with a Lead Service Line and Only
28643 Having Tier 3, 4, or 5 Sites Under Section 611.2356(a).

28644
28645 i) The supplier must list the results of all lead or copper
28646 samples it took during a tap sampling period in ascending
28647 order, ranging from the sample with the lowest
28648 concentration to the sample with the highest concentration.
28649 The supplier must assign each sampling result an ordinal
28650 number, ascending by single integers, assigning the number
28651 1 for the sample with the lowest contaminant level. The
28652 number the supplier assigns to the sample with the highest
28653 contaminant level must equal the total number of samples
28654 the supplier took.

28655
28656 ii) To determine the 90th percentile sample, the supplier must
28657 multiply the total number of samples taken during the tap
28658 sampling period times 0.9.

28659
28660 iii) The contaminant concentration in the sample corresponding
28661 with the ordinal number subsection (c)(4)(A)(ii) yields is
28662 the 90th percentile concentration.

28663
28664 iv) For a supplier collecting five samples per tap sampling
28665 period, the 90th percentile concentration is the average of
28666 the highest and second highest concentrations.
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v) For a supplier the Agency allows to collect fewer than five samples under Section 611.2356(c) or failing to collect five samples, the result for the sample with the highest concentration is the 90th percentile concentration.

B) Suppliers Having Enough Sites with a Lead Service Line Identified as Tier 1 or 2 Under Section 611.2356(a) to Meet the Minimum Number of Sites Section 611.2356(c) Requires.

i) The supplier must arrange the results of all lead or copper samples it took at Tier 1 or Tier 2 sites during a tap sampling period in ascending order from the sample with the lowest concentration to the sample with the highest concentration. The supplier must not include sample results from Tier 3, 4, or 5 sites in this calculation. The supplier must assign each sampling result a number, beginning with the number 1 for the sample with the lowest contaminant concentration and ascending by single integers through increasing concentrations. The number assigned to the sample with the highest contaminant concentration must equal the total number of samples the supplier took.

ii) The supplier must multiply the number of Tier 1 or Tier 2 sites during the tap sampling period times 0.9.

iii) The 90th percentile concentration is the contaminant concentration in the numbered sample corresponding with the number the calculation under subsection (c)(4)(B)(ii) yields.

iv) For a supplier serving fewer than 100 people that collects five samples per tap sampling period, the 90th percentile concentration is the average of the highest and second highest concentration.

v) For a supplier the Agency allows to collect fewer than five samples under Section 611.2356(c) or failing to collect five samples, the highest sample concentration is the 90th percentile concentration.

C) Suppliers Having Sites with a Lead Service Line Identified as Tier 1 or 2 Under Section 611.2356(a) but Fewer Than the Minimum Number of Sites Section 611.2356(c) Requires.

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- i) The supplier must combine the results of all lead or copper samples it took at Tier 1 or Tier 2 sites with a sufficient number of the highest results from Tier 3, 4, or 5 sites to complete the minimum number of sites. The supplier must arrange the combined results in ascending order from the sample with the lowest concentration to the sample with the highest concentration. The supplier must not include sample results from any remaining Tier 3, 4, and 5 sites in this calculation. The supplier must assign each sampling result a number, beginning with the number 1 for the sample with the lowest contaminant concentration and ascending by single integers through increasing concentrations. The number the supplier assigns to the sample with the highest contaminant concentration must equal the total minimum number of sites listed in Section 611.2356(c).
 - ii) The supplier must multiply the number of Tier 1 or Tier 2 sites during the tap sampling period times 0.9.
 - iii) The 90th percentile concentration is the contaminant concentration in the numbered sample corresponding with the number the calculation under subsection (c)(4)(C)(ii) yields.
 - iv) For a supplier serving fewer than 100 people that collects five samples per tap sampling period, the 90th percentile concentration is the average of the highest and second highest concentration.
 - v) For a supplier the Agency allows to collect fewer than five samples under Section 611.2356(c) or failing to collect five samples, the highest sample concentration is the 90th percentile concentration.
- d) Corrosion Control Requirements
- 1) Every supplier must install and operate corrosion control treatment under Sections 611.2351 and 611.2352 meeting the definition of optimal corrosion control treatment.

28753 2) Any supplier complying with the applicable corrosion control treatment
28754 requirements the Agency specifies under Sections 611.2351 and 611.2352
28755 is deemed as complying with subsection (d)(1).
28756

28757 3) A small CWS or NTNCWS supplier complying with the applicable small
28758 supplier compliance flexibility requirements the Agency specifies under
28759 Sections 611.2351(a)(3) and 611.2363 complies with the treatment
28760 requirement in subsection (d)(1).
28761

28762 4) A supplier must notify the Agency in writing under Section
28763 611.2360(a)(3) of any upcoming long-term change in water treatment or
28764 plan to add a new source as Section 611.2360(a)(3) describes. The
28765 supplier must not implement a long-term change in water treatment or add
28766 a new source until after the Agency reviews and approves the action in a
28767 SEP. The SEP may require the supplier to conduct additional monitoring
28768 or take other action the Agency deems appropriate to ensure that the
28769 supplier maintains minimal levels of corrosion control in its distribution
28770 system.
28771

28772 e) Source Water Requirements
28773

28774 1) Any supplier exceeding the lead or copper action level must implement all
28775 applicable source water treatment requirements the Agency specifies
28776 under Section 611.2353.
28777

28778 2) A supplier planning changes in its source water or making long-term
28779 treatment changes must describe the change to the Agency in writing
28780 under Sections 611.2351(a)(3), 611.2356(d)(2)(D), and 611.2360(a)(3).
28781 The supplier must not implement the change until the Agency reviews and
28782 approves the change in a SEP.
28783

28784 f) Lead Service Line Replacement and Inventory. A supplier must conduct lead
28785 service line replacements as this subsection (f) requires.
28786

28787 1) Any supplier whose system exceeds the lead action level subsection (c)
28788 specifies must complete mandatory lead service line replacement. The
28789 supplier must conduct lead service line replacement under Section
28790 611.2354(g) and must include public education under Section 611.2355(a)
28791 and (b).
28792

28793 2) A supplier exceeding the lead trigger level subsection (c) specifies must
28794 complete goal-based lead service line replacement under Section
28795 611.2354(f) and public education under Section 611.2355(g) and (h).

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3) All suppliers must prepare an inventory of service lines connected to their distribution systems, whether or not the supplier owns or controls the service lines, to identify lead service lines and lead status unknown service lines. The supplier must prepare the inventory under Section 611.2354(a).

g) Public Education and Notification Requirements. Under Section 611.2355(d), the supplier must provide notification of the lead tap water monitoring results to the persons served at each tested site (tap). A CWS supplier must conduct annual outreach to the Illinois Department of Public Health and local health agencies under Section 611.2355(i). The supplier must complete additional actions:

1) Any supplier exceeding the lead action level must implement the public education requirements under Section 611.2355.

2) Any supplier exceeding the lead trigger level subsection (c) specifies must notify all customers with a lead service line under Section 611.2355(g).

3) Any supplier exceeding the lead action level subsection (c) specifies must notify the public under Subpart V.

4) Any supplier with lead service lines, galvanized service lines needing replacement, or lead status unknown service lines in its inventory, as Section 611.2354(a) specifies, must notify all consumers with a lead service line, galvanized service line needing replacement, or a lead status unknown service line under Section 611.2355(e).

5) Any supplier failing to reach its lead service line replacement rate goal, as required under Section 611.2354(f) must conduct outreach activities in accordance with Section 611.2355(h).

h) Monitoring and Analytical Requirements. A supplier must complete all tap water monitoring for lead and copper, monitoring for water quality parameters, and source water monitoring for lead and copper and analyze the monitoring results under this Subpart AH as Sections 611.2356, 611.2357, 611.2358, and 611.2359 require.

i) Reporting Requirements. A supplier must report any information the treatment provisions of this Subpart AH and Section 611.2360 require to the Agency.

j) Recordkeeping Requirements. A supplier must maintain records as Section 611.2361 requires.

28839 k) Violating National Primary Drinking Water Regulations. Failing to comply with
28840 this Subpart AH, including conditions the Agency imposes in a SEP, violates the
28841 lead and copper NPDWR.

28842
28843 l) Testing in Schools and Childcare Facilities. A supplier must collect samples from
28844 all schools and childcare facilities within its distribution system under Section
28845 611.2362.

28846
28847 BOARD NOTE: This Section derives from 40 CFR 141.80.

28848
28849 (Source: Added at 50 Ill. Reg. _____, effective _____)

28850
28851 **Section 611.2351 Applicability of Corrosion Control**

28852
28853 a) Corrosion Control Treatment. This Section provides when a supplier must
28854 complete the corrosion control treatment steps in subsection (d) or (e) to optimize
28855 or re-optimize corrosion control treatment based on size, whether the supplier has
28856 corrosion control treatment, and whether the supplier exceeded the lead trigger
28857 level, lead action level, or copper action level.

28858
28859 1) Large Suppliers

28860
28861 A) A large supplier applying corrosion control treatment that exceeds
28862 either the lead trigger level or copper action level must complete
28863 the corrosion control treatment steps subsection (d) specifies.

28864
28865 B) A large supplier without corrosion control treatment with 90th
28866 percentile concentration results under Section 611.2350(c)(4) that
28867 exceeds either the lead practical quantitation limit of 0.005 mg/ L
28868 or the copper action level must complete the corrosion control
28869 treatment steps subsection (e) specifies.

28870
28871 C) The Agency may issue a SEP requiring a large supplier applying
28872 corrosion control treatment with 90th percentile concentration
28873 results under Section 611.2350(c)(4) exceeding the lead practical
28874 quantitation limit but not exceeding the lead trigger level or the
28875 copper action level to complete the corrosion control treatment
28876 steps in subsection (d).

28877
28878 2) Mid-Sized Suppliers (serving >10,000 and ≤50,000 people)

28879
28880 A) A mid-sized supplier applying corrosion control treatment that
28881 exceeds either the lead trigger level or the copper action level must

- 28882 complete the corrosion control treatment steps subsection (d)
28883 specifies.
28884
28885 B) A mid-sized supplier without corrosion control treatment that
28886 exceeds either the lead or copper action level must complete the
28887 corrosion control treatment steps subsection (e) specifies.
28888
28889 C) A mid-sized supplier without corrosion control treatment that
28890 exceeds the lead trigger level but does not exceed the lead or
28891 copper action level must complete the treatment recommendation
28892 step subsection (e)(1) specifies (Step 1). The water system must
28893 complete the remaining steps subsection (e) specifies if the
28894 supplier subsequently exceeds either the lead or copper action
28895 level.
28896
28897 3) Small CWS and Non-Transient, Non-Community Water System Suppliers
28898
28899 A) A small CWS or NTNCWS supplier applying corrosion control
28900 treatment that exceeds the lead trigger level or the lead action level
28901 but does not exceed the copper action level must complete the
28902 corrosion control treatment steps subsection (d) specifies if the
28903 Agency issues a SEP approving corrosion control treatment as a
28904 compliance option under Section 611.2363(a).
28905
28906 B) A small CWS or NTNCWS supplier applying corrosion control
28907 treatment that exceeds the copper action level must complete the
28908 corrosion control treatment steps subsection (d) specifies.
28909
28910 C) A small CWS or NTNCWS supplier without corrosion control
28911 treatment that exceeds the lead action level must complete the
28912 corrosion control treatment steps subsection (e) specifies if the
28913 Agency issues a SEP approving corrosion control treatment as a
28914 compliance option under Section 611.2363.
28915
28916 D) A small CWS or NTNCWS supplier without corrosion control
28917 treatment that exceeds the copper action level must complete the
28918 corrosion control treatment steps subsection (e) specifies.
28919
28920 b) Suppliers Deemed to Have Optimized Corrosion Control. Subsection (b)(1),
28921 (b)(2), or (b)(3) deems a supplier to have OCCT or re-optimized OCCT if the
28922 supplier satisfies one of the criteria specified in the subsection. Any system
28923 subsection (b)(1), (b)(2), or (b)(3) deems to have OCCT having corrosion control
28924 treatment in place must continue operating and maintaining that treatment and

28925 meeting any additional requirements the Agency determines are appropriate to
 28926 ensure that the supplier maintains OCCT.

28927
 28928 1) Small and Mid-Sized Suppliers Not Applying Corrosion Control
 28929 Treatment. A small or mid-sized supplier without corrosion control
 28930 treatment is deemed to have OCCT if it does not exceed the lead or copper
 28931 action level during two consecutive six-month tap monitoring periods and
 28932 remains at or below the lead trigger level and copper action level in all
 28933 subsequent tap monitoring periods under Section 611.2356.

28934
 28935 2) Small and Mid-Sized Suppliers Applying Corrosion Control Treatment
 28936 and Not Exceeding Levels. A small or mid-sized supplier applying
 28937 corrosion control treatment is deemed to have OCCT if it does not exceed
 28938 the lead or copper action level during two consecutive six-month tap
 28939 monitoring periods under Section 611.2356 and remains at or below the
 28940 lead trigger level and copper action level in all subsequent tap monitoring
 28941 periods under Section 611.2356. If a small or mid-sized supplier applying
 28942 corrosion control treatment exceeds the lead trigger level but does not
 28943 exceed the lead or copper action level during two consecutive six-month
 28944 tap monitoring periods and remains at or below the lead and copper action
 28945 levels in all subsequent tap monitoring periods the supplier conducts under
 28946 Section 611.2356, that supplier is deemed to have re-optimized OCCT by
 28947 complying with this Section. If the Agency issued a SEP setting optimal
 28948 water quality parameters (OWQPs) under subsection (d) or (e), a supplier
 28949 is not eligible to be deemed as having optimized or re-optimized OCCT
 28950 under subsection (b).

28951
 28952 3) Results Less Than or Equal to the Practical Quantitation Level (PQL) for
 28953 Lead. Monitoring results deem a supplier to have optimized or re-
 28954 optimized OCCT if the supplier submits results of tap water monitoring
 28955 under Section 611.356 demonstrating that the 90th percentile lead
 28956 concentration is less than or equal to the lead PQL of 0.005 mg/ L and
 28957 does not exceed the copper action level for two consecutive six-month tap
 28958 monitoring periods, and the Agency did not issue a SEP setting OWQPs
 28959 under subsection (d) or (e). Any water system this subsection (b)(3)
 28960 deems to have optimized corrosion control must continue tap water
 28961 monitoring for lead and copper no less frequently than once every three
 28962 calendar years using the reduced number of sites Section 611.2356(c)
 28963 specifies and collecting the samples at times and locations Section
 28964 611.2356(d)(4)(E) specifies. If 90th percentile tap sample results exceeds
 28965 the lead practical quantitation level (0.005 mg/L) or copper action level
 28966 during any tap sampling period, the supplier is no longer eligible to be

28967 deemed to have optimized OCCT under this subsection without first
28968 completing the treatment steps specified in subsection (d) and (e).

28969
28970 c) Completing Corrosion Control Steps for Small and Mid-Sized Suppliers Not
28971 Applying Corrosion Control Treatment

28972
28973 1) Any small or mid-sized supplier without corrosion control treatment,
28974 otherwise required to complete the corrosion control steps in subsection
28975 (e) because it exceeded the lead or copper action level, may cease
28976 completing the steps after not exceeding either the lead or copper action
28977 levels during each of two consecutive six-month tap monitoring periods
28978 under Section 611.2363 before beginning Step 3 under subsection (e)(3) or
28979 Step 5 under subsection (e)(5). The supplier needs not begin the
28980 applicable of Step 3 or Step 5, except that a mid-sized supplier with lead
28981 service lines or a small supplier with lead service lines choosing the
28982 corrosion control option under Section 611.2363 must complete a
28983 corrosion control treatment study under subsection (e)(3)(A). A supplier
28984 initiating Step 5 may not cease the steps and must complete all remaining
28985 steps in subsections (e)(6) through (e)(8).

28986
28987 2) A supplier ceasing the steps prior to either Step 3 or Step 5 and later
28988 exceeding the lead or copper action level may not cease the steps a second
28989 time and must complete the applicable treatment steps beginning with the
28990 first treatment step that the supplier previously did not complete in its
28991 entirety.

28992
28993 3) The Agency may issue a SEP requiring a supplier to repeat treatment steps
28994 the supplier previously completed if the Agency determines that this is
28995 necessary to properly implement the treatment requirements of this
28996 Section. The Agency must explain the basis for its decision in any SEP.

28997
28998 4) A small or mid-sized supplier exceeding the lead or copper action level
28999 must implement corrosion control treatment steps under subsection (e)
29000 (including a supplier deemed to have optimized corrosion control under
29001 subsection (b)(1)).

29002
29003 d) Treatment Steps and Deadlines for Suppliers Re-Optimizing OCCT. Except as
29004 subsection (b)(2) or Section 611.2363 provides otherwise, a supplier with
29005 corrosion control treatment must complete certain corrosion control treatment
29006 steps (the referenced portions of Sections 611.2352, 611.2356, and 611.2357 the
29007 steps describe) before the indicated times:

29008
29009 1) Step 1

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A) A supplier other than one to which subsection (d)(1)(B) applies must recommend re-optimized OCCT (Section 611.2352(c)) within six months after the end of the tap sampling period during which the supplier exceeds either the lead trigger level or copper action level. The Agency may issue a SEP allowing a supplier to modify its existing corrosion control treatment without a study for a supplier exceeding the lead trigger level but not the lead or copper action level. The Agency must specify re-optimized OCCT within six months after receiving the supplier's treatment recommendation. The supplier must modify its corrosion control treatment to install re-optimized OCCT within six months after the Agency specifies re-optimized OCCT.

B) A supplier having lead service lines that exceeds the lead action level must harvest lead pipes from its distribution system, construct flow-through pipe loops, and operate the loops with finished water within one year after the end of the tap sampling period during which the supplier exceeds the lead action level. The supplier must proceed to Step 3 under subsection (d)(3) and conduct the corrosion control studies for re-optimizing OCCT under subsection (d)(3)(A) using the pipe loops.

2) Step 2

A) A large supplier must conduct the corrosion control studies for re-optimizing OCCT under subsection (d)(3) (Step 3) unless the system is at or below the lead action level and the Agency issues a SEP modifying the existing corrosion control treatment the Agency specified under subsection (d)(1)(A) (Step 1).

B) Within 12 months after the end of the tap sampling period during which a small or mid-sized supplier applying corrosion control treatment exceeds the lead trigger level or copper action level, the Agency may issue a SEP requiring the supplier to perform corrosion control studies for re-optimizing OCCT (Section 611.2352(c)(1) or (c)(2)). If the Agency does not require the supplier to perform corrosion control studies, the Agency must issue a SEP specifying re-optimized OCCT (Section 611.2352(d)(2)) within the timeframes in subsections (d)(2)(B)(i) and (d)(2)(B)(ii).

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- i) A mid-sized supplier must perform corrosion control studies for re-optimizing OCCT within 12 months after the end of the tap sampling period during which the supplier exceeded the lead trigger level or copper action level.
 - ii) A small supplier must perform corrosion control studies for re-optimizing OCCT within 18 months after the end of the tap sampling period during which the supplier exceeded the lead trigger level or copper action level.
- 3) Step 3
- A) A supplier having lead service lines that exceeds the lead action level must complete the corrosion control treatment studies for re-optimizing OCCT within 30 months after the end of the tap sampling period during which the supplier exceeded the lead action level.
 - B) If subsection (d)(2) (Step 2) requires the supplier to perform corrosion control studies, the supplier must complete the studies (Section 611.2352(c)(2)) within 18 months after the Agency issues a SEP requiring the supplier to conduct the studies.
- 4) Step 4
- A) The Agency must issue a SEP designating re-optimized OCCT (subsection (d)(3)(A)) within six months after the supplier completes subsection (d)(3)(A) (Step 3).
 - B) If the supplier performed corrosion control studies under subsection (d)(2) (Step 2), the Agency must issue a SEP designating re-optimized OCCT (Section 611.2352(d)(2) or (d)(4)) within six months after the supplier completes subsection (d)(3)(B) (Step 3).
- 5) Step 5
- A) A large supplier must complete modifying its corrosion control treatment to have installed re-optimized OCCT within 12 months after the supplier completes subsection (d)(4)(A) (Step 4).

- 29093 B) A small or mid-sized supplier must install re-optimized OCCT
29094 (Section 611.2352(e)(1)) within 12 months after the supplier
29095 completes subsection (d)(4)(B) (Step 4).
29096
- 29097 6) Step 6 A supplier must complete follow-up sampling (Sections
29098 611.2356(d)(2) and 611.2357(c)) within 12 months after the supplier
29099 completes subsection (d)(5)(A) or (d)(5)(B) (Step 5).
29100
- 29101 7) Step 7 The Agency must review the supplier's installed treatment and
29102 designate optimal water quality control parameters (Section
29103 611.2352(f)(1)) within six months after completing subsection (d)(6) (Step
29104 6).
29105
- 29106 8) Step 8 The supplier must operate complying with the Agency-designated
29107 optimal water quality control parameters (Section 611.2352(g)) and
29108 continue conducting tap sampling (Section 611.2356(d)(3) and monitoring
29109 water quality parameters under Section 611.2357(d)).
29110
- 29111 e) Treatment Steps and Deadlines for Suppliers Not Applying Corrosion Control
29112 Treatment. Except as subsection (b) or Section 611.2363 provides otherwise, a
29113 supplier without corrosion control treatment must complete certain corrosion
29114 control treatment steps (described in the referenced portions of Sections 611.2352,
29115 611.2356, and 611.2357) before the indicated times.
29116
- 29117 1) Step 1
29118
- 29119 A) A supplier other than one to which subsection (e)(1)(B) or
29120 (e)(1)(C) applies must recommend OCCT (Section 611.2352(a)(1),
29121 (a)(2), (a)(3), or (a)(4)) within six months after the end of the tap
29122 sampling period during which the supplier exceeds either the lead
29123 trigger level or copper action level.
29124
- 29125 B) A supplier having lead service lines and exceeding the lead action
29126 level must harvest lead pipes from its distribution system, construct
29127 flowthrough pipe loops, and operate the loops with finished water
29128 within one year after the end of the tap sampling period during
29129 which the supplier exceeds the lead action level. The supplier
29130 must proceed to Step 3 in subsection (e)(3) and conduct the
29131 corrosion control studies under subsection (e)(3) using the pipe
29132 loops, for optimizing OCCT under subsection (e)(3)(A).
29133
- 29134 C) A large supplier subsection (a)(1)(B) directs to perform corrosion
29135 control treatment under this subsection (e) must conduct the

corrosion control studies for optimizing OCCT under subsection (e)(3) (Step 3).

2) Step 2. Within 12 months after the end of the tap sampling period during which a supplier exceeds the lead or copper action level, if not otherwise required by this rule, the Agency may issue a SEP requiring the supplier to perform corrosion control studies (Section 611.2352(b)(1)). If the Agency does not require the supplier to perform corrosion control studies, the Agency must issue a SEP specifying OCCT (under Section 611.2352(d)(1)) within the applicable timeframe in subsections (e)(2)(A) and (e)(2)(B).

A) For a mid-sized supplier, within 18 months after the end of the tap monitoring period during which the supplier exceeded the lead trigger level or copper action level; or

B) For a small supplier, within 24 months after the end of the tap monitoring period during which the supplier exceeded the lead trigger level or copper action level.

3) Step 3

A) A large supplier having or not having lead service lines that exceeds the lead action level or a small or mid-sized supplier having lead service lines that exceeds the lead action level must complete the corrosion control treatment studies for optimizing OCCT within 30 months after the end of the tap sampling period during which the supplier exceeds the lead action level.

B) If the Agency requires a supplier to perform corrosion control studies under subsection (e)(2) (Step 2), the supplier must complete the studies (Section 611.2352(c)(1)) within 18 months after the Agency issues a SEP requiring the supplier to conduct the studies.

4) Step 4

A) The Agency must issue a SEP designating re-optimized OCCT (Section 611.22352(d)(3)) within six months after the supplier completes subsection (d)(3)(A) (Step 3).

B) If the supplier has performed corrosion control studies under subsection (e)(2) (Step 2), the Agency must issue a SEP

designating OCCT (Section 611.2352(d)(1)) within six months after subsection (e)(3) (Step 3) is complete.

- 5) Step 5 The supplier must install OCCT (Section 611.2352(e)) within 24 months after the Agency designates OCCT under subsection (e)(2) or (e)(4) (Step 2 or Step 4).
- 6) Step 6 The supplier must complete follow-up sampling under Sections 611.2356(d)(2)(A) and 611.2357(c) within 12 months after completing subsection (e)(5) (Step 5).
- 7) Step 7 The Agency must review the supplier's installation of treatment and issue a SEP approving optimal water quality control parameters (Section 611.2352(f)(1)) within six months after the supplier completes subsection (e)(5) (Step 5).
- 8) Step 8 The supplier must comply with the Agency-approved optimal water quality control parameters (Section 611.2352(g)(1)) and continue tap sampling (Section 611.2356(d)(3)) and monitoring water quality parameters (Section 611.2357(d)).

f) Treatment Steps and Deadlines for Small CWS and NTNCWS Suppliers Electing Corrosion Control Treatment (CCT) As a Compliance Option under Section 611.2363 or As the Agency Requires. A small CWS or NTNCWS supplier selecting the corrosion control treatment option as small supplier compliance flexibility under Section 611.2363(a)(2) must complete two steps by the indicated times:

- 1) Step 1. A supplier must recommend the corrosion control treatment option as small supplier compliance flexibility under Section 611.2363(a)(2) within six months after the end of the tap sampling period during which the supplier exceeds either the lead trigger level or the lead action level. When recommending to the Agency, the supplier must comply with Section 611.2352(a)(1).
- 2) Step 2. The Agency must issue a SEP approving the recommendation of corrosion control treatment option as small supplier compliance flexibility or designating an alternative option under Section 611.2363(a) within six months after the supplier recommends the option under subsection (f)(1) (Step 1). A supplier the Agency requires to optimize or re-optimize OCCT must follow the schedules in subsection (d) or (e), beginning with Step 3 in subsection (d)(3) or (e)(3), unless the Agency specifies OCCT under the applicable of subsection (d)(2)(B) or (e)(2)(B).

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BOARD NOTE: This Section derives from 40 CFR 141.81.

(Source: Added at 50 Ill. Reg. _____, effective _____)

Section 611.2352 Corrosion Control Treatment

Designating Optimal Corrosion Control Treatment for Systems Optimizing or Re-Optimizing Corrosion Control Treatment. A supplier must complete the corrosion control treatment requirements in this Section as they apply to the supplier under Section 611.2351.

- a) System Recommendation Regarding Corrosion Control Treatment for Suppliers Not Having Lead Service Lines and Suppliers Having Lead Service Lines but Not Exceeding the Lead Action Level
 - 1) A supplier without corrosion control that must recommend under Section 611.2351(e) one or more of the corrosion control treatments in subsection (c)(1)(A) for the Agency to designate must base its recommendation on the results of lead and copper tap monitoring and water quality parameter monitoring.
 - A) A small CWS supplier or NTNCWS supplier exceeding the copper action level and recommending corrosion control treatment to the Agency under Section 611.2363(a) must comply with this subsection (a)(1).
 - B) The Agency may issue a SEP requiring the supplier to conduct additional water quality parameter monitoring to assist the Agency in reviewing the supplier's recommendation.
 - 2) A small CWS supplier or NTNCWS supplier subject to this subsection (a) not applying corrosion control treatment that chooses to pursue a small water system compliance flexibility option and is required to recommend an option in compliance with Section 611.2351(f) must, based on the results of lead tap sampling and water quality parameter monitoring, recommend designation of one of the options listed in Section 611.2363. A supplier not having lead service lines, exceeding the lead action level, and selecting corrosion control under Section 611.2363(a)(2) must recommend that the Agency designate one or more of the corrosion control treatments in subsection (c)(1) as OCCT for that system.
 - 3) A supplier exceeding the lead action level and selecting corrosion control treatment under Section 611.2363(a)(2) must recommend that the Agency

29265 designate one or more of the corrosion control treatments in subsection
 29266 (c)(1)(A) as the OCCT for its system. A small or mid-sized supplier
 29267 exceeding the lead trigger level but not exceeding the lead or copper
 29268 action level does not need to perform a corrosion control study under
 29269 subsection (c) unless the Agency issues a SEP requiring the supplier to do
 29270 so.

29271
 29272 4) A small CWS or NTNCWS supplier applying corrosion control treatment
 29273 exceeding the lead action level and selecting corrosion control under
 29274 Section 611.2363(a)(2) must recommend designation of one or more of
 29275 the corrosion control treatments in subsection (c)(2) as OCCT for its
 29276 system.

29277
 29278 5) The Agency may issue a SEP waiving subsection (a)(4)'s OCCT-
 29279 recommendation requirement for a supplier if the SEP requires the
 29280 supplier to complete a corrosion control study within three months after
 29281 the end of the tap sampling period during which the supplier exceeded the
 29282 lead action level. In that case, the supplier must proceed directly to
 29283 subsection (c) and complete a corrosion control study.

29284
 29285 b) Agency-Required Studies to Identify Initial Optimal Corrosion Control Treatment
 29286 and Re-Optimized OCCT Except for Large Suppliers and Small and Mid-Sized
 29287 Suppliers Having Lead Service Lines and Exceeding the Lead Action Level.
 29288 Certain suppliers must conduct corrosion control treatment studies: large
 29289 suppliers exceeding the lead action level, large suppliers not applying corrosion
 29290 control treatment whose 90th percentile concentration results exceed either the
 29291 lead practical quantitation limit of 0.005 mg/ L or the copper action level, mid-
 29292 sized water system suppliers having lead service lines and exceeding the lead
 29293 action level, and small suppliers having lead service lines and exceeding the lead
 29294 action level and selecting the corrosion control treatment option under Section
 29295 611.2363(a).

29296
 29297 1) The Agency may issue a SEP requiring a small or mid-sized supplier
 29298 without corrosion control treatment exceeding the lead or copper action
 29299 level to perform corrosion control treatment studies under subsection
 29300 (c)(1) to identify OCCT for the supplier's system.

29301
 29302 2) The Agency may issue a SEP requiring a small or mid-sized supplier
 29303 without corrosion control treatment and exceeding the lead trigger level
 29304 but not the lead or copper action level to perform corrosion control
 29305 treatment studies under subsection (c)(1) to identify OCCT for its system.
 29306 The supplier must install this corrosion control treatment if the supplier
 29307 subsequently exceeds the lead or copper action level.

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3) The Agency may issue a SEP requiring a small or mid-sized supplier applying corrosion control treatment exceeding either the lead trigger level or copper action level to perform corrosion control treatment studies under subsection (c)(2) to identify re-optimized OCCT for its system (i.e., after evaluating re-optimized OCCT).

c) Performing Corrosion Control Studies

1) A supplier without corrosion control treatment that is required to conduct corrosion control studies must complete certain actions:

A) A supplier without corrosion control treatment must evaluate the effectiveness of each of certain treatments and combinations of those treatments if appropriate to identify the OCCT for its system:

i) Adjusting alkalinity and pH;

ii) Adding an orthophosphate- or silicate-based corrosion inhibitor at a concentration sufficient to maintain an effective corrosion inhibitor residual concentration in all test samples.

iii) Adding an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain an orthophosphate residual concentration of 1 mg/ L (as PO₄) in all test samples; and

iv) Adding an orthophosphate-based corrosion inhibitor at a concentration sufficient to maintain an orthophosphate residual concentration of 3 mg/ L (as PO₄) in all test samples.

B) The supplier must evaluate each of the corrosion control treatments using pipe rig/loop tests; metal coupon tests; partial-system tests; or analyses based on documented analogous treatments in other systems of similar size, water chemistry, and distribution system configuration. A large or mid-sized supplier or a small CWS or NTNCWS supplier selecting the corrosion control treatment option under Section 611.2363 having lead service lines and exceeding the lead action level must conduct pipe rig/loop studies using harvested lead service lines from its distribution system to assess the effectiveness of corrosion control treatment options on the

29351 existing pipe scale. The supplier may use metal coupon tests as a
29352 screen to reduce the number of options the supplier evaluates using
29353 pipe rig/loop tests to the current conditions and two options.

29354
29355 C) The supplier must measure specific water quality parameters in
29356 any tests the supplier conducts under this subsection (c)(1)(C)
29357 before and after evaluating the corrosion control treatments in
29358 subsections (c)(1)(A) and (c)(1)(B):

29359
29360 i) Lead;

29361
29362 ii) Copper;

29363
29364 iii) pH;

29365
29366 iv) Alkalinity;

29367
29368 v) Orthophosphate as PO₄ (when the supplier uses an
29369 orthophosphate-based inhibitor); and

29370
29371 vi) Silicate (when the supplier uses an inhibitor containing a
29372 silicate compound).

29373
29374 D) The supplier must identify all chemical or physical constraints that
29375 limit or prohibit using any particular corrosion control treatment
29376 and document those constraints:

29377
29378 i) With data and documents showing that a particular
29379 corrosion control treatment adversely affected other
29380 drinking water treatment processes when that treatment was
29381 used by another supplier with water having comparable
29382 water quality characteristics. Systems using coupon studies
29383 to screen or pipe loop/rig studies to evaluate treatment
29384 options must not exclude treatment strategies from the
29385 studies based on the constraints identified in this section.

29386
29387 ii) With data and documents demonstrating that the supplier
29388 previously evaluated a particular corrosion control
29389 treatment, finding either that the treatment is ineffective or
29390 adversely affects other drinking water quality treatment
29391 processes. Systems using coupon studies to screen or pipe
29392 loop/rig studies to evaluate treatment options must not
29393 exclude treatment strategies from the studies based on the

29394 constraints identified in this section unless the treatment
29395 was found to be ineffective in a previous pipe loop/rig
29396 study.

29397
29398 E) The supplier must evaluate the effect of the evaluated corrosion
29399 control treatment chemicals on other water quality treatment
29400 processes. A supplier using coupon studies to screen or pipe
29401 loop/rig studies to evaluate treatment options must not exclude
29402 treatment strategies from the studies based on the effects the
29403 supplier identifies under this Section.

29404
29405 F) Based on an analysis of the data the supplier generated during each
29406 evaluation, the supplier must recommend in writing to the Agency
29407 the treatment option the corrosion control studies indicate
29408 constitutes OCCT for the supplier's system. The supplier must
29409 give a rationale for its recommendation together with all
29410 supporting documentation subsections (c)(2)(A) through (c)(2)(E)
29411 specify.

29412
29413 2) A supplier applying corrosion control treatment that must conduct
29414 corrosion control studies to determine re-optimized OCCT must complete
29415 specific tasks:

29416
29417 A) The supplier must evaluate the efficacy of certain treatments and
29418 appropriate combinations of those treatments to identify the re-
29419 optimized OCCT for its system:

29420
29421 i) Alkalinity or pH adjustment or re-adjustment;

29422
29423 ii) Adding an orthophosphate- or silicate-based corrosion
29424 inhibitor at a concentration sufficient to maintain an
29425 effective corrosion inhibitor residual concentration in all
29426 test samples if the supplier does not already use the
29427 inhibitor;

29428
29429 iii) Adding an orthophosphate-based corrosion inhibitor at a
29430 concentration sufficient to maintain an orthophosphate
29431 residual concentration of 1 mg/ L (PO₄) in all test samples
29432 unless the current inhibitor process already meets this
29433 residual; and

29434
29435 iv) Adding an orthophosphate-based corrosion inhibitor at a
29436 concentration sufficient to maintain an orthophosphate

29437 residual concentration of 3 mg/ L (PO4) in all test samples
29438 unless the current inhibitor process already meets this
29439 residual.

29440
29441 B) The supplier must evaluate each of the corrosion control treatments
29442 using pipe rig/loop tests, metal coupon tests, partial-system tests,
29443 or analyses based on documented analogous treatments with other
29444 systems of similar size, water chemistry, and distribution system
29445 configurations. If the supplier's system has lead service lines and
29446 exceeds the lead action level, the supplier must conduct pipe
29447 rig/loop studies using harvested lead service lines from its
29448 distribution system to assess the efficacy of corrosion control
29449 treatment options on the existing pipe scale. The supplier can use
29450 metal coupon tests as a screen to reduce the number of options it
29451 evaluates using pipe rig/loops to the current conditions and two
29452 options.

29453
29454 C) The supplier must measure specific water quality parameters in
29455 any tests conducted under this subsection (c)(2)(C) before and after
29456 evaluating the corrosion control treatments in subsections (c)(2)(A)
29457 and (c)(2)(B):

- 29458 i) Lead;
29459
29460 ii) Copper;
29461
29462 iii) pH;
29463
29464 iv) Alkalinity;
29465
29466 v) Orthophosphate as PO4 (if the supplier uses an
29467 orthophosphate-based inhibitor); and
29468
29469 vi) Silicate (if the supplier uses a silicate-based inhibitor).

29470
29471 D) The supplier must identify all chemical or physical constraints
29472 limiting or prohibiting using a particular corrosion control
29473 treatment and document those constraints with certain information:

- 29474
29475 i) Data and documents showing that a particular corrosion
29476 control treatment adversely affected other drinking water
29477 treatment processes when another supplier with comparable
29478 water quality characteristics used the treatment. A supplier
29479

- 29480 using coupon studies to screen or pipe loop/rig studies to
29481 evaluate treatment options must not exclude treatment
29482 strategies from the studies based on the constraints the
29483 supplier identifies under this Section; or
29484
29485 ii) Data and documents demonstrating that the supplier
29486 previously evaluated a particular corrosion control
29487 treatment and found that the treatment is ineffective or
29488 adversely affects other drinking water quality treatment
29489 processes. A supplier using coupon studies to screen or
29490 pipe loop/rig studies to evaluate treatment options must not
29491 exclude treatment strategies from the studies based on the
29492 constraints the supplier identifies under this Section, unless
29493 the supplier found the treatment ineffective in a previous
29494 pipe loop/rig study.
29495
29496 E) The supplier must evaluate the effect of the chemicals it uses for
29497 corrosion control treatment on other drinking water quality
29498 treatment processes. A supplier using coupon studies to screen or
29499 pipe loop/rig studies to evaluate treatment options must not
29500 exclude treatment strategies from the studies based on the effects
29501 the supplier identifies under this Section.
29502
29503 F) Based on its analysis of the data the supplier generated during each
29504 evaluation, the supplier must recommend to the Agency in writing
29505 the treatment option that the corrosion control studies indicate
29506 constitutes OCCT for its system. The supplier must provide a
29507 rationale for its recommendation together with all supporting
29508 documentation subsections (c)(1)(A) through (c)(1)(E) specify.
29509
29510 d) Agency Approval of Optimized and Re-Optimized Corrosion Control Treatment.
29511 When designating OCCT, the Agency must consider the effects of additional
29512 corrosion control treatment on water quality parameters and other water quality
29513 treatment processes. The Agency must notify the supplier of the basis for
29514 designating OCCT in any SEP it issues under this subsection (d).
29515
29516 1) Designating OCCT for a Supplier Without Corrosion Control Treatment.
29517 Considering available information, including applicable studies conducted
29518 under subsection (c)(1) or the supplier's recommended corrosion control
29519 treatment option, the Agency must issue a SEP designating from among
29520 the supplier-recommended corrosion control treatment option, alternative
29521 corrosion control treatments from among those in subsection (c)(1)(A), or

- 29522 an applicable alternative small supplier compliance flexibility option
29523 under Section 611.2363(a).
29524
- 29525 2) Designation of Re-Optimized OCCT for Suppliers Applying Corrosion
29526 Control Treatment. Considering available information, including
29527 applicable studies under subsection (c)(2) or the supplier's recommended
29528 corrosion control treatment option, the Agency must issue a SEP
29529 designating from among the supplier-recommended corrosion control
29530 treatment option, alternative corrosion control treatments from among
29531 those in subsection (c)(2)(A), or an applicable alternative small supplier
29532 compliance flexibility option under Section 611.2363(a).
29533
- 29534 e) Installing OCCT and Re-Optimizing OCCT. A supplier must properly install and
29535 operate the OCCT throughout its distribution system that the Agency approved
29536 under subsection (d).
29537
- 29538 f) Agency Review of Treatment and Specification of Optimal Water Quality Control
29539 Parameters for OCCT and Re-Optimized OCCT. The Agency must evaluate the
29540 results of all lead and copper tap sampling and water quality parameter sampling
29541 the supplier submits and determine whether the supplier properly installs and
29542 operates the OCCT the Agency approves under subsection (d)(1) or (d)(2).
29543
- 29544 1) Upon reviewing the results of the supplier's tap water and water quality
29545 parameter monitoring, both before and after installing OCCT , the Agency
29546 must issue a SEP specifying operating parameters:
29547
- 29548 A) A minimum value or range of values for pH at each entry point to
29549 the distribution system.
29550
- 29551 B) A minimum pH value for all tap samples. This value must be
29552 equal to or greater than 7.0, unless the Agency determines that a
29553 pH 7.0 is not technologically feasible or is not necessary for the
29554 supplier to optimize corrosion control.
29555
- 29556 C) If the supplier uses a corrosion inhibitor, a minimum inhibitor
29557 concentration or range of concentrations for orthophosphate (as
29558 PO₄) or silicate measured at each entry point to the distribution
29559 system.
29560
- 29561 D) If the supplier uses a corrosion inhibitor, the supplier must
29562 maintain a minimum orthophosphate or silicate concentration
29563 measured in all tap samples that is necessary to form a passivating
29564 film on the interior walls of the pipes of the distribution system, as

29565 determined by the Agency in a SEP. If the supplier uses
29566 orthophosphate, the supplier must maintain an orthophosphate
29567 concentration equal to or greater than 0.5 mg/ L (as PO4) for
29568 OCCT the Agency designates under subsection (d)(1) or 1.0 mg/ L
29569 for OCCT the Agency designates under subsection (d)(2), unless
29570 the Agency determines that meeting the applicable minimum
29571 orthophosphate residual is not technologically feasible or is not
29572 necessary for OCCT.

29573
29574 E) If the supplier adjusts alkalinity as part of OCCT, a minimum
29575 concentration or a range of concentrations for alkalinity for each
29576 entry point to the distribution system and in all tap samples.

29577
29578 2) The values for the applicable water quality control parameters in
29579 subsection (f)(1) must be those the Agency determines reflect OCCT for
29580 the supplier.

29581
29582 3) The Agency must explain these determinations and give the basis for its
29583 decisions when issuing a SEP.

29584
29585 g) Continued Operation and Monitoring for OCCT and Re-Optimized OCCT. All
29586 suppliers optimizing or re-optimizing corrosion control must continue to operate
29587 and maintain OCCT, including maintaining water quality parameter values at or
29588 above minimum values or within ranges the Agency approved under subsection
29589 (f), under this subsection (g) for all samples the supplier collects under Section
29590 611.2357(d) through (f). This subsection (g) applies to all suppliers that Section
29591 611.2357 does not require to monitor water quality parameters, including
29592 consecutive system suppliers distributing water that another supplier has treated
29593 applying corrosion control treatment and any suppliers applying corrosion control
29594 treatment, OCCT, or re-optimized OCCT. The supplier must determine whether
29595 it complies with this subsection (g) every six months, as Section 611.2357(d)
29596 specifies. A supplier does not comply with this subsection (g) in any six-month
29597 period during which the supplier has excursions from any Agency-specified water
29598 quality parameter on more than nine cumulative days during the six-month period.
29599 An excursion occurs whenever the daily value for one or more of the water
29600 quality parameters measured at a sampling location is below the Agency-
29601 designated minimum value or outside the Agency-designated range. The supplier
29602 calculates daily values as subsections (g)(1) through (g)(3) provide. The Agency
29603 may exclude results from this calculation that it determines are obvious sampling
29604 errors. The supplier must record sampling errors even when not included in
29605 calculations.
29606

29607 1) On days when the supplier collects more than one measurement for a
29608 water quality parameter at a sampling location, the daily value is the
29609 average of all results the supplier collected during the day, regardless of
29610 whether the supplier collected the samples through continuous monitoring,
29611 grab sampling, or a combination of both.

29612
29613 BOARD NOTE: Corresponding 40 CFR 141.82(g)(1) further provides as
29614 follows: If USEPA approves an alternative formula under 40 CFR
29615 142.16(d)(1)(ii) in the State's application for a program revision submitted under
29616 40 CFR 142.12, the approved formula is used to aggregate multiple measurements
29617 at a sampling point for the water quality parameters in lieu of the formula in this
29618 subsection (g)(1).

29619
29620 2) On days when the supplier collects only one measurement for a water
29621 quality parameter at a sampling location, the daily value is that
29622 measurement.

29623
29624 3) On days when the supplier collects no measurement for a water quality
29625 parameter at a sampling location, the daily value is the daily value
29626 calculated on the most recent day on which the supplier measured the
29627 water quality parameter at the sampling location.

29628
29629 h) Modifying Agency Treatment Decisions for OCCT and re-optimized OCCT

29630
29631 1) On its own initiative or in response to a request by the supplier, the
29632 Agency may issue a SEP modifying its determination of the OCCT under
29633 subsection (d) or of the optimal water quality control parameters under
29634 subsection (f).

29635
29636 2) A supplier must request modification in writing, explaining the propriety
29637 of the modification and providing supporting documentation.

29638
29639 3) The Agency may modify its determination if it determines that a change
29640 will ensure that the supplier continues optimizing corrosion control
29641 treatment. A revised determination must give the new treatment
29642 requirements or water quality parameters, explain the basis for the
29643 Agency's decision, and provide an implementation schedule for
29644 completing the treatment modifications for re-optimized OCCT.

29645
29646 4) Any interested person may submit information to the Agency bearing on
29647 whether the Agency should exercise its discretion and issue a SEP
29648 modifying its determination under subsection (h)(1). An Agency
29649 determination not to act on information an interested person submits is not

29650 an Agency determination for the purposes of Sections 39 and 40 of the
29651 Act.

29652
29653 i) USEPA Treatment Decisions on OCCT and re-optimized OCCT. Under 40 CFR
29654 142.19, USEPA reserves the prerogative to review Agency OCCT treatment
29655 determinations under subsections (d)(1) or (d)(2), (f), or (h) and issue federal
29656 treatment determinations consistent with Section 611.2352(d)(1) or (d)(2), (f), or
29657 (h) if USEPA finds that certain conditions exist:

- 29658
29659 1) The Agency fails to issue a treatment determination by the applicable
29660 deadlines in Section 611.2351 (corresponding with Section 611.2351);
29661
29662 2) The Agency abuses its discretion in a substantial number of instances or in
29663 instances affecting a substantial population; or
29664
29665 3) The technical aspects of the Agency's determination would be indefensible
29666 in a federal enforcement action taken against the supplier.
29667

29668 j) Find-and-fix Assessment for Tap Sample Sites Exceeding the Lead Action Level.
29669 The supplier must conduct specific steps when a tap sampling site exceeds the
29670 lead action level in monitoring under Section 611.2356.

29671
29672 1) Step 1: Corrosion Control Treatment Assessment. The supplier must
29673 sample at a new water quality parameter sampling site that is on the same-
29674 sized water main, in the same pressure zone, and located within a half mile
29675 of the sampling site that exceeded the action lead level within five days
29676 after receiving the sample results. A small supplier without corrosion
29677 control treatment may take up to 14 days to collect the samples. The
29678 supplier must measure certain parameters:

- 29679
29680 A) pH;
29681
29682 B) Alkalinity;
29683
29684 C) Orthophosphate (as PO₄), if the supplier uses an inhibitor
29685 containing an orthophosphate compound;
29686
29687 D) Silica, if the supplier uses an inhibitor containing a silicate
29688 compound; and
29689
29690 E) A supplier having an existing water quality parameter sampling
29691 site complying with this Section may sample from that site.
29692

- 29693 F) A supplier that must meet optimal water quality control parameters
 29694 but not having an existing water quality parameter sampling site
 29695 complying with this Section must add new sampling sites to the
 29696 minimum number of sites Section 611.2357(g) requires. The
 29697 supplier must add sites until it has twice the minimum number of
 29698 sites Section 611.2357(a)(2)(A) requires. If a supplier exceeds this
 29699 upper threshold for the number of sites, the Agency may issue a
 29700 SEP determining that a newer site can better assess the efficacy of
 29701 the corrosion control treatment and remove existing sites during
 29702 sanitary survey evaluating OCCT.
 29703
- 29704 2) Step 2: Site Assessment. A supplier must collect a follow-up sample at
 29705 any tap sampling site exceeding the lead action level within 30 days after
 29706 receiving the sample results. The supplier may use different sample
 29707 volumes or different sampling procedures collecting these follow-up
 29708 samples to assess the source of elevated lead levels. The supplier must
 29709 submit samples it collects under this Section to the Agency but must not
 29710 include them in calculating the 90th percentile concentration under Section
 29711 611.2356. If the supplier cannot collect a follow-up sample at a site, the
 29712 supplier must document to the Agency why it was unable to collect a
 29713 follow-up sample.
 29714
- 29715 3) Step 3: Evaluating Results and Recommending OCCT or Other Actions.
 29716 Within six months after the end of the tap sampling period during which a
 29717 supplier exceeds the lead action level, the supplier must evaluate the
 29718 results of the monitoring conducted under subsections (j)(1) and (j)(2) to
 29719 determine if the supplier must either locally or centrally adjust the OCCT
 29720 or other distribution system actions are necessary and submit the
 29721 recommendation to the Agency. Modifying corrosion control treatment
 29722 might not be necessary to address every exceedance. Other distribution
 29723 system actions may include flushing to reduce water residence time in the
 29724 system. If known from the site assessment, the supplier must note the
 29725 cause of the elevated lead level in its recommendation to the Agency
 29726 because site-specific issues can be an important factor in why the supplier
 29727 does not recommend any adjustment of corrosion control treatment or
 29728 other distribution system actions. A supplier in the process of optimizing
 29729 or re-optimizing OCCT under subsections (a) through (f) needs not
 29730 recommend a find-and-fix treatment to the Agency.
 29731
- 29732 4) Step 4: Agency Action. The Agency must issue a SEP approving the
 29733 supplier's treatment recommendation or specify a different approach
 29734 within six months after the supplier completes Step 3, as subsection (j)(3)
 29735 describes.

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- 5) Step 5: Implementing the Agency's SEP. If the Agency-issued SEP requires the water system to adjust the OCCT, the supplier must modify its corrosion control treatment within 12 months after completing Step 4, as subsection (j)(4) describes. A supplier without corrosion control treatment and needing to install OCCT must follow the schedule in Section 611.2351(e).
 - 6) Step 6: Follow-up Sampling. A supplier adjusting its OCCT must complete follow-up sampling (Sections 611.2356(d)(2) and 611.2357(c)) within 12 months after completing Step 5, as subsection (j)(5) describes.
 - 7) Step 7: Agency Review. For a supplier adjusting its OCCT, the Agency must review the supplier's modified corrosion control treatment, and the Agency must designate optimal water quality control parameters (Section 611.2352(f)(1)) within six months after the supplier completes Step 6, as subsection (j)(6) describes.
 - 8) Step 8: Operating and Complying. A supplier adjusting its OCCT must comply with the Agency-designated optimal water quality control parameters (Section 611.2352(g)) and continue tap sampling (Sections 611.2356(d)(3) and 611.2357(d)).

29759 BOARD NOTE: This Section derives from 40 CFR 141.82.

29760
29761 (Source: Added at 50 Ill. Reg. _____, effective _____)

29762
29763 **Section 611.2353 Source Water Treatment**

29764
29765 A supplier must complete source water monitoring and treatment requirements (under subsection
29766 (b) and Sections 611.2356 and 611.2358) before specific deadlines.

29767
29768 a) Deadlines for Completing Source Water Treatment Steps

- 29769
29770 1) Step 1: A supplier exceeding the lead or copper action level must
29771 complete lead and copper source water monitoring (under Section
29772 611.2358(b)) and recommend treatment to the Agency (under subsection
29773 (b)(1)) within 180 days after the end of the tap monitoring period during
29774 which the supplier exceeded the action level.
- 29775
29776 2) Step 2: The Agency must issue a SEP determining source water treatment
29777 (under subsection (b)(2)) within six months after the supplier submits
29778 monitoring results under step 1.

- 29779
- 29780
- 29781 3) Step 3: If the Agency requires installing source water treatment, the
- 29782 supplier must install that treatment (under subsection (b)(3)) within 24
- 29783 months after the Agency completes step 2.
- 29784
- 29785 4) Step 4: The supplier must complete follow-up tap water monitoring (under
- 29786 Section 611.2356(d)(2)) and source water monitoring (under Section
- 29787 611.2358(c)) within 36 months after completion of step 2.
- 29788
- 29789 5) Step 5: The Agency must issue a SEP reviewing the supplier's installation
- 29790 and operation of source water treatment and specify MPCs for lead and
- 29791 copper (under subsection (b)(4)) within six months after the supplier
- 29792 completes step 4.
- 29793
- 29794 6) Step 6: The supplier must comply with the Agency-specified lead and
- 29795 copper MPCs (under subsection (b)(4)) and continue source water
- 29796 monitoring (under Section 611.2358(d)).

29797 b) Source Water Treatment Requirements

- 29798
- 29799 1) System Treatment Recommendation. Any supplier exceeding the lead or
- 29800 copper action level must recommend to the Agency in writing one of the
- 29801 source water treatments in subsection (b)(2). A supplier may recommend
- 29802 installing no treatment based on a demonstration that source water
- 29803 treatment is not necessary to minimize lead and copper levels at users'
- 29804 taps.
- 29805
- 29806 2) Agency Determination Regarding Source Water Treatment
- 29807
- 29808 A) The Agency must evaluate the results of all source water samples
- 29809 the supplier submitted to determine whether source water treatment
- 29810 is necessary to minimize lead or copper levels in water the supplier
- 29811 delivers to users' taps.
- 29812
- 29813 B) If the Agency determines treatment is necessary, the Agency must
- 29814 issue a SEP requiring the supplier to install and operate either the
- 29815 source water treatment the supplier recommended (if any) or
- 29816 another from among specific source water treatment techniques:
- 29817
- 29818 i) ion exchange;
- 29819
- 29820 ii) reverse osmosis;
- 29821

- 29822 iii) lime softening; or
29823
29824 iv) coagulation/filtration.
29825
29826 C) The Agency may require the supplier to submit, on or before a
29827 certain date, any additional information as the Agency determines
29828 is necessary to aid its review.
29829
29830 D) The Agency must notify the supplier in writing of its
29831 determination, stating the basis for its decision.
29832
29833 3) Installing Source Water Treatment. A supplier must properly install and
29834 operate the source water treatment the Agency approves under subsection
29835 (b)(2).
29836
29837 4) Agency Reviewing Source Water Treatment and Specifying Maximum
29838 Permissible Source Water Levels (MPCs)
29839
29840 A) The Agency must review the source water samples the supplier
29841 took both before and after the supplier installs source water
29842 treatment and determine whether the supplier properly installs and
29843 operates the approved source water treatment.
29844
29845 B) Based on its review, the Agency must issue a SEP approving the
29846 lead and copper MPCs for finished water entering the supplier's
29847 distribution system. The MPC levels must reflect the contaminant
29848 removal capability of the treatment when properly operated and
29849 maintained.
29850
29851 C) The SEP issued under subsection (b)(4)(B) must include the
29852 Agency's explanation of the basis for its decision under subsection
29853 (b)(4)(B).
29854
29855 5) Continued Operation and Maintenance. A supplier must maintain lead
29856 and copper levels below the MPCs the Agency approved at every
29857 sampling point the supplier monitors under Section 611.2358. The
29858 supplier does not comply with this subsection (b) if the level of lead or
29859 copper at any sampling point is greater than the MPC the Agency
29860 approved under subsection (b)(4)(B).
29861
29862 6) Modifying Agency Treatment Decisions
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- A) On its own initiative, or in response to a request by the supplier, the Agency may issue a SEP modifying its determination of the source water treatment under subsection (b)(2) or the lead and copper MPCs under subsection (b)(4).
 - B) A supplier must make a request to modify in writing, explaining the propriety of the modification, and providing supporting documentation.
 - C) The Agency may issue a SEP modifying its determination if it concludes that the change is necessary to ensure that the supplier continues minimizing lead and copper concentrations in source water.
 - D) A revised determination under subsection (b)(6)(C) must state the new treatment requirements, explain the basis for the Agency's decision, and provide a schedule for completing the treatment modifications.
 - E) Any interested person may submit information to the Agency in writing bearing on whether the Agency should exercise its discretion and issue a SEP modifying its determination under subsection (b)(2). An Agency determination not to act on information an interested person submits is not an Agency determination for the purposes of Sections 39 and 40 of the Act.
- 7) USEPA Treatment Decisions. Under 40 CFR 142.19, USEPA reserves the prerogative to review Agency treatment determinations under subsections (b)(2), (b)(4), or (b)(6) and issue federal treatment determinations consistent with 40 CFR 141.83(b)(2), (b)(4), and (b)(6) if USEPA finds that certain conditions exist:
- A) the Agency fails to issue a treatment determination by the applicable deadline in subsection (a);
 - B) the Agency abuses its discretion in a substantial number of instances or in instances affecting a substantial population; or
 - C) the technical aspects of the Agency's determination would be indefensible in a federal enforcement action taken against the supplier.

BOARD NOTE: This Section derives from 40 CFR 141.83.

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(Source: Added at 50 Ill. Reg. _____, effective _____)

Section 611.2354 Lead Service Line Inventory and Replacing Lead Service Lines

- a) Lead Service Line Inventory. A supplier must develop an inventory identifying the materials composition for all service lines connected to its distribution system. The inventory must meet specific requirements:
 - 1) The supplier must develop an initial inventory before October 16, 2024 and submit the inventory to the Agency as Section 611.2360(e) requires.
 - 2) The inventory must include all service lines connected to the supplier's distribution system regardless of ownership status (e.g., where the supplier shares service line ownership, the inventory would include both the supplier-owned and customer-owned portions of the service line).
 - 3) When conducting the inventory of service lines in its distribution system for the initial inventory under subsection (a)(1), the supplier must use any information on lead and galvanized iron or steel system components the supplier identified complying with 40 CFR 141.42(d). The supplier must also review the sources of information in subsections (a)(3)(A) through (a)(3)(D) to identify service line materials for the initial inventory. The supplier may use other sources of information the Agency approves in a SEP.
 - A) All construction and plumbing codes, permits, and existing records or other documents indicating the service line materials connecting structures to its distribution system.
 - B) All supplier records, including distribution system maps and drawings, historical records on each service connection, meter installation records, historical capital improvement or master plans, and standard operating procedures.
 - C) All inspections and distribution system records indicating the materials composing the service connections connecting structures to its distribution system.
 - D) Any resource, information, or method for identifying and assessing service line materials the Agency provides or requires in a SEP.

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- 4) The supplier must categorize every service line and supplier-owned portion of a service line under split ownership:
- A) "Lead" for a lead service line.
- B) "Galvanized Requiring Replacement" for a galvanized service line at any time downstream of a lead service line or currently downstream of a lead status unknown service line. If the supplier cannot demonstrate that a galvanized service line was never downstream of a lead service line, the supplier must presume a lead service line was upstream.
- C) "Non-Lead" for a service line the supplier determines through an evidence-based record, method, or technique is not lead or galvanized requiring replacement under subsection (a)(4)(A) or (a)(4)(B). The supplier may classify the service line using its actual material of construction (e.g., "plastic" or "copper") as an alternative to non-lead.
- D) "Lead Status Unknown" for a service line of material the supplier does not know is lead, galvanized requiring replacement, or non-lead service line under subsection (a)(4)(A), (a)(4)(B), or (a)(4)(C), e.g., if the supplier has no documented evidence supporting material classification. The supplier may classify the line as "unknown", as an alternative to classifying it as lead status unknown, however, all requirements applying to lead status unknown service lines will apply to those the supplier classifies as Unknown. A supplier may provide more information regarding its lead status unknown lines, as long as the inventory clearly distinguishes unknown service lines from those for which the supplier verified the material of construction through records or inspection.
- BOARD NOTE: See the definition of "lead status unknown service line" in Section 611.2350(b).
- 5) The supplier must identify and track service line materials in its inventory as the supplier encounters them in the course of its normal operations (e.g., checking service line materials when reading water meters or performing maintenance activities).
- 6) The supplier must update its inventory based on all applicable sources in subsections (a)(3) and (a)(5) and any lead service line replacements or

29992 service line material inspections the supplier conducted. The supplier may
29993 use other sources of information the Agency approves in a SEP and must
29994 use other sources of information the Agency requires in a SEP. The
29995 supplier must submit the updated inventory to the Agency as Section
29996 611.2360(e) requires. The publicly accessible inventory must reflect
29997 inventory updates no less frequently than when the supplier must submit
29998 them to the Agency.

30000 A) A supplier whose inventory contains only non-lead service lines
30001 needs not provide inventory updates to the Agency or public. If
30002 the supplier subsequently finds a lead service line within its
30003 system, the supplier must prepare an updated inventory under
30004 subsection (a) on a schedule the Agency establishes in a SEP.

30005
30006 B) This subsection (a)(6)(B) corresponds with 40 CFR
30007 141.84(a)(6)(ii), which USEPA marked "Reserved". This
30008 statement maintains structural consistency with USEPA's rule.

30009
30010 7) To calculate the number of service line replacements under subsections (f)
30011 or (g), the supplier must apply the replacement rate to the sum of known
30012 lead and galvanized requiring replacement service lines when the supplier
30013 first exceeds the lead trigger level or lead action level plus the number of
30014 lead status unknown service lines in the beginning of each year of the
30015 supplier's annual goal-based or mandatory full lead service line
30016 replacement program.

30017
30018 A) A supplier must count each service line only once when calculating
30019 the required number of service lines it must replace, even if the
30020 supplier shares service line ownership, and the supplier must
30021 replace both the customer-owned and system-owned portions.

30022
30023 B) The supplier must annually update the number of service lines it
30024 needs to replace by subtracting the number of lead status unknown
30025 service lines the supplier discovered are non-lead and adding the
30026 number of non-lead service lines the supplier discovered are lead
30027 or galvanized requiring replacement service lines.

30028
30029 C) Verifying a lead status unknown service line as non-lead in its
30030 inventory does not count as replacing a service line.

30031
30032 BOARD NOTE: Using the number of lead and galvanized requiring
30033 replacement service lines at the time of first exceeding the lead trigger
30034 level applies for subsection (f). The number at the time of first exceeding

30035 the lead action level applies for subsection (g). The number of lead status
30036 unknown service lines remaining at the beginning of each year applies to
30037 both.

30038
30039 8) The supplier must keep its service line materials inventory publicly
30040 accessible.

30041
30042 A) The inventory must include a locational identifier, such as a street
30043 address, block, intersection, or landmark, for each lead or
30044 galvanized requiring replacement service line. A supplier may
30045 include a locational identifier for lead status unknown service lines
30046 or list the exact address of each service line.

30047
30048 B) A supplier serving more than 50,000 persons must make the
30049 publicly accessible inventory available online.

30050
30051 9) If a supplier has no lead, galvanized requiring replacement, or lead status
30052 unknown service lines (regardless of ownership) in its inventory, the
30053 supplier may comply with subsection (a)(8) using a written statement, in
30054 lieu of the inventory, declaring that its distribution system has no lead or
30055 galvanized requiring replacement service lines. The statement must
30056 include a general description of all applicable sources the supplier used
30057 under subsections (a)(3), (a)(5), and (a)(6) to determine these service lines
30058 are absent.

30059
30060 10) The supplier must include instructions for accessing the service line
30061 inventory (including inventories consisting only of a statement under
30062 subsection (a)(9)) in its Consumer Confidence Report under Section
30063 611.883(d)(4)(K).

30064
30065 b) Lead Service Line Replacement Plan. A supplier with one or more lead,
30066 galvanized requiring replacement, or lead status unknown service lines in its
30067 distribution system must submit a lead service line replacement plan to the
30068 Agency under Section 611.2360(e) before October 16, 2024. The lead service
30069 line replacement plan must have sufficient detail to ensure the supplier can
30070 comply with lead service line replacement requirements under this Section. The
30071 plan must include specific descriptions:

30072
30073 1) A strategy for determining the composition of lead status unknown
30074 service lines in its inventory;

30075
30076 2) A procedure for conducting full lead service line replacement;
30077

- 30078 3) A strategy for informing customers before a full or partial lead
- 30079 service line replacement;
- 30080
- 30081 4) For a supplier serving more than 10,000 persons, a lead service
- 30082 line replacement goal rate the supplier recommends if the supplier
- 30083 exceeds the lead trigger level;
- 30084
- 30085 5) A procedure for customers to flush particulate lead from service
- 30086 lines and premises plumbing;
- 30087
- 30088 6) A prioritization strategy for lead service line replacement based on
- 30089 factors, including targeting known lead service lines, replacing
- 30090 lead service lines for disadvantaged consumers and populations
- 30091 most sensitive to the effects of lead; and
- 30092
- 30093 7) A strategy for funding lead service line replacements considering
- 30094 ways to replace the customer-owned portion for those unable to
- 30095 pay.
- 30096

30097 c) Operating Procedures for Replacing Lead Goosenecks, Pigtails, or Connectors

- 30098
- 30099 1) The supplier must replace any lead gooseneck, pigtail, or connector it
- 30100 owns when the supplier encounters it during planned or unplanned water
- 30101 system infrastructure work.
- 30102
- 30103 2) The supplier must offer to replace a customer-owned lead gooseneck,
- 30104 pigtail, or connector; however, the supplier needs not bear the cost of
- 30105 replacing the customer-owned parts.
- 30106 3) The supplier needs not replace a customer-owned lead gooseneck, pigtail,
- 30107 or connector if the customer objects to replacing it.
- 30108
- 30109 4) Replacing a lead gooseneck, pigtail, or connector does not count towards
- 30110 goal-based or mandatory lead service line replacements under subsections
- 30111 (f) or (g).
- 30112
- 30113 5) When replacing any gooseneck, pigtail, or connector attached to a lead
- 30114 service line, the supplier must follow the risk mitigation procedures
- 30115 Section 611.2355(f)(2) specifies.
- 30116

30117 d) Conducting Lead Service Line Replacement That May Result in Partial

30118 Replacements.

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- 1) A supplier planning to partially replace a lead service line (e.g., replace only the supplier-owned portion) in the course of planned infrastructure work must notify the service line's owner, or the owner's authorized agent, and any non-owner residents the service line serves at least 45 days before the replacement. The notice must explain that the supplier will replace the supplier-owned portion of the service line and offer to replace the customer-owned portion (not supplier-owned). The supplier needs not bear the cost of replacing the customer-owned portion of the lead service line.
 - A) Before returning a service line to service, the supplier must provide notice complying with Section 611.2355(a) and explaining that consumers may experience a temporary increase of lead levels in their drinking water due to the replacement, providing information about the health effects of lead, and describing actions consumers can take to minimize their exposure to lead in drinking water. If the lead service line undergoing partial replacement serves multi-family dwellings, the supplier may post the information at a conspicuous location instead of providing individual notice to each resident.
 - B) The supplier must inform consumers about service line flushing using the procedure in subsection (b)(5) requires before returning the affected service line to service.
 - C) The supplier must provide the consumer with a pitcher filter or point-of-use treatment device to reduce lead, six months of replacement cartridges, and use instructions before returning the affected service line to service. If the affected service line serves more than one residence or non-residential unit (e.g., a multi-unit building), the supplier must provide a filter, six months of replacement cartridges and use instructions to every unit in the building.
 - D) The supplier must offer to collect a follow up tap sample between three and six months after partially replacing a lead service line. The supplier must provide the results from the follow up sample under Section 611.2355(d).
 - 2) Any supplier replacing the supplier-owned portion of a lead service line in the course of an emergency repair must notify and provide risk mitigation measures to the persons the affected service line serves as subsections (d)(1)(A) through (d)(1)(C) require before returning the line to service.

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3) If a customer notifies a supplier that the customer plans to replace the customer's portion of the lead service line, the supplier must make a good faith effort to coordinate simultaneously replacing the supplier's portion. If simultaneously replacing the supplier- and customer-owned portions cannot be conducted, the supplier must replace the supplier-owned portion as soon as practicable but no later than 45 days after the customer replaces the customer-owned portion of the lead service line. The supplier must notify and provide risk mitigation measures as subsections (d)(1)(A) through (d)(1)(C) require. If the supplier fails to replace its portion of the lead service line within 45 days after the customer replaces the customer's portion of the lead service line, the supplier must notify the Agency under Section 611.2360(e) within 30 days after failing to meet the deadline. The supplier must complete replacing the supplier-owned portion of the service line no later than 180 days after the customer replaces the customer-owned portion.

4) If a supplier receives notice or otherwise learns that a customer replaced the customer-owned portion of a lead service line within the previous six months leaving the system-owned portion in place, the supplier must replace its portion within 45 days after the supplier becomes aware the customer replaced the customer-owned portion. The supplier must notify and provide risk mitigation measures as subsections (d)(1)(A) through (d)(1)(C) require within 24 hours after the supplier becomes aware of the customer replacing the customer-owned portion. If the supplier fails to replace the supplier-owned portion of the service line within 45 days after becoming aware of the customer replacing the customer-owned portion, the supplier must notify the Agency under Section 611.2360(e) within 30 days after failing to meet the deadline. The supplier must complete replacing the supplier-owned portion of the service line no later than 180 days after the customer replaces the customer-owned portion.

5) If a supplier receives notice or otherwise learns that a customer replaced the customer-owned portion of a lead service line more than six months in the past, the supplier needs not replace the supplier-owned portion of the lead service line under this subsection (d)(5). However, the supplier must still include the system-owned portion when calculating a lead service line replacement rate under subsection (a)(7).

e) Conducting Full Lead Service Line Replacements. A supplier conducting a full lead service line replacement must notify the service line's owner, or the owner's authorized agent, and any non-owner residents the service line serves within 24

30205 hours after completing the replacement. The supplier needs not bear the cost of
30206 replacing the customer-owned portion of the lead service line.

30207
30208 1) The notice must comply with Section 611.2355(a), explain that consumers
30209 may experience a temporary increase of lead levels in their drinking water
30210 due to the replacement, inform about the health effects of lead, and explain
30211 actions a consumer can take to minimize exposure to lead in drinking
30212 water. If the lead service line the supplier will replace serves a multi-
30213 family dwelling, the supplier may post the information at a conspicuous
30214 location instead of providing individual notice to all residents.

30215
30216 2) The supplier must inform about flushing the service line using the
30217 procedure the supplier developed under subsection (b)(5) before returning
30218 the replaced service line to service.

30219
30220 3) The supplier must provide the consumer with a pitcher filter or point-of-
30221 use treatment device to reduce lead, six months of replacement cartridges,
30222 and use instructions before returning the replaced service line to service.
30223 If the lead service line serves more than one residence or non-residential
30224 unit (e.g., a multi-unit building), the supplier must provide a filter and six
30225 months of replacement cartridges and use instructions to every unit in the
30226 building.

30227
30228 4) The supplier must offer to the consumer to collect a follow up tap sample
30229 between three and six months after replacing a lead service line. The
30230 supplier must provide the results from the follow up sample to the
30231 consumer under Section 611.2355(d).

30232
30233 f) Goal-Based Full Lead Service Line Replacement for Suppliers Having a 90th
30234 Percentile Lead Concentration Exceeding the Lead Trigger Level But Not the
30235 Lead Action Level. A supplier serving more than 10,000 persons having a 90th
30236 percentile lead concentration under Section 611.2356 that exceeds the lead trigger
30237 level but not the lead action level must conduct goal-based full lead service line
30238 replacement at a rate approved in an Agency-issued SEP.

30239
30240 1) The supplier must annually calculate the number of full lead service line
30241 replacements it must conduct under subsection (a)(7).

30242
30243 2) The supplier must replace lead service lines complying with subsection (d)
30244 or (e).
30245

- 30246 3) Only a full lead service line replacement counts towards a supplier's
30247 annual replacement goal. A partial lead service line replacement does not
30248 count towards the goal.
30249
- 30250 4) The supplier must inform customers having a lead, galvanized requiring
30251 replacement, or lead status unknown service line as Section 611.2355(g)
30252 requires.
30253
- 30254 5) A supplier failing to meet its lead service line replacement goal must take
30255 certain actions:
30256
- 30257 A) Conduct public outreach activities under Section 611.2355(h) until
30258 either the supplier meets its replacement goal, or tap sampling
30259 shows the 90th percentile concentration does not exceed the lead
30260 trigger level for two continuous years of monitoring.
30261
- 30262 B) Resume its goal-based lead service line replacement program
30263 under this subsection (f) if its 90th percentile lead concentration
30264 anytime later exceeds the lead trigger level but not the lead action
30265 level.
30266
- 30267 6) The first year of a supplier's lead service line replacement program begins
30268 on the first day after the end of the tap sampling period during which the
30269 supplier exceeded the lead trigger level. If the supplier samples annually
30270 or less frequently, the end of the tap monitoring period is September 30 of
30271 the calendar year during which the sampling occurs. If the Agency issues
30272 a SEP establishing an alternative tap monitoring period, the end of the
30273 supplier's tap monitoring period is the last day of that cycle.
30274
- 30275 g) Mandatory Full Lead Service Line Replacement for Suppliers Whose 90th
30276 Percentile Lead Concentration Exceeds the Lead Action Level. A supplier
30277 servicing more than 10,000 persons that exceeds the lead action level in tap
30278 sampling monitoring under Section 611.2356 must replace full lead service lines
30279 on its distribution system at an annual rate of at least three percent on a two-year
30280 rolling average basis.
30281
- 30282 1) The supplier must calculate its average annual number of full lead service
30283 line replacements under subsection (a)(7).
30284
- 30285 2) The supplier must replace lead service lines under subsections (d) and (e).
30286
- 30287 3) Only a full lead service line replacement counts towards a supplier's
30288 mandatory annual replacement rate of at least three percent. A partial lead

30289 service line replacement does not count towards the supplier's mandatory
 30290 replacement rate.

30291
 30292 4) A supplier must inform its customers having a lead, galvanized requiring
 30293 replacement, or lead status unknown service line as Section 611.2355(g)
 30294 requires.

30295
 30296 5) A CWS supplier serving 10,000 or fewer persons or a NTNCWS supplier
 30297 for which the Agency issues a SEP approving or designating replacing
 30298 lead service lines as a compliance option must replace lead service lines as
 30299 Section 611.2363(a)(1) describes. The supplier must replace lead service
 30300 lines complying with subsections (d) and (e).

30301
 30302 6) A supplier may stop replacing lead service lines after cumulatively
 30303 replacing the required number. Unless the Agency issues a SEP under
 30304 subsection (g)(9) requiring another percentage, the required number is at
 30305 least three percent of the service lines subsection (a)(7) determines times
 30306 the number of years between when the supplier most recently began
 30307 mandatorily replacing lead service lines and when the supplier calculates
 30308 its lead 90th percentile concentration under Section 611.2360(c)(4) to be at
 30309 or below the lead action level during each of four consecutive six-month
 30310 tap monitoring periods. If the supplier later exceeds the lead action level,
 30311 it must restart mandatorily replacing lead service lines at the same rate on
 30312 a two-year rolling average basis, unless the Agency issues a SEP under
 30313 subsection (g)(9) requiring an alternative replacement rate.

30314
 30315 7) A supplier may also cease mandatorily replacing lead service lines if the
 30316 supplier has no remaining lead status unknown service lines in its
 30317 inventory, and the supplier obtains refusals or non-responses to its offer to
 30318 replace the customer-owned portion of the lead service line from every
 30319 customer on its distribution system still served by a lead service line or a
 30320 galvanized requiring replacement service line. For this subsection (g)(7)
 30321 and under Section 611.2360(e), a supplier must document customer
 30322 refusals to the Agency, including any written refusals signed by the
 30323 customers, any documents memorializing customers verbally refusing, and
 30324 any documents memorializing no response from customers after the
 30325 supplier made at least two good faith attempts to reach the customer, each
 30326 attempt offering to replace the full lead service line. If the supplier's lead
 30327 90th percentile concentration later exceeds the lead action level, the
 30328 supplier must offer to replace the customer-owned portion for every
 30329 customer served through a full or partial lead service line or galvanized
 30330 requiring replacement service line. The supplier need not bear the cost of
 30331 replacing the customer-owned portion of any lead service line.

- 30332
- 30333
- 30334 8) The first year of lead service line replacement begins the first day after the
- 30335 end of the tap sampling period during which the supplier exceeded the
- 30336 lead action level.
- 30337
- 30338 9) If the Agency determines a shorter schedule is feasible, the Agency must
- 30339 issue a SEP requiring a supplier to replace lead service lines on a shorter
- 30340 schedule than this Section otherwise requires, taking into account the
- 30341 number of lead service lines in the supplier's system. The Agency must
- 30342 issue this SEP within six months after the supplier must begin replacing
- 30343 lead service lines under subsection (g).
- 30344 h) Reporting to Demonstrate Compliance to the Agency. To demonstrate that it
- 30345 complies with subsections (a) through (g), a supplier must report the information
- 30346 Section 611.2360(e) specifies to the Agency.
- 30347

30348 BOARD NOTE: This Section derives from 40 CFR 141.84.

30349 (Source: Added at 50 Ill. Reg. _____, effective _____)

30350 **Section 611.2355 Public Education and Supplemental Monitoring and Mitigation**

30351

30352 A supplier exceeding the lead action level based on tap water samples under Section 611.2356

30353 must deliver the public education materials subsection (a) requires under subsection (b). A

30354 supplier exceeding the lead action level must sample the tap water of any customer requesting

30355 sampling under subsection (c). A small CWS or NTNCWS supplier electing to implement POU

30356 devices as a small supplier compliance flexibility option under Section 611.363 must provide

30357 public education materials as subsection (j) requires to inform users how to properly use POU

30358 devices. A supplier must deliver a consumer notice of lead tap water monitoring results to

30359 persons the supplier serves at each site that the supplier samples, as subsection (d) specifies. A

30360 supplier with lead, galvanized requiring replacement, or lead status unknown service lines, as

30361 defined in Section 611.2354(a)(4), must deliver public education materials to persons served

30362 through these service lines as subsections (e) through (g) specify. A CWS supplier must conduct

30363 annual outreach to the Illinois Department of Public Health and local health agencies as

30364 subsection (i) provides. A CWS supplier serving more than 10,000 persons failing to meet its

30365 annual lead service line replacement goal under Section 611.2354(f) must conduct outreach

30366 activities as subsection (h) specifies.

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30370 a) Content of Written Public Education Materials

- 30371
- 30372 1) Community Water Systems and Non-Transient Non-Community Water
- 30373 Systems. A CWS or NTNCWS supplier must include the following
- 30374 elements in printed materials (e.g., brochures and pamphlets) in the same

30375 order as listed in subsections (a)(1)(A) through (a)(1)(G). In addition, the
30376 supplier must use the verbatim language in subsections (a)(1)(A),
30377 (a)(1)(B), and (a)(1)(F), except for replacing the text in brackets with the
30378 system-specific information. Any additional information a supplier
30379 presents must be consistent with the information in subsections (a)(1)(A),
30380 through (a)(1)(G), and the supplier must present the additional information
30381 in plain language that the general public can understand. The supplier
30382 must submit all written public education materials to the Agency prior to
30383 delivery. A supplier may change the mandatory language in subsections
30384 (a)(1)(A) and (a)(1)(B) only as the Agency approves in a SEP.
30385

30386 A) IMPORTANT INFORMATION ABOUT LEAD IN YOUR
30387 DRINKING WATER. [INSERT NAME OF SUPPLIER] found
30388 elevated levels of lead in drinking water in some homes/buildings.
30389 Lead can cause serious health problems, especially for pregnant
30390 women and young children. Please read this information closely to
30391 see what you can do to reduce lead in your drinking water.
30392

30393 B) Health Effects of Lead. Exposure to lead in drinking water can
30394 cause serious health effects in all age groups. Infants and children
30395 can have decreases in IQ and attention span. Lead exposure can
30396 lead to new learning and behavior problems or exacerbate existing
30397 learning and behavior problems. The children of women who are
30398 exposed to lead before or during pregnancy can have increased risk
30399 of these adverse health effects. Adults can have increased risks of
30400 heart disease, high blood pressure, kidney or nervous system
30401 problems.
30402

30403 C) Sources of Lead
30404
30405 i) Explain what lead is.
30406
30407 ii) Explain possible sources of lead in drinking water and how
30408 lead enters drinking water. Include information on home
30409 and building plumbing materials and service lines that may
30410 contain lead.
30411
30412 iii) Discuss other important sources of lead exposure in
30413 addition to drinking water (e.g., paint).
30414

30415 BOARD NOTE: The supplier must use text providing the
30416 information this subsection (a)(1)(C) describes.
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- D) Discuss the steps the consumer can take to reduce exposure to lead in drinking water.
- i) Encourage running the water to flush out the lead.
 - ii) Explain concerns with using hot water from the tap and specifically caution against the use of hot water for preparing baby formula.
 - iii) Explain that boiling water does not reduce lead levels.
 - iv) Discuss other options consumers can take to reduce exposure to lead in drinking water, such as alternative sources or water treatment.
 - v) Suggest that parents have their child's blood tested for lead.
- BOARD NOTE: The supplier must use text providing the information this (a)(1)(D) describes.
- E) Explain why there are elevated levels of lead in the supplier's drinking water (if known) and what the supplier is doing to reduce the lead levels in homes and buildings in this area.
- BOARD NOTE: The supplier must use text providing the information this (a)(1)(E) describes.
- F) For more information, call us at [INSERT THE SUPPLIER'S NUMBER] [(IF APPLICABLE), or visit our Web site at [INSERT THE SUPPLIER'S WEB SITE HERE]]. For more information on reducing lead exposure around your home/building and the health effects of lead, visit USEPA's Web site at www.epa.gov/lead or contact your health care provider.
- G) Information on Lead Service Lines. A supplier having lead service lines must discuss opportunities to replace lead service lines and explain how a consumer may access the supplier's lead service line inventory to determine whether the consumer has a lead service line. The supplier must include information on programs providing financing solutions to assist property owners in replacing their portion of a lead service line, with a statement that the water system must replace the supplier-owned portion of a lead service line when the property owner notifies the supplier that the

30460 consumer will replace the property owners portion of the lead
30461 service line.

30462
30463 2) Community Water Systems. In addition to including the elements
30464 subsection (a)(1) specifies, a CWS supplier must include two information
30465 items:

30466
30467 A) The supplier must tell consumers how to get their water tested; and

30468
30469 B) The supplier must discuss lead in plumbing components and the
30470 difference between low-lead and lead-free components.

30471
30472 BOARD NOTE: At corresponding 40 CFR 141.85(a)(1), USEPA allowed the
30473 State to require prior approval of written public information materials. Rather
30474 than require prior Agency approval, the Board chooses to allow the Agency to
30475 raise any deficiencies that it may perceive using its existing procedure for review
30476 of public education materials. The Agency outlines its standard practice for
30477 review of public information materials: The Agency provides a comprehensive
30478 public education packet to the supplier together with the notice that the supplier
30479 exceeds the lead action level. That packet includes guidance and templates for the
30480 supplier to use in preparing and distributing its public education materials. The
30481 supplier must send a copy of the public education materials that it distributes to
30482 the Agency, and the Agency reviews the copy of the materials after their
30483 distribution to the public. The Agency directly communicates to the supplier any
30484 perceived defects in the materials. When the Agency perceives minor defects, it
30485 will request correction in future distributions of the public education materials.
30486 When the Agency perceives major defects in the materials, it will request a
30487 redistribution of corrected public education materials the supplier already
30488 distributed.

30489
30490 b) Delivering Public Education Materials

30491
30492 1) The public education materials of a supplier serving a large proportion of
30493 non-English-speaking consumers must contain information in the
30494 appropriate languages regarding the importance of the notice, or the
30495 materials must contain a telephone number or address where a water
30496 consumer may contact the supplier to obtain a translated copy of the
30497 public education materials or to request assistance in the appropriate
30498 language.

30499
30500 2) A CWS supplier exceeding the lead action level on the basis of tap water
30501 samples under Section 611.2356 not already conducting public education
30502 tasks under this Section must complete public education tasks within 60

30503 days after the end of the tap sampling period in which the exceedance
30504 occurred:

30505
30506 A) The CWS supplier must deliver printed materials complying with
30507 subsection (a) to all of its bill-paying customers.

30508
30509 B) Methods of Delivery for a CWS Supplier

30510
30511 i) The CWS supplier must contact customers who are most at
30512 risk by delivering education materials complying with
30513 subsection (a) to local public health agencies, even if those
30514 agencies are not located within the supplier's service area,
30515 along with an informational notice encouraging distribution
30516 to all of the agencies' potentially affected customers or the
30517 supplier's consumers. The supplier must contact the local
30518 public health agencies directly by phone or in person. The
30519 local public health agencies may provide a specific list of
30520 additional community-based organizations serving the
30521 target populations, which may include organizations
30522 outside the service area of the supplier. If local health
30523 agencies provide lists, the supplier must deliver education
30524 materials that comply with subsection (a) to each of the
30525 organizations on the provided lists.

30526
30527 ii) The CWS supplier must contact customers who are most at
30528 risk by delivering materials complying with subsection (a)
30529 to the organizations in subsections (b)(2)(H)(i) through
30530 (b)(2)(H)(vi) that are located within the supplier's service
30531 area, along with an informational notice encouraging
30532 distribution to all the organization's potentially affected
30533 customers or supplier's users.

30534
30535 BOARD NOTE: The Board moved the text of 40 CFR
30536 141.85(b)(2)(ii)(B)(1) through (b)(2)(ii)(B)(6) to appear as
30537 subsections (b)(2)(H)(i) through (b)(2)(H)(vi) to comport
30538 with allowed indent levels.

30539
30540 C) No less often than quarterly, the CWS supplier must provide
30541 information on or in each water bill as long as the system exceeds
30542 the action level for lead. The message on the water bill must
30543 include the verbatim text of the paragraph below, except replacing
30544 the text in brackets with system-specific information:

30545

30546 [INSERT NAME OF SUPPLIER] found high levels of lead
30547 in drinking water in some homes. Lead can cause serious
30548 health problems. For more information please call
30549 [INSERT NAME OF SUPPLIER] [or visit (INSERT
30550 SUPPLIER'S WEB SITE HERE)].

30551
30552 The message or delivery mechanism can be modified in
30553 consultation with the Illinois Environmental Protection Agency,
30554 Division of Public Water Supply; specifically, the Agency may
30555 allow a separate mailing of public education materials to customers
30556 if the water system cannot place the information on water bills.

30557
30558 D) The CWS supplier must post material complying with subsection
30559 (a) on the supplier's Web site if the CWS supplier serves a
30560 population greater than 100,000.

30561 E) The CWS supplier must submit a press release to newspaper,
30562 television, and radio stations.

30563
30564 F) In addition to subsections (b)(2)(A) through (b)(2)(E), the CWS
30565 supplier must implement at least three activities from one or more
30566 of the categories listed below. The supplier must consult with the
30567 Agency to determine the educational content and selection of these
30568 activities.

30569
30570
30571 i) Public service announcements.

30572
30573 ii) Paid advertisements.

30574
30575 iii) Public area information displays.

30576
30577 iv) E-mails to customers.

30578
30579 v) Public meetings.

30580
30581 vi) Household deliveries.

30582
30583 vii) Targeted individual customer contact.

30584
30585 viii) Direct material distribution to all multi-family homes and
30586 institutions.

30587
30588 ix) Other Agency-approved methods.

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G) For a CWS supplier that must monitor annually or less frequently, the end of the tap sampling period is September 30 of the calendar year in which the sampling occurs, or on the last day of an alternative tap sampling period the Agency sets in a SEP.

H) Organizations That the CWS Supplier Must Contact When Required to Do So under Subsection (b)(2)(B)(ii)

- i) Schools, childcare facilities, and school boards.
- ii) Women, Infants and Children (WIC) and Head Start programs.
- iii) Public and private hospitals and medical clinics.
- vi) Pediatricians.
- v) Family planning clinics.
- vi) Local welfare agencies.
- vii) Obstetricians-gynecologists and midwives.

BOARD NOTE: This subsection (b)(2)(H) derives from 40 CFR 141.85(b)(2)(ii)(B)(1) through (b)(2)(ii)(B)(7), moved here to comport with allowed indent levels.

3) As long as a CWS supplier exceeds the action level, it must repeat the activities in subsection (b)(2), as subsections (b)(3)(A) through (b)(3)(D) require.

A) The CWS supplier must repeat the tasks in subsections (b)(2)(A), (b)(2)(B), and (b)(2)(F) every 12 months.

B) The CWS supplier must repeat tasks in subsection (b)(2)(C) with each billing cycle.

C) The CWS supplier serving a population greater than 100,000 must post and retain material on a publicly accessible website under subsection (b)(2)(D).

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- D) The CWS supplier must repeat the task in subsection (b)(2)(E) twice every 12 months on a schedule agreed by the Agency in a SEP. The Agency must, on a case-by-case basis, issue a SEP extending the time for the supplier to complete the public education tasks in subsection (b)(2) beyond the 60-day limit if the Agency determines that the supplier needs the extended time to implement the tasks; however, the Agency must issue the SEP granting any extension before the 60-day deadline expires.
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- 4) Within 60 days after the end of the tap sampling period in which a NTNCWS supplier exceeds the lead action level (unless it already is repeating public education tasks under subsection (b)(5)), the supplier must deliver the public education materials subsection (a) specifies.
- 30645
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30647
- A) The supplier must deliver the public education materials by certain means:
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30651
- i) The NTNCWS supplier must post informational posters on lead in drinking water in a public place or common area in each of the buildings the supplier serves; and
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- ii) The NTNCWS supplier must distribute informational pamphlets or brochures on lead in drinking water to each person the NTNCWS supplier serves. The Agency may issue a SEP allowing the system to use electronic transmission in lieu of or combined with printed materials as long as the electronic transmission achieves the same or better coverage.
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- B) For a NTNCWS supplier that must monitor annually or less frequently, the end of the tap sampling period is September 30 of the calendar year in which the sampling occurs, or on the last day of an alternative tap sampling period the Agency sets in a SEP.
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- 5) A NTNCWS supplier must repeat the tasks in subsection (b)(4) at least once during each calendar year in which the supplier exceeds the lead action level. The Agency must, on a case-by-case basis, issue a SEP extending the time for the supplier to complete the public education tasks in subsection (b)(2) beyond the 60-day limit if the Agency determines that the extended time is needed for implementation purposes; however, the Agency must issue any SEP granting any extension before the 60-day deadline expires.

- 30674 6) A supplier may stop delivering public education materials after the
30675 supplier does not exceed the lead action level during the most recent six-
30676 month tap monitoring period under Section 611.2356. The supplier must
30677 begin public education anew under this Section if the supplier
30678 subsequently exceeds the lead action level during any tap sampling period.
30679
- 30680 7) A CWS supplier may apply to the Agency, in writing, to use only the text
30681 in subsection (a)(1) in lieu of the text in subsections (a)(1) and (a)(2) and
30682 to perform the tasks in subsections (b)(4) and (b)(5) in lieu of the tasks in
30683 subsection (b)(2) and (b)(3) under specific circumstances:
30684
- 30685 A) The supplier is a facility, such as a prison or a hospital, where the
30686 population served is not capable of or is prevented from making
30687 improvements to plumbing or installing point of use treatment
30688 devices; and
30689
- 30690 B) The supplier provides water as part of the cost of services
30691 provided, not separately charging for water consumption.
30692
- 30693 8) A CWS supplier serving 3,300 or fewer people may limit certain aspects
30694 of its public education programs:
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- 30696 A) For notice under subsection (b)(2)(F), a supplier serving 3,300 or
30697 fewer people must implement at least one of the activities in that
30698 subsection.
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- 30700 B) For notice under subsection (b)(2)(B), a supplier serving 3,300 or
30701 fewer people may limit the distribution of the public education
30702 materials to facilities and organizations that pregnant women and
30703 children are most likely to visit.
30704
- 30705 C) For notice under subsection (b)(2)(E), the Agency may issue a SEP
30706 waiving this requirement for a supplier serving 3,300 or fewer
30707 persons, as long as the supplier distributes notices to every
30708 household the supplier serves.
30709
- 30710 c) Supplemental Monitoring and Notification of Results. A supplier failing to meet
30711 the lead action level in tap samples under Section 611.2356 must offer to sample
30712 the tap water of any customer requesting it. The supplier needs not pay for
30713 collecting or analyzing the sample, nor must the supplier itself collect and analyze
30714 the sample.
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- 30716 d) Requirement for Consumer Notice of Tap Water Monitoring Results

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- 1) Consumer Notice Requirement. A supplier must provide a notice of the individual tap results from lead tap water monitoring under Section 611.2356 to the persons the water system serves at the specific sampling site from which the supplier took the sample (e.g., the occupants of the building where the supplier sampled the tap).
 - 2) Timing of Consumer Notice. The supplier must provide the consumer notice as soon as practicable but no later than the specified timeframe:
 - A) For individual samples not exceeding 15 µg/ L of lead, no later than 30 days after the supplier learns of the tap monitoring results.
 - B) For individual samples exceeding 15 µg/ L of lead, as soon as practicable but no later than three calendar days after the supplier learns of the tap monitoring results. A supplier choosing to mail the notification must post those letters so they receive postmarks within the three days.
 - 3) Content of Consumer Notice. The consumer notice must include the results of lead tap water monitoring for the tap the supplier tested, an explanation of the health effects of lead, a list of steps consumers can take to reduce exposure to lead in drinking water and contact information for the water utility. The notice must also provide the maximum contaminant level goal and the action level for lead and the definitions for these two terms from Section 611.2883(c).
 - 4) Delivery of Consumer Notice
 - A) For tap sampling lead results not exceeding 15 µg/ L, the supplier must provide the consumer notice to persons it serves at the tap the supplier sampled, by mail or by another method the Agency approves in a SEP. For example, upon Agency approval, a NTNCWS supplier could post the results on a bulletin board in the facility enabling users to review the information.
 - B) For tap sampling lead results exceeding 15 µg/ L, the supplier must provide consumer notice to persons it serves at the tap the supplier sampled; the supplier must provide this notice electronically or by phone, hand delivery, mail, or another method the Agency approves in a SEP.
 - e) Notice of Known or Potential Service Line Containing Lead

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- 1) Notice requirements. A supplier having lead, galvanized requiring replacement, or lead status unknown service lines in their inventory under Section 2611.354(a) must inform all persons the supplier serves through a lead, galvanized requiring replacement, or lead status unknown service line.

- 2) Timing of notice. A supplier must provide the initial notice within 30 days after completing the lead service line inventory Section 611.2354 requires and annually repeat the notice to each person the supplier serves until the supplier's entire service connection is no longer a lead, galvanized requiring replacement, or lead status unknown service line. For each new customer, the supplier must also provide the notice when the supplier initiates service.

- 3) Notice Content
 - A) Persons the Supplier Serves Through a Confirmed Lead Service Line. The notice must state that the supplier serves the person through a lead service line; explain the health effects of lead in a way complying with subsection (a)(1)(B); give steps persons at the service connection can take to reduce exposure to lead in drinking water; inform about opportunities to replace lead service lines, including programs providing financing solutions to assist property owners to replace the customer-owned portion of a lead service line; and explain that the supplier must replace the supplier-owned portion of a lead service line when the property owner notifies the supplier that the owner will replace the customer-owned portion of the lead service line.

 - B) Persons the Supplier Serves Through a Galvanized Requiring Replacement Service Line. The notice must state that the supplier serves the person through a galvanized requiring replacement service line, explain the health effects of lead in a way complying with subsection (a)(1)(B), give steps persons at the service connection can take to reduce exposure to lead in drinking water, and inform about opportunities to replace the service line.

 - C) Persons the Supplier Serves Through a Lead Status Unknown Service Line. The notice must state that the supplier serves the person through a lead status unknown service line (a service line whose material is unknown but may be lead), explain the health effects of lead in a way complying with subsection (a)(1)(B), give

30803 steps persons at the service connection can take to reduce exposure
30804 to lead in drinking water, and inform about opportunities to verify
30805 the material of the service line.

30806
30807 4) Delivery. The supplier must provide notice to persons the supplier serves
30808 at the service connection with a lead, galvanized requiring replacement, or
30809 lead status unknown service line, by mail or using another method the
30810 Agency approves in a SEP.

30811
30812 f) Notice Due to Disturbing a Service Line Known to or Potentially Containing Lead

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30814 1) A supplier disturbing a lead, galvanized requiring replacement, or lead
30815 status unknown service line by a water shutoff or bypass to the service
30816 line, such as operating a valve on the service line or meter setter, without
30817 partially or fully replacing the lead service line must inform the persons
30818 the supplier serves through the service connection about the potential for
30819 an elevated lead concentration in their drinking water due to the supplier
30820 disturbing the service line, including instructions for flushing to remove
30821 particulate lead. The supplier must comply with this subsection (f)(1)
30822 before returning the affected service line to service.

30823
30824 2) If a supplier disturbs a lead, galvanized requiring replacement, or lead
30825 status unknown service line while replacing an inline water meter, a water
30826 meter setter, or gooseneck, pigtail, or connector, the supplier must inform
30827 the persons the supplier serves through the service connection about the
30828 potential for an elevated lead concentration in their drinking water due to
30829 the supplier disturbing the service line, provide public education materials
30830 complying with subsection (a), a pitcher filter or point-of-use treatment
30831 device to reduce lead, use instructions, and six months of replacement
30832 filter cartridges. The supplier must comply with this subsection (f)(2)
30833 before returning the affected service line to service.

30834
30835 3) A supplier partially or fully replacing a lead service line must follow
30836 applicable procedures in Section 611.2354(d)(1)(A) through (d)(1)(D) or
30837 (e)(1)(A) through (e)(1)(D).

30838
30839 g) Information for Persons the Supplier Serves Through a Service Line Known to or
30840 Potentially Containing Lead When the Supplier Exceeds the Lead Trigger Level

30841
30842 1) Content. A supplier having lead service lines and exceeding the lead
30843 trigger level of 10 µg/ L must inform persons the supplier serves through a
30844 lead, galvanized requiring replacement, or lead status unknown service

30845 line about the supplier's lead service line replacement program and
30846 opportunities for replacing the customer's lead service line.

30847
30848 2) Timing. The supplier must inform persons it serves within 30 days after
30849 the end of the tap sampling period during which the supplier exceeded the
30850 lead trigger level. The supplier must continue to annually inform the
30851 persons it serves until the results of sampling under Section 611.2356 do
30852 not exceed the lead trigger level.

30853
30854 3) Delivery. The supplier must inform the persons it serves through a lead,
30855 galvanized requiring replacement, or lead status unknown service line by
30856 mail or another method the Agency approves in a SEP.

30857
30858 h) Outreach Activities for Failing to Fulfill the Lead Service Line Replacement Goal

30859
30860 1) In the first year after a CWS supplier serving more than 10,000 persons
30861 does not fulfill its required annual lead service line replacement goal under
30862 Section 611.2354(f), the supplier must conduct one outreach activity from
30863 among those in subsections (h)(1)(A) through (h)(1)(B). The supplier
30864 must annually conduct an outreach activity under this subsection (h)(1)
30865 until the supplier fulfills its replacement goal or until tap sampling shows
30866 that its 90th percentile lead concentration does not exceed the trigger level
30867 of 10 µg/ L for two consecutive tap monitoring periods:

30868
30869 A) Send certified mail to customers the supplier serves through a lead
30870 or galvanized requiring replacement service line to inform them
30871 about the supplier's goal-based program for replacing lead service
30872 lines and opportunities for replacing the customer's service line.

30873
30874 B) Conduct a townhall meeting.

30875
30876 C) Participate in a community event providing information about the
30877 supplier's program for replacing lead service lines and distribute
30878 public education materials whose content complies with subsection
30879 (a).

30880
30881 D) Contact customers by phone, text message, email, or door hanger.

30882
30883 E) Use another method the Agency approves in a SEP to discuss the
30884 supplier's program for replacing lead service lines and
30885 opportunities for replacing the customer's lead service line.

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30887 2) Following the first year after the supplier exceeds the lead trigger level, a
30888 supplier still failing to fulfill its goal for replacing lead service lines must
30889 conduct one activity from subsection (h)(1) and two additional outreach
30890 activities each year from among those in subsections (h)(2)(A) through
30891 (h)(2)(D):

30892 A) Conduct social media campaign.

30893 B) Conduct outreach via newspaper, television, or radio.

30894 C) Contact organizations representing plumbers and contractors by
30895 mail providing information about lead in drinking water, including
30896 health effects, sources of lead, and the importance of using lead-
30897 free plumbing materials.

30898 D) Visit targeted customers to discuss the supplier's program for
30899 replacing lead service lines and opportunities for replacing the
30900 customers' lead service lines.

30901 3) The supplier may stop outreach activities when tap sampling shows that its
30902 90th percentile lead concentration no longer exceeds the trigger level of 10
30903 µg/ L for two consecutive tap monitoring periods or when all customers
30904 the supplier serves through lead or galvanized requiring replacement
30905 service lines refuse to participate in replacing the customer-owned portion
30906 under the supplier's program for replacing lead service lines. Under this
30907 subsection (h)(3), a refusal includes a customer-signed statement refusing
30908 to participate in replacing the customer-owned portion of the lead service
30909 line or supplier-generated documents memorializing the customer's verbal
30910 refusal or non-response after two good faith attempts by the supplier to
30911 reach the customer.

30912 i) Public Education to Local and State Health Agencies

30913 1) Find-and-Fix Results. A CWS supplier must inform the Department of
30914 Public Health and local health agencies about its find-and-fix activities
30915 under Section 611.2352(j), including the location of the tap sample sites
30916 exceeding 15 µg/ L, the results from initial tap samples, the results from
30917 follow-up tap samples, the results from water quality parameter
30918 monitoring, and any distribution system management actions or corrosion
30919 control treatment adjustments the supplier made.

30920

- 30928 2) Timing and Content. A CWS supplier must annually send copies of the
- 30929 public education materials the supplier provided under subsections (a) and
- 30930 (h)(1) during a calendar year no later than July 1 of the following year.
- 30931
- 30932 3) Delivery. The CWS supplier must send the public education materials and
- 30933 find-and-fix information to the Department of Public Health and local
- 30934 health agencies by mail or by another method the Agency approves in a
- 30935 SEP.
- 30936
- 30937 j) Public Education for Small Supplier Compliance Flexibility POU Devices
- 30938
- 30939 1) Content. A small CWS or NTNCWS supplier implementing the POU
- 30940 device option under Section 611.2363 must provide public education
- 30941 materials to inform users how to properly use POU devices to maximize
- 30942 the units' effectiveness in reducing the lead concentration in drinking
- 30943 water.
- 30944
- 30945 2) Timing. The supplier must provide its public education materials when
- 30946 the supplier delivers the POU device.
- 30947
- 30948 3) Delivery. The supplier must provide its public education materials in
- 30949 person, by mail, or another method the Agency approves in a SEP, to
- 30950 persons at the locations where the supplier delivers the POU devices.
- 30951

30952 BOARD NOTE: This Section derives from 40 CFR 141.85.

30953 (Source: Added at 50 Ill. Reg. _____, effective _____)

30954 **Section 611.2356 Tap Water Monitoring for Lead and Copper**

- 30955
- 30956 a) Sampling Site Location
- 30957
- 30958 1) Selecting a Pool of Targeted Sampling Sites
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- 30960
- 30961 A) Before the applicable date for beginning monitoring under
- 30962 subsection (d)(1), a supplier must identify a pool of targeted
- 30963 sampling sites complying with this Section based on the service
- 30964 line inventory the supplier developed under Section 611.2354(a).
- 30965
- 30966 B) The pool of targeted sampling sites must be large enough to ensure
- 30967 that the supplier can collect the number of lead and copper tap
- 30968 samples subsection (c) requires.
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30971 C) The supplier may not include among its sampling sites any with
30972 installed POE treatment devices, and the tap the supplier uses at a
30973 sampling site may not have a POU device designed to remove
30974 inorganic contaminants. The exceptions are that a supplier
30975 monitoring under Section 611.2363(a)(3)(D) and a supplier using a
30976 POE or POU device for the primary drinking water tap to meet
30977 other primary and secondary drinking water standards may sample
30978 the connected tap if all service connections on the supplier's
30979 system have a POE or POU device to provide localized treatment
30980 to comply with those other drinking water standards.

30981 D) A supplier monitoring under Section 611.2363(a)(3)(D) may not
30982 use lead and copper sampling results to fulfill the criteria for
30983 reduced monitoring under subsection (d)(4).

30984 2) Materials Evaluation. A supplier must use the information on lead,
30985 copper, and galvanized iron or steel it identified under 40 CFR 141.42(d)
30986 when conducting a materials evaluation and the information on lead
30987 service lines that Section 611.2354(a) requires the supplier to collect to
30988 identify potential lead service line sampling sites.

30989 BOARD NOTE: Suppliers completed identifying and reporting
30990 construction materials in their distribution systems under 40 CFR
30991 141.42(d), so the Board omitted this requirement from the Illinois rules.

30992 3) Sampling Site Tiers. A supplier must categorize the sampling sites within
30993 its pool according to tiers:

30994 A) CWS Tier 1 Sampling Sites. "CWS Tier 1 sampling sites" include
30995 single-family structures the supplier serves through a lead service
30996 line. The supplier must not use sites with lead status unknown
30997 service lines as Tier 4 sampling sites.

31000 BOARD NOTE: This subsection (a)(3)(A) derives from segments
31001 of 40 CFR 141.86(a)(3).

31002 B) CWS Tier 2 Sampling Sites. "CWS Tier 2 sampling sites" include
31003 buildings, including multiple-family structures, the supplier serves
31004 through a lead service line. The supplier must not use sites with
31005 lead status unknown service lines as Tier 2 sampling sites.

31006 BOARD NOTE: This subsection (a)(3)(B) derives from segments
31007 of 40 CFR 141.86(a)(4).

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C) CWS Tier 3 Sampling Sites. "CWS Tier 3 sampling sites" include single-family structures containing galvanized service lines the supplier identified as currently or formerly downstream of a lead service line or known to be downstream of a lead gooseneck, pigtail, or connector. The supplier must not use sites with lead status unknown service lines as Tier 3 sampling sites.

BOARD NOTE: This subsection (a)(3)(C) derives from segments of 40 CFR 141.86(a)(5).

D) CWS Tier 4 Sampling Sites. "CWS Tier 4 sampling sites" include single-family structures or buildings containing copper pipes with lead solder installed before June 19, 1986. The supplier must not use sites with lead status unknown service lines as Tier 4 sampling sites.

BOARD NOTE: This subsection (a)(3)(D) derives from segments of 40 CFR 141.86(a)(6).

E) CWS Tier 5 Sampling Sites. "CWS Tier 5 sampling sites" include single-family structures, including multiple-family residences, representing sites throughout the supplier's distribution system. The supplier must not use sites with lead status unknown service lines as Tier 5 sampling sites.

BOARD NOTE: This subsection (a)(3)(E) derives from segments of 40 CFR 141.86(a)(7).

F) NTNCWS Tier 1 Sampling Sites. "NTNCWS Tier 1 sampling sites" include sites that the supplier serves through a lead service line. The supplier must not use sites with lead status unknown service lines as Tier 1 sampling sites.

BOARD NOTE: This subsection (a)(3)(F) derives from segments of 40 CFR 141.86(a)(8).

G) NTNCWS Tier 3 Sampling Sites. "NTNCWS Tier 3 sampling sites" include sites having galvanized lines the supplier identified as currently or formerly downstream of a lead service line or known to be downstream of a lead gooseneck, pigtail, or connector. The supplier must not use sites with lead status unknown service lines as Tier 3 sampling sites.

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BOARD NOTE: This subsection (a)(3)(G) derives from segments of 40 CFR 141.86(a)(9).

H) NTNCWS Tier 5 Sampling Sites. "NTNCWS Tier 5 sampling sites" include sites representing sites throughout the supplier's distribution system. Under this subsection (a)(3)(H), a site representing sites throughout the distribution system has plumbing materials commonly found at the other sites the supplier serves.

BOARD NOTE: This subsection (a)(3)(H) derives from segments of 40 CFR 141.86(a)(10).

4) Selecting Sampling Sites. A supplier must select sampling sites for its sampling pool using specific criteria:

A) CWS Suppliers. A CWS supplier must use CWS Tier 1 sampling sites, except that the supplier may include CWS Tier 2 or CWS Tier 3 sampling sites in its sampling pool under certain circumstances:

i) If multiple-family residences comprise at least 20 percent of the structures the supplier serves, the supplier may use CWS Tier 2 sampling sites in its Tier 1 sampling pool, if the supplier serves the sampling site through a lead service line.

BOARD NOTE: This subsection (a)(4)(A)(i) derives from a segment of 40 CFR 141.86(a)(3).

ii) If the CWS supplier does not have a sufficient number of CWS Tier 1 sampling sites on its distribution system, the supplier may use CWS Tier 2 sampling sites the supplier serves through a lead service line in its sampling pool; or

BOARD NOTE: This subsection (a)(4)(A)(ii) derives from a segment of 40 CFR 141.86(a)(4).

iii) If the CWS supplier does not have a sufficient number of CWS Tier 1 and CWS Tier 2 sampling sites on its distribution system, the supplier may complete its sampling pool with CWS Tier 3 sampling sites.

31100 BOARD NOTE: This subsection (a)(4)(A)(iii) derives from
31101 a segment of 40 CFR 141.86(a)(5).

31102
31103 iv) If the CWS supplier does not have a sufficient number of
31104 CWS Tier 1 sampling sites, CWS Tier 2 sampling sites, and
31105 CWS Tier 3 sampling sites, the supplier must complete its
31106 sampling pool with CWS Tier 4 sampling sites.

31107
31108 BOARD NOTE: This subsection (a)(4)(A)(iv) derives from
31109 segments of 40 CFR 141.86(a)(6).

31110
31111 v) If a CWS supplier does not have a sufficient number of
31112 CWS Tier 1, CWS Tier 2, CWS Tier 3, and CWS Tier 4
31113 sampling sites, the CWS supplier must complete its
31114 sampling pool with CWS Tier 5 sampling sites.

31115
31116 BOARD NOTE: This subsection (a)(4)(A)(v) derives from
31117 a segment of 40 CFR 141.86(a)(7).

31118
31119 vi) A supplier may use non-residential buildings representing
31120 sites throughout its distribution system only if there are an
31121 insufficient number of single-family or multiple-family
31122 residential Tier 5 sampling sites available.

31123
31124 BOARD NOTE: This subsection (a)(4)(A)(vi) derives from
31125 a segment of 40 CFR 141.86(a)(7).

31126
31127 B) NTNCWS Suppliers

31128
31129 i) An NTNCWS supplier must select NTNCWS Tier 1
31130 sampling sites for its sampling pool.

31131
31132 BOARD NOTE: This subsection (a)(4)(B)(i) derives from
31133 segments of 40 CFR 141.86(a)(8).

31134
31135 ii) If the NTNCWS supplier has an insufficient number of
31136 NTNCWS Tier 1 sampling sites, the supplier must
31137 complete its sampling pool with NTNCWS Tier 3 sampling
31138 sites.

31139
31140 BOARD NOTE: This subsection (a)(4)(B)(ii) derives from
31141 segments of 40 CFR 141.86(a)(9).

31142

31143 iii) If the NTNCWS supplier has an insufficient number of
31144 NTNCWS Tier 1 and Tier 3 sampling sites, the supplier
31145 must complete its sampling pool with Tier 5 NTNCWS
31146 sampling sites. For the purpose of this subsection
31147 (a)(4)(B)(iii), a representative site is a site where the
31148 plumbing materials are commonly found at other sites the
31149 water system serves.

31150
31151 BOARD NOTE: This subsection (a)(4)(B)(iii) derives from
31152 segments of 40 CFR 141.86(a)(10).

31153
31154 C) Suppliers with Lead Service Lines. Any supplier whose
31155 distribution system contains lead service lines must collect all
31156 samples for monitoring under this Section from sites the supplier
31157 serves through a lead service line. A supplier that cannot identify a
31158 sufficient number of sampling sites that it serves through lead
31159 service lines must still collect samples from every site the supplier
31160 serves though a lead service line and collect the remaining samples
31161 under subsections (a)(4)(A)(iii) through (a)(4)(A)(vi) or
31162 subsections (a)(4)(B)(ii) and (a)(4)(B)(iii).

31163
31164 BOARD NOTE: This subsection (a)(4)(C) derives from segments
31165 of 40 CFR 141.86(a)(11).

31166
31167 b) Sample-Collecting Methods

31168
31169 1) All tap samples a supplier collects for lead and copper under this Subpart
31170 G, with the exception of fifth-liter tap samples the supplier collects under
31171 subsection (b)(3) and samples the supplier collects under subsections
31172 (b)(5) and (h) must be first-draw tap samples. The supplier must analyze
31173 the first-draw tap sample for lead and copper during tap sampling periods
31174 when the supplier must monitor both contaminants. In tap sampling
31175 periods during which the supplier must monitor only lead, the supplier
31176 may analyze the first-draw tap sample for lead only.

31177
31178 2) First-Draw Tap Samples

31179
31180 A) A first-draw tap sample for lead and copper must be one liter in
31181 volume and have stood motionless at least six hours in the
31182 plumbing system of the sampling site .

31183
31184 B) The supplier must use wide-mouthed bottles to collect first-draw
31185 tap samples.

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- C) For residential housing, the supplier must collect first-draw tap samples from the cold-water kitchen or bathroom sink tap.
- D) For non-residential buildings, the supplier must collect first-draw tap samples one-liter in volume from a tap occupants typically use for consuming water.
- E) The Agency-approved substitute non-first-draw tap samples the supplier collects in lieu of first-draw tap samples under subsection (b)(5) must be one liter in volume from an interior tap occupants typically use for consuming water.
- F) The supplier may collect first-draw tap samples or allow residents to collect first-draw tap samples after instructing the residents in the sampling procedures this subsection (b)(2) specifies.
 - i) Sampling instructions the supplier provides to residents must not include instructions for removing the aerator and cleaning or flushing taps before the minimum six-hour stagnation period begins.
 - ii) To avoid problems of residents handling nitric acid, the supplier may acidify first-draw tap samples up to 14 days after the supplier or a resident collects the sample.
 - iii) After adding acid to resolubilize the metals, a sample must stand in its original container for the time the USEPA-approved method specifies before the laboratory analyzes the sample.
- G) If a supplier allows residents to perform sampling under subsection (b)(2)(F), the supplier may not challenge the accuracy of sampling results based on alleged errors in sample collection.

3) Service Line Samples

- A) A supplier must collect all tap samples for copper at sites it serves through a lead service line as a first-draw tap sample using the procedure in this subsection (b)(3). The supplier must collect and analyze tap samples for copper only during tap monitoring periods when the supplier must monitor copper.

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B) First-Draw and Fifth-Liter Tap Water Samples

- i) A supplier must collect tap water samples in five consecutively numbered wide-mouthed bottles after the water has stood motionless in the sampling site's plumbing for at least six hours without flushing the tap prior to collecting the sample.
- ii) The supplier must analyze first-draw tap samples for copper, when applicable, and fifth-liter tap samples for lead.
- iii) The supplier must use wide-mouthed bottles to collect these samples. The supplier must collect the first-draw tap sample in the first numbered bottle, then sequentially fill each numbered bottle until the final bottle is full with the fifth-liter tap sample, constantly running the water while collecting the samples. The fifth-liter tap sample is the final sample collected in this sequence.
- iv) The supplier must collect first-draw and fifth-liter tap samples from residential housing from the cold-water kitchen or bathroom sink tap. The supplier must collect first-draw and fifth-liter tap samples from a nonresidential building at an interior cold water tap typically used for consuming water.
- v) The supplier may itself collect first-draw and fifth-liter tap samples or allow residents to collect the samples after instructing the residents on the sampling procedures in this subsection (b)(3)(B). The sampling instructions the supplier provides to customers must not direct the customer to remove the aerator or clean or flush the taps before the minimum six-hour stagnation period begins. To avoid problems from residents handling nitric acid, the supplier may acidify first-draw tap samples up to 14 days after the resident collects the sample. After the supplier acidifies the sample to resolubilize the metals, the sample must stand in its original container for the time a USEPA-approved method provides before analysis. If the supplier allows residents to sample, the supplier may not challenge the accuracy of sampling results based on alleged errors collecting samples.

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4) Follow-Up First-Draw Tap Samples

- A) A supplier must collect each follow-up first-draw tap sample from the same sampling site where the previous sample originated. A supplier must collect each follow-up fifth-liter tap sample from the same sampling site where the previous sample originated.
- B) If the supplier cannot access a sampling site to collect a follow-up tap sample for reasons beyond the control of the supplier, the supplier 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 and is within reasonable proximity of the original site.

5) Substitute Non-First-Draw Tap Samples

- A) A NTNCWS supplier or a CWS supplier meeting the criteria in Sections 611.2355(b)(7)(A) and (b)(7)(B) not having enough taps for first-draw tap samples or fifth-liter tap samples meeting the six-hour minimum stagnation time may apply to the Agency in writing for a SEP allowing the supplier to substitute non-first-draw, first-draw, or fifth-liter tap samples that do not meet the six-hour minimum stagnation time.
- B) A supplier approved to substitute non-first-draw tap samples must collect as many first-draw or fifth-liter tap samples from interior taps typically used for consuming water, as possible and must identify sampling times and locations that likely give the longest standing time for the remaining sites.
- C) The Agency may grant a SEP waiving the requirement for prior Agency approval of sites not meeting the six-hour stagnation time.

c) Number of Samples

- 1) A supplier must collect at least one sample each from the number of sites in the first column of Table D (labelled "standard monitoring") during each six-month tap monitoring period subsection (d) specifies.
- 2) A supplier conducting reduced monitoring under subsection (d)(4) must collect at least one sample each from the number of sites in the second column of Table D (labelled "reduced monitoring") during each reduced

31315 tap monitoring period subsection (d)(4) specifies. The reduced monitoring
 31316 sites must represent the sites standard monitoring requires. A supplier
 31317 whose system has fewer than five drinking water taps capable of use for
 31318 human consumption that meet the sampling site criteria of subsection (a)
 31319 must collect multiple samples from individual taps to reach the required
 31320 number of sampling sites Table D requires. To accomplish this, the
 31321 supplier must collect at least one sample from each tap, then additional
 31322 samples from those taps on different days during the tap sampling period,
 31323 to collect a total number of samples meeting the required number of
 31324 sampling sites. Alternatively, the Agency may issue a SEP allowing the
 31325 supplier whose system has fewer than five drinking water taps to collect a
 31326 number of samples that is fewer than the number of sites this subsection
 31327 (c) specifies if the Agency determines that the supplier samples 100
 31328 percent of all taps capable of use for human consumption and that the
 31329 reduced number of samples will produce the same results as collecting
 31330 multiple samples from some taps. The Agency must base any SEP
 31331 approving a reduced minimum number of samples on a request from the
 31332 supplier or Agency on on-site verification. The Agency may specify
 31333 sampling locations in a SEP when a system conducts reduced monitoring.

31334
 31335 d) Timing of Monitoring

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 31337 1) Standard Monitoring. Standard monitoring is a six-month tap monitoring
 31338 period beginning on January 1 or July 1 of a year during which the
 31339 supplier monitors at the standard number of sites under subsection (c).

31340
 31341 A) A supplier having lead service lines, including a supplier Section
 31342 611.2351(b)(3) deems to have optimized or re-optimized OCCT or
 31343 a supplier that did not monitor complying with this Section (i.e.,
 31344 selecting sites under subsection (a), collecting samples under
 31345 subsection (b), etc.) before January 16, 2024, must begin its first
 31346 standard tap monitoring period on January 1, 2025. After
 31347 completing the first standard monitoring cycle, the supplier must
 31348 monitor under subsection (d)(1)(B).

31349
 31350 B) A supplier that completed monitoring complying with this Section
 31351 (i.e., selecting sites under subsection (a), collecting samples under
 31352 subsection (b), etc.) before January 16, 2024 or a supplier that
 31353 completed monitoring under subsection (d)(1)(A), must continue
 31354 monitoring:

31355
 31356 i) A supplier not meeting the criteria in subsection (d)(4)
 31357 must conduct standard monitoring.

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- ii) A supplier meeting the criteria in subsection (d)(4) must continue to monitor under subsection (d)(4).

 - iii) A supplier monitoring at a reduced frequency under subsection (d)(4) and exceeding the lead or copper action level must resume standard monitoring on January 1 immediately after the tap monitoring period during which the supplier exceeded the action level. The supplier must also monitor water quality parameters as Section 611.2357(b), (c), or (d) require.

 - iv) A supplier monitoring at a reduced frequency and exceeding the lead trigger level but not the copper action level must monitor no less frequently than annually and must collect samples from the standard number of sites that subsection (c) establishes. The supplier must begin this monitoring in the calendar year after the tap monitoring period during which the supplier exceeded the lead trigger level. The supplier must also monitor water quality parameters as Section 611.2357(b), (c), or (d) require.

 - v) A supplier failing to operate at or above the minimum value or within the range of values for the water quality parameters the Agency specifies under Section 611.2352(f) for more than nine days in any water quality monitoring period Section 611.2357 specifies must conduct standard tap water monitoring and resume sampling for water quality parameters under Section 611.2357(d). The supplier must begin this standard monitoring no later than the six-month tap monitoring period beginning January 1 of the calendar year after the supplier fails to comply with the Agency-specified water quality parameters.

 - vi) A supplier becoming a large supplier without corrosion control treatment or any large supplier without corrosion control treatment having a 90th percentile lead concentration exceeding the lead practical quantitation limit must conduct standard monitoring for at least two consecutive six-month tap monitoring periods, then continue monitoring under this subsection (d)(1)(B)(vi).

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- 2) Monitoring after Installing Initial or Re-Optimized Corrosion Control Treatment, Installing Source Water Treatment, Adding a New Source, or a Change in Treatment
- A) A supplier installing or re-optimizing corrosion control treatment after exceeding the lead or copper action level must monitor for lead and copper every six months and comply with applicable Agency-designated water quality parameter values until the Agency issues a SEP specifying new water quality parameter values for optimal corrosion control.
- B) A supplier reoptimizing corrosion control treatment as a result of exceeding the lead trigger level but not exceeding the lead or copper action level must annually monitor for lead at the standard number of sites subsection (c) requires. The supplier must triennially analyze samples for copper. A small or mid-sized supplier not exceeding the lead trigger level in three annual tap monitoring periods may reduce lead monitoring under subsection (d)(4).
- C) A supplier installing source water treatment under Section 611.2353(a)(3) must monitor every six months until the supplier is at or below lead and copper action levels for two consecutive six-month tap sampling periods. A supplier not exceeding the lead or copper action level for two consecutive six-month tap monitoring periods may reduce monitoring under subsection (d)(4).
- D) If a supplier gives prior notice to the Agency under Section 611.2360(a)(3) of adding a new source or making a long-term change in treatment, the supplier must monitor every six months at the standard number of sites subsection (c) requires until the supplier is at or below the lead and copper action levels for two consecutive six-month monitoring cycles, unless the Agency issues a SEP determining that adding the new source or making the long-term change in treatment is not significant and does not warrant more frequent monitoring. A supplier not exceeding the lead action level, copper action level, or lead trigger level for two consecutive six-month tap sampling periods may reduce monitoring under subsection (d)(4).
- 3) Monitoring after the Agency Specifies Water Quality Parameter Values for OCCT

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- A) After the Agency specifies the values for water quality control parameters under Section 611.2352(f), the supplier must conduct standard monitoring for two consecutive six-month tap monitoring periods.

 - B) A supplier that must complete the re-optimization steps in Section 611.2351(d) after exceeding the lead trigger level but not exceeding the lead or copper action level must monitor for two consecutive six-month tap monitoring periods. The supplier may then reduce monitoring under subsection (d)(4) after the Agency issues a SEP approving reduced monitoring.
- 4) Reduced Monitoring Based on 90th Percentile Concentrations. Reduced monitoring refers to an annual or triennial tap monitoring period. A supplier's 90th percentile concentration determines the reduced monitoring frequency.
- A) Reducing to Annual Monitoring for Suppliers Meeting the Criteria for Reduced Monitoring. A supplier meeting the criteria for reduced monitoring under subsection (d)(4) must collect these samples from sampling sites the supplier identified under subsection (a). A supplier monitoring annually or less frequently must conduct lead and copper tap sampling during June, July, August, or September, unless the Agency approves a different tap sampling period under subsection (d)(4)(A)(i)
 - i) The Agency may grant a SEP approving a different tap sampling period for conducting lead and copper tap sampling to a supplier collecting samples at a reduced frequency. The duration of the period must not exceed four consecutive months within one calendar year and must represent a time of normal operation when the highest lead levels are most likely to occur. For a NTNCWS supplier not operating during any of the months June through September and whose normal operating period when the highest levels of lead are most likely to occur is not known, the Agency must designate a period that represents a time of normal operation for the system. This reduced monitoring can only begin during the Agency-designated period in the calendar year immediately following the end of the second six-month tap monitoring period, for a supplier initiating annual monitoring, or in the three-year period following the end of the third consecutive year of

- 31486 annual monitoring, for a supplier initiating triennial
31487 monitoring.
31488
31489 ii) A supplier monitoring annually and collecting samples
31490 during the months of June through September that receives
31491 Agency approval to alter its tap sampling period under
31492 subsection (d)(4)(A)(i) must collect its next round of
31493 samples during a time period ending no later than 21
31494 months after its previous round of sampling. A supplier
31495 monitoring once every three years and collecting samples
31496 during the months of June through September that receives
31497 Agency approval to alter its tap sampling period under
31498 subsection (d)(4)(A)(i) must collect its next round of
31499 samples during a time period ending no later than 45
31500 months after the previous tap sampling period. The
31501 supplier must conduct subsequent monitoring annually or
31502 once every three years, as this Section requires.
31503
31504 iii) A small supplier collecting samples during the months of
31505 June through September, receiving a waiver under
31506 subsection (g) and receiving Agency approval to alter its
31507 tap sampling period under subsection (d)(4)(A)(i) must
31508 collect its next round of samples before the end of the nine-
31509 year tap monitoring period (as Section 611.101 defines the
31510 term).
31511
31512 B) A supplier meeting the lead trigger level and copper action level
31513 during two consecutive six-month tap monitoring periods may
31514 reduce its monitoring frequency to annual monitoring and must
31515 sample at the standard number of sampling sites for lead and
31516 reduced number of sites for copper that subsection (c) specifies. A
31517 supplier operating OCCT must also maintain the range of OWQPs
31518 the Agency set under Section 611.2352(f) during the same period
31519 and receive a SEP from the Agency approving annual monitoring
31520 based on the Agency's review of the supplier's monitoring,
31521 treatment, and other relevant information the supplier reports under
31522 Section 611.2360. The supplier must begin this sampling no later
31523 than the calendar year immediately following the last calendar year
31524 during which the supplier sampled.
31525
31526 C) A supplier exceeding the lead trigger level but neither the lead nor
31527 copper action level during two consecutive six-month tap
31528 monitoring periods must monitor no less frequently than annually

31529 at the standard number of sampling sites for lead and copper
 31530 subsection (c) specifies. A supplier operating OCCT must also
 31531 maintain the range of OWQPs the Agency set under Section
 31532 611.2352(f) during the same period and receive a SEP from the
 31533 Agency approving annual monitoring based on the Agency's
 31534 review of monitoring, treatment, and other relevant information the
 31535 supplier reports under Section 611.2360. The supplier must begin
 31536 this sampling no later than the calendar year immediately
 31537 following the last calendar year during which the supplier sampled.

31538
 31539 D) A supplier exceeding the lead trigger level but neither the lead nor
 31540 copper action level during three consecutive years of monitoring
 31541 may increase the tap monitoring period (reduce its monitoring
 31542 frequency) for copper to once every three years; however, the
 31543 supplier may not increase the tap monitoring period (reduce its
 31544 monitoring frequency) for lead. A supplier operating OCCT must
 31545 also maintain the range of OWQPs the Agency set under Section
 31546 611.2352(f) during the same period and receive a SEP from the
 31547 Agency approving triennial monitoring based on the Agency's
 31548 review of monitoring, treatment, and other relevant information the
 31549 supplier reports under Section 611.2360. The supplier must begin
 31550 this sampling no later than the third calendar year immediately
 31551 following the last calendar year during which the supplier sampled.

31552
 31553 E) A small or mid-sized supplier not exceeding the lead trigger level
 31554 or copper action level during three consecutive years of monitoring
 31555 (completing standard monitoring during both six-month tap
 31556 monitoring periods of a calendar year constitutes one year of
 31557 monitoring) may sample at the reduced number of sites for lead
 31558 and copper that subsection (c) provides and reduce its monitoring
 31559 frequency to triennially monitoring. A supplier operating OCCT
 31560 must also maintain the range of OWQPs the Agency set under
 31561 Section 611.2352(f) during the same three-year period and receive
 31562 a SEP from the Agency approving triennial monitoring based on
 31563 the Agency's review of monitoring, treatment, and other relevant
 31564 information the supplier reports under Section 611.2360. The
 31565 supplier must begin this sampling no later than three calendar years
 31566 after the last calendar year during which the supplier sampled.

31567
 31568 F) A supplier demonstrating for two consecutive six-month tap
 31569 monitoring periods that its 90th percentile lead concentration,
 31570 calculated under Section 611.2350(c)(4), is less than or equal to
 31571 0.005 mg/ L and that its 90th percentile copper concentration,

31572 calculated under Section 611.2350(c)(4), is less than or equal to
31573 0.65 mg/ L may sample at the reduced number of sites for lead and
31574 copper under subsection (c) and reduce its monitoring to
31575 triennially. A supplier applying corrosion control treatment must
31576 maintain the range of water quality parameter values reflecting
31577 OCCT the Agency specifies under Section 611.2352(f) to qualify
31578 for reduced monitoring under this subsection (d)(4)(F).

31579
31580 e) Additional Monitoring. The supplier and the Agency must consider the results of
31581 any monitoring the supplier conducts in addition to the minimum requirements in
31582 this Section (such as customer-requested sampling) in making any determinations
31583 (i.e., calculating the 90th percentile lead concentration or copper action level)
31584 under this Subpart AH. A supplier serving through lead service lines that cannot
31585 collect the minimum number of samples from Tier 1 or Tier 2 sites must calculate
31586 the 90th percentile concentration using data from all sites it serves through lead
31587 service lines (Tier 1 and Tier 2 sites) together with the highest lead and copper
31588 results from lower-tier sites to complete the minimum number of sampling sites
31589 subsection (c) requires. The supplier must submit data from additional Tier 3,
31590 Tier 4 or Tier 5 sites to the Agency but may not use these results in calculating the
31591 90th percentile concentration. The supplier must include customer-requested
31592 samples from sites the supplier knows it serves through lead service lines in
31593 calculating its 90th percentile concentration if the samples comply with this
31594 Section.

31595
31596 f) Invalidation of Lead and Copper Tap Samples Used in Calculating the 90th
31597 Percentile Concentration. A sample the Agency invalidates under this subsection
31598 (f) does not count toward determining lead or copper 90th percentile
31599 concentrations under Section 611.2350(c)(4) or toward meeting the minimum
31600 monitoring requirements of subsection (c).

31601
31602 1) The Agency must invalidate a lead or copper tap water sample if it
31603 determines that any of certain conditions exists:

31604
31605 A) The laboratory establishes that improper sample analysis caused
31606 erroneous results;

31607
31608 B) The supplier took the sample from a site that did not meet the site
31609 selection criteria in this Section;

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31611 C) The sample container sustained damage in transit; or

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31613 D) There is substantial reason to believe that someone tampered with
31614 the sample.

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- 2) The supplier must report the results from all samples to the Agency and submit all supporting documentation for samples the supplier believes the Agency should invalidate.
 - 3) To invalidate a sample under subsection (f)(1), the Agency must document its decision and rationale for the decision in writing. The Agency may not invalidate a sample solely because a follow-up sample result is higher or lower than that of the original sample.
 - 4) The supplier must collect replacement samples for any samples the Agency invalidates under this Section if the supplier has too few samples to meet the minimum requirements of subsection (c) after the Agency invalidates samples. The supplier must take any replacement samples as soon as possible but no later than the latter of 20 days after the Agency invalidates the original sample or before the end of the applicable tap sampling period. The supplier must not use replacement samples it takes after the end of the applicable tap sampling period to meet the monitoring requirements of a subsequent tap sampling period. The supplier must take replacement samples at the same locations where it took the invalidated samples or, if that is not possible, at other locations the supplier did not use for sampling during the tap sampling period.
- g) Monitoring Waivers for Suppliers Serving 3,300 or Fewer Persons. Any supplier serving 3,300 or fewer persons complying with the criteria in this subsection (g) may apply to the Agency for a SEP reducing its lead and copper monitoring frequency under this Section to once every nine years (i.e., a "full waiver") if the supplier complies with all of the materials criteria subsection (g)(1) specifies and all of the monitoring criteria subsection (g)(2) specifies. Any supplier serving 3,300 or fewer persons complying with the criteria subsections (g)(1) and (g)(2) only for lead or copper may apply to the Agency for a SEP reducing its tap water monitoring frequency to once every nine years for that contaminant only (i.e., a "partial waiver").
- 1) Materials Criteria. The supplier must demonstrate that its distribution system, 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 or copper-containing materials, as this subsection (g)(1) defines these terms:
 - A) Lead. To qualify for a SEP granting a full waiver or a partial waiver of the tap water monitoring requirements for lead (i.e., a "lead waiver"), the supplier must provide certification and

supporting documentation to the Agency demonstrating that its system is free of all lead-containing materials:

i) The system has no plastic pipes or service lines containing lead plasticizers; and

ii) The system is free of lead service lines, lead pipes, lead soldered pipe joints, and leaded brass- or bronze-alloy fittings and fixtures, unless those fittings and fixtures comply with Section 611.126(b).

BOARD NOTE: Corresponding 40 CFR 141.86(g)(1)(i)(B) specifies "any standard established pursuant to 42 U.S.C. 300g-6(e) (SDWA section 1417(e))". Congress changed the lead standards for fittings and fixtures in the Reduction of Lead in Drinking Water Act, P.L. 111-380, section 2(a)(2) and (b), 124 Stat. 4131 (Jan. 4, 2011). The Board incorporated the statutory changes into this Section by referencing Section 611.126(b).

B) Copper. To qualify for a SEP granting a full waiver or a partial waiver of the tap water monitoring requirements for copper (i.e., a "copper waiver"), the supplier must provide certification and supporting documentation to the Agency demonstrating that its system contains no copper pipes or copper service lines.

2) Monitoring Criteria for Waiver Issuance. The supplier must have completed at least one six-month round of standard tap water monitoring for lead and copper at Agency-approved sites and from the number of sites subsection (c) requires and demonstrate to the Agency that the 90th percentile concentrations for any and all rounds of monitoring conducted since the system became free of all lead-containing or copper-containing materials, as appropriate, meet certain criteria:

A) Lead Levels. To qualify for a full waiver or a lead partial waiver, the supplier must demonstrate that its 90th percentile lead concentration does not exceed 0.005 mg/ L.

B) Copper Levels. To qualify for a full waiver or a copper partial waiver, the supplier must demonstrate that its 90th percentile copper concentration does not exceed 0.65 mg/ L.

- 31700 3) Agency Approval of Waiver Application. The Agency must notify the
31701 supplier of its waiver determination in a SEP stating the basis of its
31702 decision and any condition on the waiver. As a condition on the waiver,
31703 the Agency may require the supplier to perform specific activities (e.g.,
31704 limited monitoring, periodic outreach to customers to remind them to
31705 avoid installation of materials that might void the waiver) to avoid the risk
31706 of lead or copper concentration of concern in tap water. The supplier must
31707 continue monitoring for lead and copper at the tap as subsections (d)(1)
31708 through (d)(4) require, as appropriate, until the supplier receives written
31709 notification from the Agency approving the waiver.
31710
31711 4) Monitoring Frequency for Suppliers with Waivers
31712
31713 A) A supplier with a full waiver must conduct tap water monitoring
31714 for lead and copper under subsection (d)(4)(D) at the reduced
31715 number of sampling sites subsection (c) identifies at least once
31716 every nine years and provide to the Agency the materials
31717 certification subsection (g)(1) specifies for both lead and copper
31718 together with the monitoring results. The supplier must collect
31719 samples every nine years no later than the ninth calendar year.
31720
31721 B) A supplier with a partial waiver must conduct tap water monitoring
31722 for the waived contaminant under subsection (d)(4)(D) at the
31723 reduced number of sampling sites subsection (c) specifies at least
31724 once every nine years and provide to the Agency the materials
31725 certification subsection (g)(1) specifies pertaining to the waived
31726 contaminant together with the monitoring results. Such a supplier
31727 also must continue to monitor for the non-waived contaminant in
31728 under the applicable of subsections (d)(1) through (d)(4).
31729
31730 C) A supplier with a full or partial waiver must notify the Agency in
31731 writing under Section 611.2360(a)(3) of any upcoming long-term
31732 change in treatment or adding a new source, as that rule describes.
31733 The Agency must review and approve adding a new source or
31734 long-term change in water treatment before the supplier
31735 implements it. The Agency may add or modify waiver conditions
31736 (e.g., require recertification that the supplier's system is free of
31737 lead-containing or copper-containing materials, require additional
31738 rounds of monitoring, etc.) if the Agency determines that the
31739 modifications are necessary to address system treatment or source
31740 water changes.
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- D) If a supplier with a full or partial waiver becomes aware that its system is no longer free of lead-containing or copper-containing materials, as appropriate (e.g., as a result of new construction or repairs), the supplier must notify the Agency in writing no later than 60 days after becoming aware of the change.

 - 5) Continued Eligibility. If the supplier continues to comply with subsection (g)(4), the waiver will renew automatically, unless any of the conditions in subsections (g)(5)(A) through (g)(5)(C) occur. A supplier whose waiver the Agency revokes may re-apply for a waiver when the supplier again meets the appropriate materials and monitoring criteria of subsections (g)(1) and (g)(2).
 - A) A full waiver or a lead partial waiver does not renew if the supplier no longer satisfies the materials criteria of subsection (g)(1)(A) or has a 90th percentile lead concentration greater than 0.005 mg/ L.

 - B) A full waiver or a copper partial waiver does not renew if the supplier no longer satisfies the materials criteria of subsection (g)(1)(B) or has a 90th percentile copper concentration greater than 0.65 mg/ L.

 - C) A waiver terminates when the Agency notifies the supplier that the Agency revokes the waiver, in writing and describing the basis of its decision.

 - 6) Requirements Following Waiver Revocation. A supplier whose full or partial waiver the Agency revokes must comply with specific corrosion control treatment and lead and copper tap water monitoring requirements:
 - A) If the supplier exceeds the lead or copper action level, the supplier must implement corrosion control treatment within the deadlines Section 611.2351(e) specifies and any other applicable requirements under this Subpart AH.

 - B) If the supplier meets both the lead and the copper action levels, the supplier must monitor for lead and copper at the tap no less frequently than once every three years using the reduced number of sampling sites subsection (c) specifies.

 - 7) Pre-Existing Waivers. A waiver the Agency granted a supplier in writing prior to April 11, 2000 remains in effect under certain conditions:

31785 A) If the supplier demonstrates that its system is free of both lead-
31786 containing and copper-containing materials, as subsection (g)(1)
31787 requires, and that its 90th percentile lead and copper concentrations
31788 comply with subsection (g)(2), the waiver remains in effect so long
31789 as the supplier continues to be eligible for a waiver under
31790 subsection (g)(5). The supplier must complete its first round of tap
31791 water monitoring under subsection (g)(4) no later than nine years
31792 after the supplier last monitored for lead and copper at the tap.

31793
31794 B) If the supplier complies with the materials criteria of subsection
31795 (g)(1) but has not complied with the monitoring criteria of
31796 subsection (g)(2), the supplier must conduct a round of monitoring
31797 for lead and copper at the tap demonstrating that it complied with
31798 subsection (g)(2). Thereafter, the waiver remains in effect as long
31799 as the supplier complies with the continued eligibility criteria in
31800 subsection (g)(5). The supplier must complete its first round of tap
31801 water monitoring under subsection (g)(4) no later than nine years
31802 after the supplier conducts the monitoring under subsection (g)(2).

31803
31804 h) Follow-Up Samples for "Find-and-Fix" Under Section 611.2352(j). A supplier
31805 must collect a follow-up sample at any site exceeding the lead action level within
31806 30 days after receiving the sample results. For these follow-up samples, the
31807 supplier may use different sample volumes or different sample collection
31808 procedures to assess the source of elevated lead. A supplier must submit the
31809 results from samples it collects under this Section to the Agency but must not
31810 include those results in calculating its 90th percentile concentration.

31811
31812 i) Public Availability of Tap Monitoring Results the Supplier Used in Calculating its
31813 90th Percentile Concentration. A supplier must make the results of its compliance
31814 tap water monitoring data, including data the supplier used in calculating its 90th
31815 percentile concentration under Section 611.2350(c)(4), available to the public
31816 within 60 days after the end of the applicable tap sampling period. This Section
31817 does not require a supplier to make publicly available the addresses of the sites
31818 where the supplier collected tap samples. A large supplier must make available
31819 the monitoring results in a digital format. A small or mid-sized supplier must
31820 make available the monitoring results in either a written or digital format. A
31821 supplier must retain tap sampling monitoring data per the recordkeeping
31822 requirements under Section 611.2361.

31823
31824 BOARD NOTE: This Section derives from 40 CFR 141.86.

31825
31826 (Source: Added at 50 Ill. Reg. _____, effective _____)

31827

31828 Section 611.2357 Monitoring for Water Quality Parameters

31829
31830 A large supplier or any small or mid-sized supplier exceeding the lead or copper action level or a
31831 small or mid-sized supplier applying corrosion control treatment and exceeding the lead trigger
31832 level must monitor water quality parameters in addition to lead and copper under this Section.

31833
31834 a) General Requirements

31835
31836 1) Sample Collection Methods

31837
31838 A) Using Tap Samples. In totality, all tap samples a supplier collects
31839 must represent water quality throughout the supplier's distribution
31840 system, considering the number of persons served, the different
31841 sources of water, the different treatment methods the supplier
31842 employs, and seasonal variability. Although a supplier may
31843 conveniently conduct tap sampling for water quality parameters at
31844 sites it uses for coliform sampling under Subpart L, if they meet
31845 the requirements of this section, the supplier need not do so, and
31846 the supplier need not perform tap sampling under this Section at
31847 taps it targeted for lead and copper sampling under Section
31848 611.2356(a). The supplier must include sites it selects for tap
31849 samples under this Section in the site sample plan under Section
31850 611.2356(a)(1). The supplier must update site sample plan before
31851 changing sampling locations.

31852
31853 B) Using Entry Point Samples. A supplier must collect samples at
31854 entry points to the distribution system from locations representing
31855 each source after treatment. If a supplier draws water from more
31856 than one source and combines the sources before distribution, the
31857 supplier must sample at an entry point to the distribution system
31858 during normal operating conditions (i.e., when the supplier uses
31859 water representing all sources).

31860
31861 2) Number of Samples

31862
31863 A) Tap Samples. A supplier must collect two tap samples for
31864 applicable water quality parameters during each six-month water
31865 quality monitoring period under subsections (b) through (e) from
31866 the minimum number of sites the first column of Table F (labelled
31867 "standard monitoring") indicates. A supplier adding sites under
31868 Section 611.2352(j) ("find-and-fix" requirements) must collect tap
31869 samples for applicable water quality parameters during each water
31870 quality monitoring period under subsections (b) through (e) and

31871 must sample from that adjusted minimum number of sites. A
31872 supplier needs not add sites if it monitors at least twice the
31873 minimum number of sites the first column of Table F indicates.
31874

31875 B) Entry Point Samples
31876

31877 i) Initial Monitoring. Except as subsection (c)(2) provides
31878 otherwise, a supplier without corrosion control treatment
31879 must collect two samples for each applicable water quality
31880 parameter at each entry point to its distribution system
31881 during each six-month water quality monitoring period
31882 subsection (b) specifies.
31883

31884 ii) Subsequent Monitoring. A supplier must collect one
31885 sample for each applicable water quality parameter at each
31886 entry point to its distribution system during each six-month
31887 water quality monitoring period subsections (c) through (e)
31888 specify. During each water quality monitoring period
31889 subsections (c) through (e) specify, a supplier applying
31890 corrosion control treatment must continue collecting one
31891 sample for each applicable water quality parameter at each
31892 entry point to its distribution system at least once every two
31893 weeks.
31894

31895 b) Initial Sampling for Suppliers
31896

31897 1) Large Suppliers. A large supplier without corrosion control treatment
31898 must begin monitoring for water quality parameters subsection (b)(3)
31899 specifies during the first two six-month tap monitoring periods no later
31900 than January 1 after the supplier either becomes a large supplier or fails to
31901 maintain its 90th percentile lead concentration below the PQL for lead.
31902

31903 2) Small and Mid-Sized Suppliers. A small or mid-sized supplier exceeding
31904 the lead or copper action level or a supplier applying corrosion control
31905 treatment for which the Agency did not designate OWQPs and exceeding
31906 the lead trigger level must begin monitoring for water quality parameters
31907 subsection (b)(3) specifies for two consecutive six-month water quality
31908 monitoring periods in the month immediately after the tap sampling period
31909 during which the exceedance occurred.
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31911 3) Water Quality Parameters
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- A) Tap Water Samples. The supplier must collect two samples each for specific parameters:
 - i) pH; and
 - ii) Alkalinity.
 - B) Entry Point Samples. The supplier must collect a sample from each entry point to its distribution system for analyses for the parameters in subsection (b)(3)(A);
- c) Monitoring after Installing OCCT or Reoptimized OCCT
- 1) A supplier installing or modifying corrosion control treatment under Section 611.2351(d)(5) or (e)(5) that Section 611.2351(d)(6) or (e)(6) requires to monitor must monitor the water quality parameters in subsections (c)(1)(A) and (c)(1)(B) every six months at the locations and frequencies those subsections specify until the Agency specifies new water quality parameter values for optimal corrosion control under subsection (d). The supplier must collect these samples evenly throughout the six-month water quality monitoring period to reflect seasonal variability.
 - A) Tap Water Samples. The supplier must collect two samples at each tap for each of specific water quality parameters:
 - i) pH;
 - ii) Alkalinity;
 - iii) Orthophosphate if the supplier uses an inhibitor containing an orthophosphate compound; and
 - iv) Silica if the supplier uses an inhibitor containing a silicate compound.
 - B) Entry Point Samples. Except as subsection (c)(1)(C) provides otherwise, a supplier must collect one sample at each entry point to its distribution system every two weeks (bi-weekly) for specific water quality parameters:
 - i) pH;

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- ii) If the supplier adjusts alkalinity as part of optimal corrosion control, a reading of the chemical dosage rate the supplier uses to adjust alkalinity and the alkalinity concentration; and
 - iii) If the supplier uses a corrosion inhibitor as part of optimal corrosion control, a reading of the inhibitor dosage rate the supplier uses and the orthophosphate or silica concentration.
- C) Groundwater Systems. A groundwater system supplier can limit entry point sampling under subsection (c)(1)(B) to those entry points representing water quality and treatment conditions throughout the system. If water from untreated groundwater sources mixes with water from treated groundwater sources, the system must monitor for water quality parameters at both representative entry points receiving treatment and representative entry points not receiving treatment. Before starting monitoring under this subsection (c)(1)(C), the supplier must provide written information to the Agency identifying the selected entry points and documentation sufficient to demonstrate that the sites represent water quality and treatment conditions throughout the system, including information on seasonal variability.
- 2) Upon determining that doing so is necessary, the Agency may issue a SEP requiring a small or mid-sized supplier applying corrosion control treatment for which the Agency has not designated OWQPs that exceeds the lead trigger level but not the lead or copper action level to conduct water quality parameter monitoring under subsection (c)(1). Alternatively, the Board may require an alternative scheme for monitoring water quality control parameters, by rule, variance, or adjusted standard.
- d) Monitoring after the Agency Specifies Water Quality Parameter Values for Optimal Corrosion Control
- 1) After the Agency specifies the values for water quality control parameters reflecting OCCT under Section 611.2352(f), a supplier must monitor for the specified OWQPs during six-month water quality monitoring periods beginning on January 1 or July 1. The supplier must space this monitoring evenly throughout the six-month water quality monitoring period to reflect seasonal variability and be consistent with subsections (c)(1)(A) through (c)(1)(C).

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- A) Large Suppliers. A large supplier must measure the applicable water quality parameters the Agency specifies and determine whether the supplier complies with Section 611.2352(g) every six months, with the first six-month water quality monitoring period to begin on the sooner of January 1 or July 1 after the Agency specifies the optimal values under Section 611.2352(f).

 - B) Small and Mid-Sized Suppliers. A small or mid-sized supplier exceeding an action level must begin monitoring during the six-month water quality monitoring period immediately following the tap monitoring period during which the exceedance occurs and continue monitoring until the supplier no longer exceeds the lead or copper action level and meets the OWQPs in two consecutive six-month tap monitoring periods under Section 611.2356(d)(3). For a small or mid-sized supplier subject to a reduced water quality monitoring cycle frequency under Section 611.2356(d)(4) at the time it exceeds the action level, the start of the applicable six-month water quality monitoring cycle under this subsection (d) must coincide with the start of the applicable tap monitoring period under Section 611.2356(d)(4).

 - C) A supplier must determine whether it complies with Agency-designated OWQPs as Section 611.2352(g) specifies.

 - 2) A small or mid-sized supplier exceeding the lead trigger level but not the lead or copper action level for which the Agency has set OWQPs must monitor every six months as subsection (d)(1) specifies, until the supplier no longer exceeds the lead trigger level in two consecutive tap monitoring periods.

 - 3) The Agency may issue a SEP requiring a supplier under subsection (d)(2) to continue monitoring the OWQPs.

 - e) Reduced Monitoring
 - 1) Reduced Tap Monitoring. A large supplier maintaining the range of values for the water quality parameters reflecting OCCT the Agency specifies under Section 611.2352(f) and not exceeding the lead trigger level during each of two consecutive six-month water quality monitoring cycles under subsection (d) must continue monitoring at the entry points to the distribution system as subsection (c)(1)(B) specifies. The supplier may collect two samples from each tap for applicable water quality parameters from the reduced number of sites the second column of Table

32042 F (Standard Monitoring) indicates during each subsequent six-month
32043 water quality monitoring cycle. The supplier must collect these samples
32044 evenly throughout the six-month water quality monitoring cycle to reflect
32045 seasonal variability.

32046
32047 2) Reduced Monitoring Frequency

32048
32049 A) Annual Monitoring. A supplier maintaining the range of values for
32050 the water quality parameters reflecting OCCT under Section
32051 611.2352(f) not exceeding the lead trigger level or copper action
32052 level during three consecutive years of monitoring may reduce its
32053 tap sampling frequency for applicable water quality parameters
32054 subsection (e)(1) specifies from every six months to annually. The
32055 supplier must begin this reduced sampling during the calendar year
32056 immediately following the end of the water quality monitoring
32057 cycle in which the third consecutive year of six-month monitoring
32058 occurs.

32059
32060 B) A supplier may reduce its tap sampling frequency for applicable
32061 water quality parameters in subsection (e)(1) to once every year if
32062 the supplier demonstrates that it complies with subsections
32063 (e)(2)(B)(i) through (e)(2)(B)(iii) during two consecutive water
32064 quality monitoring cycles.

32065
32066 i) The supplier must demonstrate that its tap water 90th
32067 percentile concentration for lead is less than or equal to the
32068 PQL for lead of 0.005 mg/ L.

32069
32070 ii) The supplier must demonstrate that its tap water 90th
32071 percentile concentration for copper is less than or equal to
32072 0.65 mg/ L in Section 611.2350(c)(3).

32073
32074 iii) The supplier must demonstrate that it maintains the range
32075 of values for the water quality parameters reflecting OCCT
32076 the Agency specified under Section 611.2352(f).

32077
32078 3) A supplier sampling annually or triennially must collect these samples
32079 evenly throughout the calendar year to reflect seasonal variability.

32080
32081 4) A supplier on a reduced monitoring frequency under this subsection (e)
32082 failing to operate at or above the minimum value or within the range of
32083 values for the water quality parameters the Agency specifies under Section
32084 611.2352(f) for more than nine days in any six-month period for

32085 determining compliance under Section 611.2352(g) must resume tap water
32086 sampling complying with the number and frequency of samples subsection
32087 (d) requires. A supplier thus ceasing reduced monitoring may resume
32088 annual monitoring for water quality parameters at the tap at the reduced
32089 number of sites subsection (e)(1) specifies after completing two
32090 subsequent consecutive six-month rounds of monitoring complying with
32091 subsection (e)(1). The supplier may resume annual monitoring for water
32092 quality parameters at the reduced number of sites after demonstrating
32093 through subsequent rounds of monitoring that the supplier complies with
32094 subsection (e)(2)(A) or (e)(2)(B).

32095
32096 f) Additional Monitoring by Suppliers. The supplier and the Agency must consider
32097 the results any monitoring conducted in addition to what this Section requires in
32098 making any determinations (i.e., determining concentrations of water quality
32099 parameters) under this Section or Section 611.2352.

32100
32101 g) Sites Added During Find-and-Fix. A supplier conducting water quality parameter
32102 monitoring at additional sites during a "find-and-fix" assessment under Section
32103 611.2352(j) must add those sites to the minimum number of sites subsections (a)
32104 through (e) specify, unless the supplier monitors at least twice the required
32105 minimum number of sites.

32106
32107 BOARD NOTE: This Section derives from 40 CFR 141.87.

32108
32109 (Source: Added at 50 Ill. Reg. _____, effective _____)

32110
32111 **Section 611.2358 Monitoring for Lead and Copper in Source Water**

32112
32113 a) Sampling Location, Collection Methods, and Number of Samples

32114
32115 1) A supplier failing to meet the lead or copper action level on the basis of
32116 tap samples under Section 611.2356 must collect lead and copper source
32117 water samples under specific requirements for sample location, number of
32118 samples, and collection methods:

32119
32120 A) A groundwater supplier must take a minimum of one sample at
32121 every entry point to the distribution system after the supplier
32122 applies any treatment or in the distribution system at a point
32123 representing each source after treatment (a "sampling point"). The
32124 supplier must take one sample at the same sampling point unless
32125 conditions make another sampling point more closely represent a
32126 source or treatment plant.
32127

32128 B) A surface water supplier must take a minimum of one sample at
32129 every entry point to the distribution system after treatment or in the
32130 distribution system at a sampling point. The supplier must take
32131 each sample at the same sampling point unless conditions make
32132 another sampling point more closely represent a source or
32133 treatment plant.

32134
32135 BOARD NOTE: For this subsection (a)(1)(B), a system using a
32136 combination of surface water and groundwater sources is a surface
32137 water system.
32138

32139 C) If a supplier draws water from more than one source and combines
32140 the sources before distribution, the supplier must sample at an
32141 entry point to the distribution system during periods of normal
32142 operating conditions (i.e., when water represents all sources being
32143 used).

32144
32145 D) The Agency may issue a SEP reducing the total number of samples
32146 a supplier must analyze by allowing the use of compositing.
32147 Certified laboratory personnel must composite the samples. A
32148 composite sample may include a maximum of five samples.
32149 However, if the lead concentration in the composite sample is
32150 greater than or equal to 0.001 mg/ L or the copper concentration is
32151 greater than or equal to 0.160 mg/ L, the supplier must do either of
32152 two things:

32153
32154 i) The supplier must take and analyze a follow-up sample
32155 within 14 days at each sampling point included in the
32156 composite sample; or

32157
32158 ii) If duplicate samples or sufficient volumes of the original
32159 samples are available from each sampling point the
32160 certified laboratory used in the composite sample, the
32161 supplier may use those instead of resampling.

32162
32163 2) SEP Requiring an Additional Sample
32164

32165 A) Upon determining that sampling indicates exceedance of the lead
32166 or copper MPC under Section 611.2353(b)(4), the Agency must
32167 issue a SEP requiring the supplier to collect one additional sample
32168 as soon as possible after the initial sample at the same sampling
32169 point but before two weeks after the supplier took the initial
32170 sample.

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B) If a supplier takes an Agency-required confirmation sample for lead or copper, the supplier must average the results obtained from the initial sample with those from the confirmation sample to determine whether it complies with the Agency-specified lead and copper MPCs.

i) For averaging, consider any analytical result below the MDL as zero.

ii) Consider any value above the MDL but below the PQL either as the measured value or one-half the PQL.

b) Monitoring Frequency after System Exceeds Tap Water Action Level. A supplier exceeding the lead or copper action level in tap for the first time or for the first time after adding a new source or installing source water treatment under Section 611.2353(b)(2) must collect one source water sample from each entry point to its distribution system no later than six months after the end of the tap sampling period during which the supplier exceeds the lead or copper action level. For annual or less frequent tap monitoring periods, the end of the tap sampling period is September 30 of the calendar year during which the sampling occurs or the last day of any alternative tap sampling period the Agency establishes in a SEP. If the Agency determines under Section 611.2353(b)(2) that source water treatment is not necessary, the Agency may issue a SEP waiving source water monitoring for the supplier subsequently exceeding the lead or copper action level at the tap under subsections (b)(1)(A) through (b)(1)(C).

1) The Agency may issue a SEP waiving source water monitoring for the supplier exceeding the lead or copper action level at the tap under specific conditions:

A) The supplier already conducted source water monitoring after previously exceeding the lead or copper action level;

B) The Agency issued a SEP determining that source water treatment is not necessary; and

C) The supplier has not added any new water sources.

2) This subsection (b)(2) corresponds with 40 CFR 141.88(b)(2), which USEPA marked "[reserved]". This statement maintains structural consistency with USEPA's rule.

32214 c) Monitoring Frequency after Installing Source Water Treatment or Adding a New
32215 Source

32216
32217 1) A supplier installing source water treatment under Section 611.2353(a)(3)
32218 must collect one source water sample from each entry point to its
32219 distribution system during each of two consecutive six-month source
32220 water monitoring periods on or before 36 months after completing step 2,
32221 as Section 611.2353(a)(4) specifies.

32222
32223 2) A supplier adding a new source must collect one source water sample
32224 from each entry point to its distribution system during each six-month
32225 source water monitoring period until the supplier demonstrates that the
32226 supplier has maintained finished drinking water entering the distribution
32227 system below the MPCs for lead and copper the Agency specifies under
32228 Section 611.2353(b)(4), or the Agency issues a SEP determining that the
32229 supplier does not need source water treatment.

32230
32231 d) Monitoring Frequency after the Agency Specifies the Lead and Copper MPCs
32232

32233 1) A supplier must monitor at the frequency subsections (d)(1) and (d)(2)
32234 specify if the Agency specifies the MPCs under Section 611.2353(b)(4).

32235
32236 A) GWS Suppliers
32237

32238 i) A GWS supplier sampling under subsection (d)(1) must
32239 collect samples once during the three-year compliance
32240 period (as Section 611.101 defines the term) during which
32241 the Agency makes its determination under Section
32242 611.2353(b)(4).

32243
32244 ii) A GWS supplier sampling under subsection (d)(1) must
32245 sample once during each subsequent compliance period.

32246
32247 iii) A supplier must triennially collect samples every third
32248 calendar year.

32249
32250 B) A SWS or mixed system supplier must collect samples once during
32251 each calendar year, the first annual source water monitoring period
32252 to begin during the year in which the Agency makes its
32253 determination under Section 611.2353(b)(4).

32254
32255 2) A supplier needs not sample source water for lead or copper if the supplier
32256 meets the action level for the specific contaminant in all tap water samples

32257 during the entire source water monitoring period under subsection
32258 (d)(1)(A) or (d)(1)(B).

32259 e) Reduced Monitoring Frequency

32260 1) A GWS supplier may reduce its source water monitoring frequency for
32261 lead and copper to once during each nine-year compliance cycle (as
32262 Section 611.101 defines the term), provided the supplier collects the
32263 samples no later than every ninth calendar year, and only if the supplier
32264 meets certain criteria:

32265 A) The supplier demonstrates that finished drinking water entering the
32266 distribution system remains below the MPCs for lead and copper
32267 the Agency specifies under Section 611.2353(b)(4) during at least
32268 three consecutive monitoring periods under subsection (d)(1).

32269 B) This subsection (e)(1)(B) corresponds with 40 CFR
32270 141.88(e)(1)(ii), which USEPA marked "[reserved]". This
32271 statement maintains structural consistency with USEPA's rule.

32272 2) A SWS or mixed system supplier may reduce its monitoring frequency
32273 subsection (d)(1) requires to once during each nine-year compliance cycle
32274 (as Section 611.101 defines the term) if the supplier collects the samples
32275 no later than every ninth calendar year, and only if the supplier meets
32276 certain criteria:

32277 A) The supplier demonstrates that finished drinking water entering its
32278 distribution system remains below the MPCs for lead and copper
32279 the Agency specifies under Section 611.2353(b)(4) for at least
32280 three consecutive years.

32281 B) This subsection (e)(2)(B) corresponds with 40 CFR
32282 141.88(e)(1)(ii), which USEPA marked "[reserved]". This
32283 statement maintains structural consistency with USEPA's rule.

32284 3) A supplier using a new source of water must not reduce its monitoring for
32285 lead or copper until after the supplier demonstrates, by samples it collected
32286 from the new source during three consecutive source water monitoring
32287 periods under subsection (d)(1), that lead or copper levels are below the
32288 MPC the Agency specifies under Section 611.2353(a)(5).

32289 BOARD NOTE: This Section derives from 40 CFR 141.88.
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(Source: Added at 50 Ill. Reg. _____, effective _____)

Section 611.2359 Analytical Methods

The supplier must conduct analyses for lead, copper, pH, alkalinity, orthophosphate, and silica, using the methods in Section 611.611(a).

a) Only a certified laboratory in one of the categories in Section 611.490(a) may conduct analyses for lead and copper to demonstrate that a supplier complies with this Subpart G. To obtain certification for conducting analyses for lead and copper, a laboratory must fulfill specific conditions:

1) The laboratory must analyze lead- and copper-containing performance evaluation samples provided by USEPA or the Agency at least once a year by each method for which the laboratory seeks certification;

2) The laboratory must achieve certain quantitative acceptance limits:

A) For lead: ± 30 percent of the actual amount in the performance evaluation sample when the actual amount is greater than or equal to 0.005 mg/ L (the PQL for lead is 0.005 mg/ L);

B) For copper: ± 10 percent of the actual amount in the performance evaluation sample when the actual amount is greater than or equal to 0.050 mg/ L (the PQL for copper is 0.050 mg/ L);

3) The laboratory must achieve method detection limit (MDL) for lead of 0.001 mg/ L using the procedures in 35 Ill. Adm. Code 186 and appendix B to 40 CFR 136: "Definition and Procedure for the Determination of the Method Detection Limit—Revision 1.11", incorporated by reference in Section 611.102(c); and

4) The laboratory must have current certification to perform analyses under the specifications this subsection (a) describes.

BOARD NOTE: This subsection (a) derives from 40 CFR 141.89(a) and (a)(1).

b) The Agency must issue a SEP allowing a supplier to use previously collected monitoring data under this Subpart AH if the supplier collected and analyzed the data complying with this Subpart AH.

BOARD NOTE: This subsection (b) derives from 40 CFR 141.89(a)(2).

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c) Reporting Lead and Copper Levels

- 1) The supplier must report all lead and copper levels greater than or equal to the lead and copper PQL ($Pb \geq 0.005$ mg/ L and $Cu \geq 0.050$ mg/ L) as measured.
- 2) The supplier must report all lead and copper levels less than the PQL but greater than the MDL (0.005 mg/ L $> Pb > MDL$ and 0.050 mg/ L $> Cu > MDL$) either as measured or as one-half the PQL in subsection (a) (i.e., 0.0025 mg/ L for lead or 0.025 mg/ L for copper).
- 3) The supplier must report all lead and copper levels below the lead and copper MDL ($MDL > Pb$) as zero.

BOARD NOTE: This subsection (c) derives from 40 CFR 141.89(a)(3) and (a)(4).

(Source: Added at 50 Ill. Reg. _____, effective _____)

Section 611.2360 Reporting

A supplier must report specific information to the Agency as this Section provides.

a) Reporting for Tap, Lead, and Copper, and Water Quality Parameter Monitoring

- 1) Notwithstanding Section 611.840(a) and except as subsection (a)(1)(H) provides otherwise, a supplier must report the information subsections (a)(1)(A) through (a)(1)(I) specify for all samples and for all water quality parameter samples Section 611.2357 specifies within ten days after the end of each applicable tap sampling period Sections 611.2356 and 611.2357 specify (i.e., every six months, annually, triennially, or every nine years). For a tap monitoring period shorter than six months, the end of the tap monitoring period is the last date on which the supplier may collect samples during that tap sampling period, as Sections 611.2356 and 611.2357 specify.
 - A) The results of all tap samples for lead and copper, including the location of each site and the criteria under Section 611.2356(a)(3) through (a)(10) the supplier used as the basis for selecting the site for its sampling pool, accounting for Section 611.2356(a)(11);

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- B) Supporting documents for each tap water lead or copper sample the supplier requests the Agency invalidate under Section 611.2356(f)(2);

 - C) A supplier having lead, galvanized requiring replacement, or lead status unknown service lines in its lead service line inventory under Section 611.2354(a) must re-evaluate the tap sampling locations the supplier uses in its sampling pool prior to the compliance date Section 611.2350(a) specifies, then the more frequent of annually or prior to the each subsequent round of tap sampling the supplier conducts, whichever is more frequent;
 - i) Before the first applicable tap monitoring period under Section 611.2356(d), the supplier must submit a site sample plan to the Agency under Section 611.2356, including a list of tap sample site locations identified in the inventory under Section 611.2354(a), and a list a tap sampling WQP sites the supplier selected under Section 611.2357(a)(1). The supplier must update and submit the site sample plan to the Agency before changing any sample site locations. The Agency may issue a SEP requiring the supplier to modify its site sample plan as necessary.

 - ii) For a supplier having lead service line sites but an insufficient number to meet the minimum number Section 611.2356 requires, the supplier must document support for its conclusion that it has an insufficient number of lead service line sites complying with the applicable of 40 CFR Section 141.86(a)(3) or (a)(4) (for a CWS supplier) or 40 CFR Section 141.86(a)(8) (for an NTNCWS supplier);

 - D) The 90th percentile lead and copper concentrations the supplier measures from among all lead and copper tap samples the supplier collects during each tap sampling period (calculated under Section 611.2350(c)(4)), unless the Agency calculates the supplier's 90th percentile lead and copper concentrations under subsection (h);

 - E) With the exception of initial tap sampling under Section 611.2356(d)(1), the supplier must identify any site it did not sample during previous tap sampling periods and explain why sampling sites have changed;

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- F) The results of all water quality parameter tap samples the supplier must collect under Section 611.2357(b) through (g);
 - G) The results of all samples the supplier collects at entry points for applicable water quality parameters under Section 611.2357(b) through (e);
 - H) A supplier must report the results of all water quality parameter samples the supplier collects under Section 611.2357(c) through (f) during each six-month water quality monitoring period Section 611.2357(d) specifies within the first ten days following the end of the water quality monitoring period, unless the Agency specifies a more frequent reporting requirement in a SEP; and
 - I) Before the first applicable tap sampling period under Section 611.2356(d), the supplier must submit to the Agency, a copy of the tap sampling protocol the supplier provides to persons sampling. The Agency must verify that the supplier uses wide-mouth collection bottles and the supplier does not recommend pre-stagnation flushing or aerator cleaning or removal before collecting samples under Section 611.2356(b). The tap sampling protocol must contain instructions for correctly collecting a first draw sample at a site without a lead service line and a first draw and a fifth liter sample at a site with a lead service line, as applicable. If the supplier seeks to modify the tap sampling protocol it submitted this subsection (a)(1)(I), the supplier must submit the updated version of the protocol to the Agency for review and approval at least 60 days before using it.
- 2) For an NTNCWS supplier, or a CWS supplier complying with Section 611.2356(b)(5), not having enough taps for first-draw or fifth liter tap samples, the supplier must do one of two things:
- A) The supplier must identify to the Agency in writing standing times and locations for enough non-first-draw and fifth liter tap samples to make up its sampling pool under Section 611.2356(b)(5) by the start of the first applicable monitoring period under Section 611.2356(d), unless the Agency waives prior Agency approval of non-first-draw and fifth liter tap sampling sites the supplier selects under Section 611.2356(b)(5); or
 - B) If the Agency waives prior approval of non-first-draw sampling sites the supplier selects, the supplier must identify each site that

did not meet the six-hour minimum standing time and the length of standing time for that particular substitute sample collected under Section 611.2356(b)(5) in writing and include this information with the lead and copper tap sample results the supplier must submit under subsection (a)(1)(A).

- 3) At a time the Agency specifies in a SEP, a supplier must document adding a new source or any change in water treatment to the Agency describing the addition or change. If the Agency does not specify a time in a SEP, the supplier must document the changes to the Agency as early as possible but no later than six months before adding a new source or any change in water treatment. The Agency may issue a SEP requiring a supplier to take actions before or after adding a new source or making a long-term change in treatment to ensure the supplier will operate and maintain OCCT, such as additional water quality parameter monitoring, additional lead or copper tap sampling, and re-evaluating corrosion control treatment.

BOARD NOTE: USEPA gives examples of long-term changes in treatment as including adding a new treatment process or modifying an existing treatment process. USEPA gives examples of modifying treatment as including switching secondary disinfectants, coagulants (e.g., alum to ferric chloride), or corrosion inhibitor (e.g., orthophosphate to blended phosphate). USEPA said that long-term changes can also include dose changes to existing chemicals if the supplier plans long-term changes to its finished water pH or residual inhibitor concentration. USEPA said that long-term treatment changes would not include chemical dose fluctuations associated with daily raw water quality changes where the supplier does not add a new source.

- 4) A small supplier applying for a monitoring waiver under Section 611.2356(g) or subject to a waiver granted under Section 611.2356(g)(3) must provide certain information to the Agency in writing before the applicable deadline:

A) Before the start of the first applicable tap monitoring period in Section 611.2356(d), a small supplier applying for a monitoring waiver must provide the documents demonstrating that the supplier qualifies for a waiver under Section 611.2356(g)(1) and (g)(2).

B) No later than nine years after the monitoring the supplier previously conducted under Section 611.2356(g)(2) or Section 611.2356(g)(4)(A), a small supplier wanting to maintain its

- 32511 monitoring waiver must provide the information Section
32512 611.2356(g)(4)(A) and (g)(4)(B) requires.
32513
32514 C) No later than 60 days after the small supplier becomes aware that it
32515 is no longer free of lead-containing or copper-containing material,
32516 a small supplier having a monitoring waiver must notify the
32517 Agency in writing, stating the circumstances introducing lead- or
32518 copper-containing materials into the system and describing any
32519 corrective action the supplier plans to remove these materials.
32520
32521 5) A GWS supplier limiting its water quality parameter monitoring to a
32522 subset of entry points under Section 611.2357(c)(3) must identify its
32523 selected entry points to the Agency in writing, including information
32524 sufficiently demonstrating that the sites represent water quality and
32525 treatment conditions throughout the supplier's system.
32526
32527 b) Reporting for Source Water Monitoring
32528
32529 1) A supplier must report its sampling results for all source water samples it
32530 collects under Section 611.2358 within ten days after the end of each
32531 source water monitoring period Section 611.2358 specifies.
32532
32533 2) With the exception of the first round of source water sampling a supplier
32534 conducts under Section 611.2358(b), a supplier must specify any site it did
32535 not sample during source water monitoring periods, explaining why the
32536 supplier changed the sampling point.
32537
32538 c) Reporting for Corrosion Control Treatment. Before the applicable dates under
32539 Section 611.2351, a supplier must report certain information:
32540
32541 1) A supplier demonstrating that it already optimized corrosion control must
32542 provide the information Section 611.2351(b)(1) through (b)(3) requires.
32543
32544 2) A supplier that must optimize corrosion control must provide its
32545 recommendation regarding OCCT under Section 611.2352(a).
32546
32547 3) A supplier that must evaluate the effectiveness of corrosion control
32548 treatments under Section 611.2352(c) must provide the information
32549 Section 611.2352(c) requires.
32550
32551 4) A supplier that must install optimal corrosion control the Agency approves
32552 under Section 611.2352(d) must provide a copy of the Agency permit

32553 letter, which acts as certification that the supplier completed installing the
32554 permitted treatment.

32555
32556 d) Reporting for Source Water Treatment. Before the applicable dates in Section
32557 611.2353, a supplier must provide certain information to the Agency:

32558
32559 1) If Section 611.2353(b)(1) requires, the supplier must provide its
32560 recommendation on source water treatment; or

32561
32562 2) A supplier that must install source water treatment under Section
32563 611.2353(b)(2) must provide a copy of the Agency permit letter, which
32564 acts as certification that the supplier completed installing the Agency-
32565 approved treatment within 24 months after Agency approval.

32566
32567 e) Reporting for Lead Service Line Inventory and Replacement. A supplier must
32568 report certain information to the Agency demonstrating it complies with Sections
32569 611.2354 and 611.2355:

32570
32571 1) No later than October 16, 2024, the supplier must submit an inventory of
32572 service lines to the Agency, as Section 611.2354(a) requires.

32573
32574 2) No later than October 16, 2024, a supplier that inventoried a lead,
32575 galvanized requiring replacement, or lead status unknown service line in
32576 its distribution system must submit a lead service line replacement plan to
32577 the Agency, as Section 611.2354(b) requires.

32578
32579 3) The supplier must provide the Agency with an updated version of its
32580 inventory under Section 611.2354(a) consistent with its tap monitoring
32581 period schedule under Section 611.2356(d), but no more frequently than
32582 annually. The supplier must submit its updated inventory within 30 days
32583 after the end of each tap monitoring period.

32584
32585 A) If the supplier demonstrates that it has no lead, galvanized
32586 requiring replacement, or lead status unknown service lines in its
32587 inventory, the supplier needs no longer submit inventory updates to
32588 the Agency, except as subsection (e)(3)(B) requires.

32589
32590 B) If a supplier complying with subsection (e)(3)(A) subsequently
32591 discovers that it must replace any service lines in its distribution
32592 system, the supplier must notify the Agency within 30 days after
32593 identifying the service lines and prepare an updated inventory
32594 under Section 611.2354(a) on a schedule the Agency establishes in
32595 a SEP.

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- 4) Within 30 days after the end of each tap monitoring period, the supplier must certify replacing any encountered lead goosenecks, pigtails, and connectors under Section 611.2354(c).
- 5) Within 30 days after the end of each tap monitoring period, the supplier must certify to the Agency that the supplier made any partial and full lead service line replacements under Section 611.2354(d) and (e).
- 6) If it fails to meet the 45-day deadline for completing a customer-initiated lead service line replacement under Section 611.2354(d)(4), a supplier must notify the Agency within 30 days after the deadline to request that the Agency extend the deadline up to 180 days for completing the customer-initiated lead service line replacement. The supplier must annually certify that it has completed all customer-initiated lead service line replacements under Section 611.2354(d)(4).
- 7) No later than 30 days after the end of the supplier's annual period for replacing lead service lines under Section 611.2354(f) or (g), the supplier must submit certain information to the Agency and continue submitting the information each year the supplier conducts lead service line replacements under Section 611.2354(f) or (g):
 - A) The number of lead service lines, as Section 611.2354(a)(4) defines the term, in its inventory at the beginning of the annual period;
 - B) The number of galvanized requiring replacement service lines in its inventory at the beginning of the annual period;
 - C) The number of lead status unknown service lines, as Section 611.2354(a)(4) defines the term, in its inventory at the beginning of the annual period;
 - D) The number of full lead service line replacements the supplier has made and the street address for each service line the supplier replaced;
 - E) The number of galvanized requiring replacement service lines the supplier replaced and the street address for each service line the supplier replaced;

- 32638 F) The number of lead status unknown service lines, as Section
32639 611.2354(a)(4) defines the term, remaining in its inventory;
32640
32641 G) The total number of lead status unknown service lines the supplier
32642 determines are non-lead, as Section 611.2354(a)(4) defines the
32643 terms; and
32644
32645 H) The total number of service lines the supplier initially inventoried
32646 as non-lead later and later discovered are lead or galvanized
32647 requiring replacement service lines.
32648
32649 8) No later than 30 days after the end of each tap sampling period, a supplier
32650 that received a customer refusal for a lead service line replacement or no
32651 customer response after the supplier makes a minimum of two good-faith
32652 efforts to contact customers regarding a full lead service line replacement
32653 under Section 611.2354(g)(7) must certify to the Agency the number of
32654 customer refusals or non-responses it received from customers the supplier
32655 serves through a lead or galvanized requiring replacement service line.
32656 The supplier must maintain these documents.
32657
32658 9) No later than 12 months after the end of a tap sampling period during
32659 which a supplier exceeds the lead action level in sampling under Section
32660 611.2356, the supplier must provide to the Agency its schedule for
32661 annually replacing an average annual rate of at least three percent on a
32662 two-year rolling average basis, or as specified in Section 611.2354(g), of
32663 the number of known lead service lines and galvanized lines requiring
32664 replacement when the lead trigger or action level was first exceeded and
32665 lead status unknown service lines at the beginning of each year that
32666 required replacement occurs in its distribution system.:
32667
32668 10) No later than 12 months after the end of a sampling period during which a
32669 supplier exceeds the lead trigger level in monitoring under Section
32670 611.2356 and every 12 months after that, the supplier must certify to the
32671 Agency in writing:
32672
32673 A) That the supplier conducted consumer notification, as Sections
32674 611.2354(f)(4) and 611.2355(g) require; and
32675
32676 B) That the supplier delivered public education materials to the
32677 affected consumers, as specified in Section 611.2355(a).
32678
32679 C) If a supplier does not fulfill its annual service line replacement
32680 goal under Section 611.2354(f), it must certify to the Agency in

writing that the supplier conducted public outreach, as Section 611.2355(h) requires. The supplier must also submit the outreach materials it used to the Agency.

- 11) The annual certification the supplier submits to the Agency under subsection (e)(10) must certify that the supplier provided the results from samples it collected between three months and six months after fully or partially replacing a lead service line to the resident within the timeframe Section 611.2355(d)(2) requires. A mailed notice postmarked within three business days after receiving the results is timely.
- 12) Any supplier collecting samples following partial lead service line replacement Section 611.2354 requirements must report the results to the Agency before the tenth day of the next month after the supplier receives the laboratory results or as the Agency specifies in a SEP. The Agency may issue a SEP waiving the supplier reporting these monitoring results, but the supplier must retain these records. A supplier must also report any additional information the Agency specifies in a time and manner the Agency prescribes to verify that the supplier completed all partial lead service line replacement activities.
- 13) A supplier having lead service lines in its inventory must certify on an annual basis that the supplier complied with consumer notification of service line containing lead under Section 611.2355(e).

f) Reporting for Public Education Program

- 1) A supplier subject to Section 611.2355 must send documents to the Agency containing certain items within ten days after the end of each period in which the supplier must perform public education under Section 611.2355(b):
- A) The public education materials the supplier delivered, and documents showing that the supplier delivered the public education materials complying with the content requirements in Sections 611.2355(a) and the delivery requirements in Section 611.2355(b); and
- B) A list of all newspapers, radio stations, television stations, and facilities and organizations to which the supplier delivered public education materials when this Subpart AH required the supplier to perform public education tasks.

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- 2) Unless the Agency issues a SEP requiring a supplier to do so, a supplier that previously submitted the information subsection (f)(1)(B) requires need not resubmit the information subsection (f)(1)(B) requires, as long as no changes in the distribution list occurred, and the supplier certifies that it distributed the public education materials to the same list the supplier previously submitted.
 - 3) No later than three months after the end of the tap sampling period, each supplier must mail a sample copy of the consumer notification of tap water monitoring results to the Agency, certifying that the supplier distributed the notification in a manner complying with Section 611.2355(d).
 - 4) The supplier must demonstrate to the Agency before July 1 of each year that the supplier delivered annual consumer notice and lead service line information materials under Section 611.2355(e) to affected consumers the supplier serves through a lead, galvanized requiring replacement, or lead status unknown service line during the previous calendar year. The supplier must also provide a copy of the consumer notice and information materials to the Agency.
 - 5) The supplier must demonstrate to the Agency before July 1 of each year that the supplier conducted an outreach activity under Section 611.2355(h) if the supplier failed to meet the lead service line replacement goal under Section 611.2354(f) during the previous calendar year. The supplier must also submit a copy to the Agency of the outreach it provided to customers.
 - 6) The supplier must certify to the Agency before July 1 of each year that the supplier delivered notice to affected customers under Section 611.2355(f) after any lead service line disturbance during the previous calendar year. The supplier must also submit a copy of the notice to the Agency.
 - 7) The supplier must certify to the Agency before July 1 of each year that the supplier delivered the required find-and-fix information to the Agency and local health departments under Section 611.2356(i) during the previous calendar year.
 - g) Reporting Additional Monitoring Data. Any supplier collecting more samples than the required minimum must report those sampling data results to the Agency within the first ten days following the end of the applicable sampling periods Sections 611.2356 through 611.2358 specify during which the supplier collected the samples. This includes the monitoring data for "find-and-fix" under Sections 611.2356(h) and 611.2357(g). The supplier must certify to the Agency the number of customer refusals or nonresponses for follow-up sampling it received

32767 under Section 611.2352(j) with information supporting the accuracy of the
32768 refusals or non-responses. The supplier must certify within the first ten days after
32769 the end of the applicable tap sampling period during which any individual sample
32770 exceeded the lead action level.

32771
32772 h) Reporting 90th Percentile Lead and Copper Concentrations If the Agency
32773 Calculates a Supplier's 90th Percentile Concentrations. A water supplier needs not
32774 report its 90th percentile lead and copper concentrations during each tap
32775 monitoring period, as subsection (a)(1)(D) requires, under certain circumstances:
32776

32777 1) The Agency previously notified the supplier that the Agency will calculate
32778 the supplier's 90th percentile lead and copper concentrations based on the
32779 lead and copper tap results the supplier submitted under subsection
32780 (h)(2)(A), and the supplier provides the results from lead and copper tap
32781 water samples no later than ten days after the end of the applicable tap
32782 monitoring period;

32783
32784 2) The supplier provides the specific information to the Agency before the
32785 date subsection (h)(1) specifies:
32786

32787 A) The results from all tap water samples for lead and copper,
32788 including the location of each site and the Section 611.2356(a)(3)
32789 through (a)(10) criteria under which the supplier selected the site
32790 for its sampling pool; and

32791
32792 B) The supplier must identify sampling sites it used during the current
32793 tap monitoring period that it did not sample during previous tap
32794 monitoring periods, explaining why the supplier changed sampling
32795 sites; and

32796
32797 3) The Agency provides the written results of calculating the 90th percentile
32798 lead and copper concentrations to the supplier within 15 days after the end
32799 of the tap sampling period.

32800
32801 i) Reporting Requirements for CWS Public Education and Sampling in Schools and
32802 Childcare Facilities
32803

32804 1) A CWS supplier must report to the Agency before July 1 of each year the
32805 previous calendar year's activity. The report must include certain
32806 information:
32807

32808 A) The supplier must certify that it made a good faith effort to identify
32809 schools and childcare facilities under Section 611.2362(e). The

32810 good faith effort may include reviewing customer records and
32811 requesting lists of schools and childcare facilities from the Agency,
32812 the Department of Children and Family Services, the State Board
32813 of Education, or other pertinent local agency. A supplier certifying
32814 that it serves no schools or childcare facilities needs not include the
32815 information subsections (i)(1)(B) through (i)(1)(D) require in the
32816 report. If changes occur to schools and childcare facilities a
32817 supplier serves, the supplier must submit an updated list at least
32818 once every five years under Section 611.2362(e).

32819 BOARD NOTE: The Department of Children and Family Services
32820 regulates daycare facilities in Illinois, and the State Board of
32821 Education regulates primary and secondary schools. Local
32822 agencies may play a role, and many facilities and schools are not
32823 regulated under Illinois law. E.g., 225 ILCS 10 and 105 ILCS 5.

32824
32825 B) The supplier must certify that it delivered information about health
32826 risks from lead in drinking water to the school and childcare
32827 facilities it serves under Section 611.2362(a)(2) and (g)(1).

32828
32829 C) The supplier must certify that it completed notifying and sampling
32830 under Section 611.2362 and subsections (i)(1)(C)(i) through
32831 (i)(1)(C)(v) at a minimum of 20 percent of elementary schools and
32832 20 percent of childcare facilities the supplier serves. The supplier
32833 must certify that it completed notifying and sampling under
32834 Section 611.2362(g) and subsections (i)(1)(C)(i), (i)(1)(C)(ii), and
32835 (i)(1)(C)(v) for secondary schools the supplier sampled. After a
32836 supplier completes one cycle of required sampling in all
32837 elementary schools and childcare facilities it identified under
32838 Section 611.2362(a)(1), the supplier must subsequently certify that
32839 it completed notifying and sampling under Section 611.2362(g)
32840 and subsections (i)(1)(C)(i), (i)(1)(C)(ii), and (i)(1)(C)(v) for all
32841 sampling the supplier later completes in any school or childcare
32842 facility.

32843
32844 i) The number of schools and childcare facilities the supplier
32845 serves;

32846
32847 ii) The number of schools and childcare facilities the supplier
32848 sampled in the calendar year;

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32850 iii) The number of schools and childcare facilities that refused
32851 sampling;

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- iv) Information about outreach attempts for sampling that a school or childcare facility declined; and
 - v) The analytical results for all schools and childcare facilities the supplier sampled in the calendar year.
 - D) The supplier must certify that it provided its sampling results to schools, childcare facilities, and the Illinois Department of Public Health and local health agencies.
 - 2) This subsection (i)(2) corresponds with 40 CFR 141.90(i)(2), which USEPA marked "reserved". This statement maintains structural consistency with the corresponding USEPA rules.
 - 3) The Agency has provided the results of the 90th percentile lead and copper calculations, in writing, to the supplier before the end of the monitoring period.
 - j) Reporting Requirements for Small Supplier Compliance Flexibility Options. Before the times subsections (j)(1) and (j)(2) provide, a supplier implementing a small supplier compliance option under Section 611.2363 must provide certain information to the Agency:
 - 1) Point-of-Use Device Option. A small CWS or NTNCWS supplier implementing the point-of-use device option under Section 611.2363(a)(3), must report the results from tap sampling under Section 611.2363 no later than ten days after the end of the tap monitoring period. If results exceed the lead trigger level, the supplier must reach out to the homeowner or building management or, if applicable, both within 24 hours after receiving the tap sample results. The supplier must complete corrective action within 30 days. If the supplier does not complete corrective action within 30 days, the supplier must document to the Agency within 30 days of the failure explaining why the supplier was unable to correct the issue. A supplier selecting the point-of-use device option under Section 611.2363(a)(3) must document to the Agency certifying that the supplier maintains the point-of-use devices, unless the Agency issues a SEP waiving this requirement.
 - 2) Replacing Lead-Bearing Plumbing Option. A small CWS or NTNCWS supplier implementing the option of replacing all lead-bearing plumbing under Section 611.2363(a)(4) must certify to the Agency that the supplier replaced all lead-bearing material on the schedule the Agency establishes

32895 in a SEP within one year after designating the option under Section
32896 611.2363(a)(4).

32897
32898 BOARD NOTE: This Section derives from 40 CFR 141.90.

32899
32900 (Source: Added at 50 Ill. Reg. _____, effective _____)

32901
32902 **Section 611.2361 Recordkeeping**

32903
32904 Any supplier subject to this Subpart G must retain original records of all sampling data and
32905 analyses, reports, surveys, letters, evaluations, schedules, Agency determinations, and any other
32906 information Sections 611.2351 through 611.2360, 611.2362, and 611.2363 require. Each
32907 supplier must retain the records this Section requires on its premises for at least 12 years.

32908
32909 BOARD NOTE: This Section derives from 40 CFR 141.91.

32910
32911 (Source: Added at 50 Ill. Reg. _____, effective _____)

32912
32913 **Section 611.2362 Monitoring for Lead in Schools and Childcare Facilities**

32914
32915 A CWS supplier must conduct directed public education and lead monitoring at those schools
32916 and childcare facilities it serves that were constructed prior to January 1, 2014. A supplier must
32917 sample for lead at elementary schools and childcare facilities it serves once and afterwards on
32918 request of the school or facility. The supplier must also sample for lead at secondary schools it
32919 serves on request. This Section does not apply to a school or childcare facility that is a regulated
32920 PWS. This subsection (a) applies until the supplier samples all the elementary schools and
32921 childcare facilities it serves once under subsection (c). After sampling all elementary schools
32922 and childcare facilities, the supplier must comply with subsection (g).

32923
32924 a) Public Education to Schools and Childcare Facilities

32925
32926 1) Before the compliance date Section 611.2350(a)(3) specifies, a supplier
32927 must compile a list of schools and childcare facilities the supplier serves.

32928
32929 2) A supplier must contact elementary schools and childcare facilities the
32930 supplier listed under subsection (a)(1):

32931
32932 A) The supplier must annually or more frequently provide information
32933 about health risks from lead in drinking water that complies with
32934 Section 611.2355(a);

32935
32936 B) Notice that the supplier must sample for lead at elementary schools
32937 and childcare facilities, including certain information:

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- i) A proposed schedule for sampling at the facility;
- ii) Information about sampling for lead in schools and childcare facilities; and

BOARD NOTE: USEPA has guidance available from USEPA, National Center for Environmental Publications: "3Ts for Reducing Lead in Drinking Water in Schools and Childcare Facilities: A Training, Testing, and Taking Action Approach, Revised Manual" (October 2018), USEPA, Office of Water, doc. no. EPA 815-B-18-007 (search: "815B18007") and "U.S. EPA 3Ts Program Training, Testing & Taking Action: Lead Sample Collection Field Guide for Schools and Childcare Facilities" (July 2022), USEPA, Office of Water, doc. no. EPA 815-F-22-009 (search: "815F22009") or subsequent EPA guidance.
- iii) Instructions for identifying sampling outlets and preparing for a sampling event 30 days prior to the event.

- 3) The supplier must document under Section 611.2360(i) if an elementary school or childcare facility fails to respond or otherwise declines to participate in monitoring or education under this Section. Under this Section, a school or childcare facility fails to respond after the supplier makes at least two separate good faith attempts to contact the facility to schedule sampling and receives no response.
- 4) The supplier must annually or more frequently contact all secondary schools it listed under subsection (a)(1) to provide information on health risks from lead in drinking water and how to request lead sampling under subsection (g)(1).

b) Lead Sampling in Schools and Childcare Facilities

- 1) The supplier must collect five samples per school and two samples per childcare facility at outlets typically used for consumption. Except as subsections (b)(1)(A) through (b)(1)(D) provide otherwise, the outlets must not have a POU device. The supplier must sample at specific locations:

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- A) For schools: two drinking water fountains, one kitchen faucet persons use for preparing food or drink, one classroom faucet or other outlet persons use for drinking, and one nurse's office faucet, as available.
 - B) For childcare facilities: one drinking water fountain and one of either a kitchen faucet persons use for preparing food or drink or one classroom faucet or other outlet persons use for drinking.
 - C) If any school or facility has fewer than the required number of outlets, the supplier must sample all outlets persons use for consumption.
 - D) The supplier may sample at outlets having POU devices if the school or facility has POU devices installed on all outlets persons typically use for consumption.
 - E) If any school or facility does not contain the type of faucet listed above, the supplier must collect a sample from another outlet the school or facility identifies as one persons typically use for consumption.
 - F) The supplier must collect all samples from cold water taps fulfilling specific additional requirements:
 - i) All samples for lead must be first-draw samples;
 - ii) All samples must be 250 ml in volume;
 - iii) The water must remain stationary in the sampling site's (building's) plumbing system for at least eight but no more than 18 hours before sampling; and
 - iv) The supplier must acidify samples and analyze them using the analytical methods in Section 611.2359.
- 2) Appropriately trained personnel of the water system, school, or childcare facility or another appropriately trained person may collect samples under subsection (b)(1).
- c) Sampling Frequency at Elementary Schools and Childcare Facilities

- 33022 1) Annually, or on an alternative Agency-approved schedule, the supplier
33023 must collect samples from no fewer than 20 percent of elementary schools
33024 and 20 percent of childcare facilities the supplier serves, until the supplier
33025 samples all schools and childcare facilities it listed under subsection (a)(1)
33026 that did not decline to participate. Under this Section, a supplier may
33027 count an elementary school or childcare facility failing to respond or
33028 otherwise declining to participate as part of its annual 20 percent
33029 minimum.
- 33030
- 33031 2) A supplier must sample all elementary schools and childcare facilities it
33032 serves at least once in the five years following the compliance date under
33033 Section 611.2350(a)(1)(A).
- 33034
- 33035 3) After a supplier completes one required cycle of sampling in all
33036 elementary schools and childcare facilities it serves, the supplier must
33037 sample at the request of any elementary school or childcare facility under
33038 subsection (g).
- 33039
- 33040 4) A supplier must sample at the request of a secondary school under
33041 subsection (g). If a supplier receives requests from more than 20 percent
33042 of secondary schools it listed under subsection (a)(1) in any of the five
33043 years following the compliance date under Section 611.2350(a)(1)(A), the
33044 supplier may schedule the requests exceeding 20 percent for the following
33045 year, and the supplier needs not sample an individual secondary school
33046 more than once during the five-years.
- 33047
- 33048 d) Alternative School and Childcare Lead Sampling Programs
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- 33050 1) If a CWS supplier conducts mandatory sampling for lead in drinking water
33051 for schools and childcare facilities the supplier serves under another State
33052 or local law or program, the Agency may issue a SEP exempting the
33053 supplier from duplicative requirements under this Section:
- 33054
- 33055 A) If the sampling under that State or local law or program is
33056 consistent with subsections (b) and (c);
- 33057
- 33058 B) If the sampling under that State or local law or program is
33059 consistent with subsections (b)(1)(A) through (b)(1)(F) and (c) and
33060 the sampling is coupled with certain remediation actions:
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- 33062 i) Disconnecting affected fixtures;
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- ii) Replacing affected fixtures with fixtures certified lead-free as Section 611.126(j) requires; or
 - iii) Installing POU devices;
 - C) If the sampling under that State or local law or program occurs in schools and childcare facilities the supplier serves less frequently than once every five years, and the sampling is coupled with any of the remediation actions in subsection (d)(1)(B); or
 - D) If the sampling is conducted under a voluntary school and childcare program lead testing grant awarded under section 1464(d) of SDWA (42 U.S.C. 300j-24(d)), consistent with the requirements of the grant.
 - 2) The term of the waiver may not exceed the duration of the mandatory or voluntary sampling, and the waiver must automatically expire at the end of any 12-month period during which sampling does not occur at the required number of schools or childcare facilities.
 - 3) The Agency may issue a SEP granting the supplier a partial waiver if the sampling covers only a subset of the schools or childcare facilities the supplier serves as it listed under subsection (a)(1).
 - 4) The Agency may issue a SEP granting a waiver applicable to more than one supplier (e.g., one waiver for all suppliers subject to a statewide sampling program complying with subsection (d)).
 - e) Confirming or Revising Schools and Childcare Facilities in Inventory. At least once every five years, a supplier must either confirm that the list it assembled under subsection (a)(1) of schools and childcare facilities it serves has not changed or submit a revised list.
 - f) Notice of results.
 - 1) A supplier must provide analytical results to the school or childcare facility as soon as practicable but no later than 30 days after receiving them with information about remediation options.
 - 2) A supplier must annually provide analytical results:
 - A) To the local and State health departments; and

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B) To the Agency under Section 611.2360(i).

g) Lead Sampling in Schools and Childcare Facilities on Request

1) A supplier must contact schools and childcare facilities the supplier identified under subsection (a)(1) at least annually to provide:

A) Information about health risks from lead in drinking water;

B) Information about how to request sampling for lead at the facility; and

C) Information about sampling for lead in schools and childcare facilities.

BOARD NOTE: USEPA has guidance available from USEPA, National Center for Environmental Publications: "3Ts for Reducing Lead in Drinking Water in Schools and Childcare Facilities: A Training, Testing, and Taking Action Approach, Revised Manual" (October 2018), USEPA, Office of Water, doc. no. EPA 815-B-18-007 (search: "815B18007") and "U.S. EPA 3Ts Program Training, Testing & Taking Action: Lead Sample Collection Field Guide for Schools and Childcare Facilities" (July 2022), USEPA, Office of Water, doc. no. EPA 815-F-22-009 (search: "815F22009") or subsequent EPA guidance.

2) A supplier must conduct sampling under subsection (b) when the school or facility requests, and the supplier must provide information to the facility:

A) Instructions for identifying outlets for sampling and preparing for sampling at least 30 days before it occurs; and

B) Results as subsection (f) requires.

3) If a supplier receives requests from more than 20 percent of the schools and childcare facilities the supplier listed under subsection (a)(1) in a given year, the supplier may schedule sampling for those exceeding 20 percent for the following year. A supplier needs not sample an individual school or childcare facility more than once every five years.

4) The Agency may issue a SEP exempting a CWS supplier from this Section by issuing a written waiver under subsection (d) if the supplier conducts

33149 voluntary sampling for lead in drinking water complying with this Section
33150 at schools and childcare facilities the supplier serves.

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33152 (Source: Added at 50 Ill. Reg. _____, effective _____)

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33154 **Section 611.2363 Small Supplier Compliance Flexibility**

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33156 This section gives compliance flexibility options applying to a small CWS supplier serving
33157 10,000 or fewer persons or an NTNCWS supplier. A CWS or NTNCWS supplier having
33158 corrosion control treatment in place must continue operating and maintaining OCCT until the
33159 Agency issues a SEP determining this no longer necessary, and the supplier must comply with
33160 any conditions the Agency are appropriate before implementing an Agency-approved
33161 compliance flexibility option under this Section.

33162
33163 a) A small CWS or NTNCWS supplier exceeding the lead trigger level but neither
33164 the lead nor copper action level must collect samples for water quality parameters
33165 under Section 611.2357(b), evaluate compliance flexibility options under
33166 subsections (a)(1) through (a)(4), and recommend a compliance flexibility option
33167 to the Agency within six months of the end of the tap sampling period in which
33168 the exceedance occurred. When recommending to the Agency, the supplier must
33169 comply with Section 611.2382(a)(1). The Agency must either approve the
33170 supplier's recommended compliance flexibility option or designate an alternative
33171 under subsections (a)(1) through (a)(4) within six months after the supplier
33172 recommends an option. If the supplier subsequently exceeds the lead action level,
33173 the supplier must implement the Agency-approved compliance flexibility option
33174 under subsection (b). A supplier must select one from among specific compliance
33175 flexibility options:

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33177 1) Replacing Lead Service Lines. A supplier must implement a program for
33178 full lead service line replacement on an Agency-approved schedule not
33179 exceeding 15 years. The supplier must begin replacing lead service lines
33180 within one year after the Agency approves or designates this compliance
33181 flexibility option.

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33183 A) The supplier must replace lead service lines complying with
33184 Section 611.2354(e) and (g)(4), (g)(8), and (g)(9).

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33186 B) The supplier must continue replacing lead service lines even if the
33187 supplier's 90th percentile lead concentration is at or below the lead
33188 action level in future tap monitoring periods.

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- C) The supplier must have no lead, galvanized requiring replacement, or lead status unknown service lines in its inventory before ending its lead service line replacement program.

 - 2) Corrosion Control Treatment. A supplier must install and maintain OCCT under Sections 611.2351 and 611.2352, even if its 90th percentile concentration is at or below the lead action level in future tap monitoring periods. A supplier having installed corrosion control treatment must re-optimize its corrosion control treatment under Section 611.2351(d). A supplier the Agency requires to optimize or re-optimize corrosion control treatment must follow the appropriate schedule in Section 611.2351(d) or (e), beginning with Step 3 in Section 611.2351(d)(3) or (e)(3), unless the Agency specifies OCCT under the applicable of Section 611.2351(d)(2)(B) or (e)(2).

 - 3) Point-of-Use Devices. A supplier must continue installing, maintaining, and monitoring POU devices in each household or building it serves even if its 90th percentile lead concentration is at or below the action level in future tap monitoring periods.
 - A) Schedule for Installing POU Devices
 - i) A CWS supplier must install a minimum of one POU device (at one tap) in every household and at every tap persons use for cooking or drinking in every non-residential building the supplier serves on a schedule not exceeding one year the Agency specifies in a SEP.
 - ii) An NTNCWS supplier must provide a POU device to every tap persons use for cooking or drinking on a schedule not exceeding three months the Agency specifies in a SEP.

 - B) A third party must independently certify the POU device to meet the American National Standards Institute standard applying to the specific type of POU unit for reducing lead in drinking water.

 - C) The supplier must maintain each POU device according to its manufacturer's recommendations to ensure the POU device continues effectively filtering, including changing filter cartridges and resolving any operational issues. The POU devices must have mechanical warnings ensuring automatic notice to customers of operational problems. The supplier must certify to the Agency

- 33232 under Section 611.2360(j)(1) that it maintains the POU devices,
33233 unless the Agency issues a SEP waiving this requirement.
33234
- 33235 D) The supplier must monitor one-third of the POU devices each year
33236 and all POU devices within a three-year cycle. The supplier must
33237 collect first draw tap samples under this Section after water passes
33238 through the POU device to assess its performance. Samples must
33239 be one-liter in volume and have had a minimum six-hour
33240 stagnation time. Results from all samples must not exceed the lead
33241 trigger level. The supplier must report its tap sampling results no
33242 later than 10 days after the end of the tap monitoring period under
33243 Section 611.2360(j)(1). The supplier must document the problem
33244 and take corrective action at any site exceeding the lead trigger
33245 level. If a site exceeds the lead trigger level, the supplier must
33246 reach out to the homeowner or building manager or, if applicable,
33247 both no later than 24 hours after receiving the tap sample results.
33248 The supplier must complete the corrective action within 30 days.
33249 If the supplier does not complete the corrective action within 30
33250 days, the supplier must document to the Agency within 30 days
33251 explaining why the supplier was unable to correct the issue.
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- 33253 E) The supplier must provide public education to consumers under
33254 Section 611.2355(j) informing them how to properly use POU
33255 devices to maximize their effectiveness in reducing lead
33256 concentrations.
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- 33258 F) The supplier must operate and maintain the POU devices until the
33259 Agency approves another compliance flexibility option, and
33260 supplier implements it.
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- 33262 4) Replacing Lead-Bearing Plumbing. A supplier controlling all plumbing in
33263 buildings the supplier serves and having no lead status unknown,
33264 galvanized requiring replacement, or lead service lines must replace all
33265 plumbing that is not lead free as Section 611.126(c) defines the term when
33266 the supplier replaces it. Replacing all lead-bearing plumbing must occur
33267 on a schedule not exceeding one year as established by the Agency in a
33268 SEP. The supplier must certify to the Agency that it has replaced all lead-
33269 bearing material under Section 611.2360(j)(2).
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- 33271 b) Implementing a Compliance Option after Exceeding an Action Level
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- 33273 1) A supplier exceeding the lead action level after exceeding the lead trigger
33274 level but not exceeding the copper action level must implement the
33275 compliance option the Agency approved under subsection (a).
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- 33277 2) A supplier exceeding the lead action level but not the copper action level
33278 and not previously exceeding the lead trigger level must comply with
33279 subsection (a) and implement the compliance option the Agency approved
33280 under subsection (a).
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- 33282 3) A supplier exceeding the lead trigger level after implementing a
33283 compliance option the Agency approved under subsection (a) must
33284 complete the steps in subsection (a). If the supplier later exceeds the lead
33285 action level, the supplier must implement the compliance option the
33286 Agency approved under subsection (a).
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33288 (Source: Added at 50 Ill. Reg. _____, effective _____)
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33290 SUBPART AZ: PER- AND POLYFLUOROALKYL SUBSTANCES (PFAS)
33291

33292 **Section 611.7900 General Requirements**
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- 33294 a) The requirements of this subpart constitute the national primary drinking water
33295 regulations (NPDWRs) for PFAS. Each CWS and NTNCWS supplier must meet
33296 the requirements of this subpart including the maximum contaminant levels for
33297 the PFAS identified in Section 611.311(c).
33298
- 33299 b) The deadlines for complying with the provisions of this subpart are as follows:
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- 33301 1) Each supplier must meet the analytical requirements in Section 611.7901
33302 within 30 days of the effective date of this Subpart.
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- 33304 2) Each supplier must report the results of initial monitoring, as described in
33305 Section 611.7902 (b)(1), to the Agency by April 26, 2027.
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- 33307 3) Each supplier must meet the compliance monitoring requirements in
33308 Section 611.7902(b)(2) by April 26, 2027.
33309
- 33310 4) Each supplier must meet the MCL compliance requirements in Section
33311 611.7903 by April 26, 2029.
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- 33313 5) Each supplier must meet the reporting and recordkeeping requirements in
33314 Section 611.7904 by April 26, 2027.
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33316 6) Violations described in Section 611.7905 include monitoring and
33317 reporting violations and violations of MCLs. Monitoring and reporting
33318 violations may be assessed beginning on April 26, 2027. MCL violations
33319 may be assessed beginning on April 26, 2029.
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33321 BOARD NOTE: This Section derives from 40 CFR 141.900.
33322

33323 (Source: Added at 50 Ill. Reg. _____, effective _____)
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33325 **Section 611.7901 Analytical Requirements**
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33327 a) General.
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33329 1) Suppliers must use only the analytical methods this Section specifies, each
33330 incorporated by reference in Section 611.102, to demonstrate compliance
33331 with the requirements of this Subpart AZ.
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33333 2) The following documents are incorporated by reference with the approval
33334 of USEPA in compliance with 5 U.S.C. 552(a) and 1 CFR part 51. This
33335 material is available for inspection at the EPA and at the National
33336 Archives and Records Administration (NARA). Contact the USEPA's
33337 Drinking Water Docket at: 1301 Constitution Avenue NW., EPA West,
33338 Room 3334, Washington, DC 20460; phone: 202-566-2426. For
33339 information on the availability of this material at NARA, email:
33340 fr.inspection@nara.gov, or go to: [www.archives.gov/federal-](http://www.archives.gov/federal-register/cfr/ibr-locations)
33341 [register/cfr/ibr-locations](http://www.archives.gov/federal-register/cfr/ibr-locations). The material may be obtained from the USEPA
33342 at 1301 Constitution Avenue NW, the EPA West, Room 3334,
33343 Washington, DC 20460; phone: 202-566-2426; website:
33344 <https://www.epa.gov/pfas/epa-pfas-drinking-water-laboratory-methods>.
33345

33346 A) EPA Method 533: Determination of Per- and Polyfluoroalkyl
33347 Substances in Drinking Water by Isotope Dilution Anion Exchange
33348 Solid Phase Extraction and Liquid Chromatography/Tandem Mass
33349 Spectrometry, 815-B-19-020, November 2019.
33350

33351 B) Method 537.1, Version 2.0: Determination of Selected Per- and
33352 Polyfluorinated Alkyl Substances in Drinking Water by Solid
33353 Phase Extraction and Liquid Chromatography/Tandem Mass
33354 Spectrometry (LC/MS/MS), EPA/600/R-20/006, March 2020.
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33356 b) PFAS
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- 1) Analytical methods. Suppliers must measure regulated PFAS by the methods listed in the following Table 1:

Section 611.7901(b)(1) Table 1: Analytical Methods for PFAS Contaminants

<u>Contaminant</u>	<u>Methodology</u>	<u>Incorporated by Reference</u> (see subsection (a))
<u>Perfluorobutane Sulfonate (PFBS)</u>	<u>SPE LC-MS/MS</u>	<u>533, 537.1, version 2.0.</u>
<u>Perfluorohexane Sulfonate (PFHxS)</u>	<u>SPE LC-MS/MS</u>	<u>533, 537.1, version 2.0.</u>
<u>Perfluorononanoate (PFNA)</u>	<u>SPE LC-MS/MS</u>	<u>533, 537.1, version 2.0.</u>
<u>Perfluorooctanesulfonic Acid (PFOS)</u>	<u>SPE LC-MS/MS</u>	<u>533, 537.1, version 2.0.</u>
<u>Perfluorooctanoic Acid (PFOA)</u>	<u>SPE LC-MS/MS</u>	<u>533, 537.1, version 2.0.</u>
<u>2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy)propanoate (HFPO-DA or GenX Chemicals)</u>	<u>SPE LC-MS/MS</u>	<u>533, 537.1, version 2.0.</u>

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- 2) Laboratory certification. Analyses under this Section for regulated PFAS must only be conducted by laboratories that have been certified by USEPA or the Agency. To receive certification to conduct analyses for the regulated PFAS, the laboratory must:

- A) Analyze Performance Evaluation (PE) samples that are acceptable to the Agency at least once during each consecutive 12-month period by each method for which the laboratory desires certification.
- B) Within 30 days of the effective date of this Subpart Z, achieve quantitative results on the PE sample analyses that are within the following acceptance limits:

Section 611.7901(b)(2)(B) Table 1: Acceptance Limits for PFAS Performance Evaluation Samples

<u>Contaminant</u>	<u>Acceptance limit</u> (percent of true value)
<u>Perfluorobutane Sulfonate (PFBS)</u>	<u>70-130</u>
<u>Perfluorohexane Sulfonate (PFHxS)</u>	<u>70-130</u>

<u>Perfluorononanoate (PFNA)</u>	<u>70-130</u>
<u>Perfluorooctanesulfonic Acid (PFOS)</u>	<u>70-130</u>
<u>Perfluorooctanoic Acid (PFOA)</u>	<u>70-130</u>
<u>2,3,3,3-Tetrafluoro-2-(heptafluoropropoxy) propanoate (HFPO-DA or GenX Chemicals)</u>	<u>70-130</u>

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- C) For all samples analyzed for regulated PFAS in compliance with Section 611.7902, report data for concentrations as low as the trigger levels as defined in Section 611.7902(a)(5).

BOARD NOTE: This Section derives from 40 CFR 141.901

(Source: Added at 50 Ill. Reg. _____, effective _____)

Section 611.7902 Monitoring Requirements

a) General requirements

- 1) Suppliers must take all samples during normal operating conditions at all entry points to the distribution system.
- 2) If the supplier draws water from more than one source and the sources are combined before distribution, the supplier must sample at an entry point to the distribution system during periods of representative operating conditions.
- 3) Suppliers must use only data collected under the provisions of this Subpart AZ to qualify for reduced monitoring.
- 4) All new suppliers that begin operation after, or suppliers that use a new source of water after April 26, 2027, must demonstrate compliance with the MCLs within a period of time specified by the Agency. A supplier must also comply with initial sampling frequencies required by the Agency to ensure the supplier can demonstrate compliance with the MCLs. Compliance monitoring frequencies must be conducted in compliance with this Section.

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5) For purposes of this Section, the trigger levels are defined as shown in the following Table 1.

Section 611.7902 (a)(5) TABLE 1: Trigger Levels for PFAS Contaminants

<u>Contaminant</u>	<u>Trigger Level</u>
<u>Hazard Index PFAS (HFPO-DA, PFBS, PFHxS, PFNA)</u>	<u>0.5 (unitless)</u>
<u>HFPO-DA</u>	<u>5 nanograms per liter (ng/l).</u>
<u>PFHxS</u>	<u>5 ng/l.</u>
<u>PFNA</u>	<u>5 ng/l.</u>
<u>PFOA</u>	<u>2.0 ng/l.</u>
<u>PFOS</u>	<u>2.0 ng/l.</u>

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6) Based on initial monitoring results, for each sampling point at which a regulated PFAS listed in Section 611.311(c) is detected at a level greater than or equal to the trigger level, the supplier must monitor quarterly for all regulated PFAS beginning April 26, 2027, in compliance with subsection (b)(2).

7) For the purposes of this section, each water supplier must ensure that all results provided by a laboratory are reported to the Agency and used for determining the required sampling frequencies. This includes values below the practical quantitation levels defined in Section 611.7903 (f)(1)(D); zero must not be used in place of reported values.

b) Monitoring requirements for PFAS

1) Initial monitoring.

A) Groundwater CWS and NTNCWS suppliers serving greater than 10,000 persons and all surface water CWS and NTNCWS suppliers must take four consecutive samples 2 to 4 months apart within a 12-month period (quarterly samples) for each regulated PFAS listed in Section 611.311(c).

- 33441 B) All groundwater CWS and NTNCWS suppliers serving 10,000 or
- 33442 fewer persons must take two samples for each regulated PFAS
- 33443 listed in Section 611.311(c) five to seven months apart within a 12-
- 33444 month period.
- 33445
- 33446 C) All groundwater under the direct influence of surface water
- 33447 (GWUDI) CWS and NTNCWS suppliers must follow the surface
- 33448 water CWS and NTNCWS supplier monitoring schedule in
- 33449 subsection (b)(1)(A).
- 33450
- 33451 D) All suppliers that use both surface water and groundwater must
- 33452 apply the requirements in subsections (b)(1)(A) through (C)
- 33453 depending on the source(s) of water provided at a given entry point
- 33454 to the distribution system (EPTDS). If the EPTDS provides
- 33455 surface water, the requirements for a surface water
- 33456 CWS/NTNCWS supplier apply. If the EPTDS provides
- 33457 groundwater, the requirements for a groundwater CWS/NTNCWS
- 33458 supplier apply, based on supplier size. If an EPTDS provides a
- 33459 blend of surface water and groundwater, the requirements for a
- 33460 surface water system apply. For suppliers that change the source
- 33461 water type at an EPTDS during the initial monitoring period (i.e.,
- 33462 one part of the year it is surface water and the remaining part of the
- 33463 year it is groundwater), the sampling requirements for a surface
- 33464 water supplier apply.
- 33465
- 33466 E) Suppliers must monitor at a frequency indicated in the following
- 33467 table, though the Agency may require more frequent monitoring on
- 33468 a supplier specific basis:
- 33469

Section 611.7902(b)(1)(E) TABLE 1 Initial Monitoring Requirements

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<u>Type of System</u>	<u>Minimum Monitoring Frequency</u>	<u>Sample Location</u>
<u>Groundwater CWS and NTNCWS suppliers serving greater than 10,000 persons, all surface water CWS and NTNCWS suppliers, and all GWUDI suppliers</u>	<u>Four consecutive quarters of samples per entry point to the distribution system (EPTDS) within a 12-month period, unless the exception in subsection (b)(1)(H)</u>	<u>Sampling point for EPTDS</u>

applies. Samples must be taken two to four months apart.

Groundwater CWS and NTNCWS suppliers serving 10,000 or fewer persons

Two consecutive samples per EPTDS within a 12-month period, unless the exception in subsection (b)(1)(H) applies. Samples must be taken five to seven months apart.

Sampling point for EPTDS

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- F) The Agency may accept data previously acquired by a supplier to count toward the initial monitoring requirements if the data meets the requirements of Section 611.7901(b)(1), samples were collected starting on or after January 1, 2019, and otherwise meet the timing requirements specified in table 1 to subsection (b)(1)(E). For the purposes of satisfying initial monitoring requirements, acceptable data may be reported to a concentration no greater than the MCLs. However, a supplier is only eligible for triennial monitoring at the start of the compliance monitoring period if the supplier demonstrates that concentrations in all samples it uses to satisfy the initial monitoring requirements are below the trigger levels defined in subsection (a)(5).
- G) If suppliers have multiple years of data, the most recent data must be used.
- H) For suppliers using previously acquired data that have fewer than the number of samples required in a continuous 12-month period for initial monitoring as listed in table 1 to subsection (b)(1)(E): All surface water suppliers, GWUDI suppliers, and groundwater suppliers serving greater than 10,000 persons must collect in a calendar year one sample in each quarter that was not represented, two to four months apart from the months with available data; All groundwater suppliers serving 10,000 or fewer persons must collect one sample in the month that is five to seven months apart from the month in which the previous sample was taken.
- D) In determining the most recent data to report, a supplier must include all results provided by a laboratory whether above or below the practical quantitation levels. These results must be used

33503 for the purposes of determining the frequency with which a
33504 supplier must monitor at that sampling point at the start of the
33505 compliance monitoring period.
33506

33507 J) The Agency may delete results of obvious sampling errors. If the
33508 Agency deletes a result because of an obvious sampling error and
33509 the supplier fails to collect another sample this is a monitoring
33510 violation described in Section 611.311(c).
33511

33512 K) Initial monitoring requirements, including reporting results to the
33513 Agency, must be completed by April 26, 2027.
33514

33515 2) Compliance Monitoring.
33516

33517 A) Based on initial monitoring results, at the start of the monitoring
33518 period that begins on April 26, 2027, suppliers may reduce
33519 monitoring at each sampling point at which all reported sample
33520 concentrations were below all trigger levels defined in subsection
33521 (a)(5), unless otherwise provided for by the Agency. At eligible
33522 sampling points, each supplier must analyze one sample for all
33523 regulated PFAS during each three-year monitoring period, at a
33524 time specified by the Agency, in the quarter in which the highest
33525 analytical result was detected during the most recent round of
33526 quarterly or semi-annual monitoring. If a sampling point is not
33527 eligible for triennial monitoring, then the supplier must monitor
33528 quarterly at the start of the compliance monitoring period.
33529

33530 B) If, during the compliance monitoring period, a supplier is
33531 monitoring triennially and a PFAS listed in Section 611.311(c) is
33532 detected at a level equal to or exceeding the trigger levels defined
33533 in subsection (a)(5) in any sample, then the supplier must monitor
33534 quarterly for all regulated PFAS beginning in the next quarter at
33535 the sampling point. The triggering sample must be used as the first
33536 quarter of monitoring for the running annual average calculation.
33537

33538 C) For all source water types, the Agency may determine that all
33539 regulated PFAS at a sampling point are reliably and consistently
33540 below the MCL after considering, at a minimum, four consecutive
33541 quarterly samples collected during the compliance monitoring
33542 period. A sampling point that the Agency has determined to be
33543 reliably and consistently below the MCL is required to collect
33544 annual samples for at least the first three years after that
33545 determination is made. Annual samples must be collected in the

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quarter in which detected concentrations were highest during the most recent year of quarterly monitoring. If, after three consecutive years, annual samples all contain results that are below the trigger levels defined in subsection (a)(5), the Agency may allow a supplier to begin triennial monitoring at the sampling point. The supplier must collect triennial samples in the quarter with the highest concentrations during the most recent round of quarterly sampling. If an annual sample meets or exceeds an MCL or the Agency determines that the result is not reliably and consistently below the MCL for all regulated PFAS, then the supplier must monitor quarterly for all regulated PFAS beginning in the next quarter at the sampling point.

D) The three different compliance monitoring sampling schedules that may be assigned and the criteria for each are summarized in the following table:

Section 611.7902 (b)(2)(D) TABLE 1: Compliance Monitoring Schedules and Requirements

<u>Sampling Frequency</u>	<u>Eligibility Requirements¹</u>	<u>Sample Timing Requirements</u>
<u>Triennial</u>	<p><u>At an individual sampling point, either:</u></p> <p><u>(1) All initial monitoring results demonstrate concentrations of all regulated PFAS below trigger levels;</u></p> <p><u>(2) The most recent three consecutive annual monitoring results all demonstrated concentrations of all regulated PFAS below trigger levels; or</u></p> <p><u>(3) The previous triennial sample demonstrated all regulated PFAS concentrations below trigger levels..</u></p> <p><u>Note: After beginning compliance monitoring, a supplier may not transition</u></p>	<p><u>Sample must be collected at a time within the three-year period designated by the Agency, in the quarter that yielded the highest analytical result during the most recent round of quarterly sampling (or the most recent semi-annual sampling, if no quarterly sampling has occurred).</u></p>

	<u>directly from quarterly monitoring to triennial monitoring...</u>	
<u>Annual</u>	<u>The Agency makes a determination that all regulated PFAS concentrations at the sampling point are reliably and consistently below PFAS MCLs, after considering, at a minimum, 4 consecutive quarterly samples collected during the compliance monitoring period.</u>	<u>Sample must be collected at a time designated by the Agency, within the quarter that yielded the highest analytical result during the most recent round of quarterly sampling.</u>
<u>Quarterly</u>	<p><u>At an individual sampling point, either:</u></p> <p><u>(1) Any regulated PFAS concentration meets or exceeds a trigger level during initial monitoring;</u></p> <p><u>(2) Sampling is occurring quarterly during compliance monitoring and the Agency has not made a determination that all levels of regulated PFAS at the sampling point are reliably and consistently below the regulated PFAS MCLs; or</u></p> <p><u>(3) A sample collected by a supplier required to conduct triennial monitoring contains regulated PFAS concentrations that meet or exceed trigger levels. The first of these samples meeting or exceeding the trigger level is considered the first quarterly sample.</u></p> <p><u>(4) A sample collected by a supplier required to conduct annual monitoring contains regulated PFAS concentrations that meet or exceed an MCL. The first of these samples meeting or exceeding the MCL is considered the first quarterly sample.</u></p>	<u>Samples must be collected in four consecutive quarters, on dates designated by the Agency.</u>

¹ The monitoring frequency at a sampling point must be the same for all regulated PFAS and is determined based on the most frequent sampling required for any regulated PFAS detected at a level at or exceeding the trigger level.

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- E) The Agency may require a confirmation sample for any sampling result. If a confirmation sample is required by the Agency, the supplier must average the result with the first sampling result and the average must be used for the determination of compliance with MCLs as specified by Section 611.7903. The Agency may delete results of obvious sampling errors from the MCL compliance calculations described in Section 611.7903. If the Agency deletes a result because of an obvious sampling error and the supplier fails to collect another sample this is a monitoring violation as described in Section 611.7905(c).
- F) The Agency may increase the required monitoring frequency, where necessary, to detect variations within the supplier's system (e.g., fluctuations in concentration due to seasonal use, changes in water source).
- G) Each supplier must monitor at the time designated by the Agency within each monitoring period.
- H) When a supplier reduces its sampling frequency to annual or triennial sampling, the next compliance sample must be collected in the monitoring period that begins the calendar year following Agency approval of a reduction in monitoring frequency.

BOARD NOTE: This Section derives from 40 CFR 141.902

(Source: Added at 50 Ill. Reg. _____, effective _____)

Section 611.7903 Compliance Requirements

- a) Compliance with MCLs for regulated PFAS in Section 311.611(c) must be determined based on the analytical results obtained at each sampling point.
- b) For suppliers monitoring quarterly, compliance with the MCL is determined by the running annual average at each sampling point.

- 33603 c) If a supplier fails to collect the required number of samples specified in Section
33604 611.7902, this is a monitoring violation as described in Section 611.7905(c), and
33605 compliance calculations must be based on the total number of samples collected.
33606
- 33607 d) Suppliers monitoring triennially whose sample result equals or exceeds the trigger
33608 level of 2.0 ng/l for either PFOS or PFOA, 5 ng/l for HFPO-DA, PFHxS, or
33609 PFNA, or a Hazard Index of 0.5 for the Hazard Index PFAS, must begin quarterly
33610 sampling for all regulated PFAS in the next quarter at the sampling point.
33611 Suppliers monitoring annually whose sample result equals or exceeds the MCL of
33612 4.0 ng/l for either PFOS or PFOA, 10 ng/l for HFPO-DA, PFHxS, or PFNA, or a
33613 Hazard Index of 1 for the Hazard Index PFAS, must begin quarterly sampling for
33614 all regulated PFAS in the next quarter at the sampling point.
33615
- 33616 e) Except as provided in this subsection (e), if a sample result exceeds an MCL, the
33617 supplier will not be considered in violation of the MCL until it has completed one
33618 year of quarterly sampling at the sampling point with the triggering sample used
33619 as the first quarter of monitoring for the running annual average calculation.
33620 However, whenever a sample result in any quarter (or quarterly average, if more
33621 than one compliance sample is available in a quarter because a confirmation
33622 sample was required by the Agency) causes the running annual average to exceed
33623 the MCL at a sampling point regardless of the subsequent quarterly monitoring
33624 results required to complete a full year of monitoring (e.g., the results from a
33625 single sample are more than 4 times the MCL), the supplier is out of compliance
33626 with the MCL immediately.
33627
- 33628 f) Suppliers must calculate compliance using the following method to determine
33629 MCL compliance at each sampling point:
33630
- 33631 1) For each PFAS regulated by an individual MCL:
33632
- 33633 A) For suppliers monitoring quarterly, divide the sum of the measured
33634 quarterly concentrations for each analyte by the number of quarters
33635 samples were collected for that analyte during the consecutive
33636 quarters included in the calculation. If more than one compliance
33637 sample for that analyte is available in a quarter because a
33638 confirmation sample was required by the Agency, suppliers must
33639 average all the results in a quarter then average the quarterly
33640 averages. Rounding does not occur until the end of the calculation.
33641 If the running annual average exceeds the MCL, the supplier is not
33642 in compliance with the MCL requirements.
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- 33644 B) For suppliers monitoring annually, if the concentration measured is
33645 equal to or exceeds an MCL for regulated PFAS, the supplier is

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required to initiate quarterly monitoring for all regulated PFAS beginning in the next quarter at the sampling point, with the triggering sample result used as the first quarter of monitoring for the running annual average calculation.

- C) For suppliers monitoring triennially, if the concentration measured is equal to or exceeds the trigger level, the supplier is required to initiate quarterly monitoring for all regulated PFAS beginning in the next quarter at the sampling point, with the triggering sample result used as the first quarter of monitoring for the running annual average calculation.
- D) For the purpose of calculating MCL compliance, if a sample result is less than the practical quantitation level (PQL) for a regulated PFAS, in compliance with the following table, zero is used for that analyte solely to calculate the running annual average.

Section 611.7903 (f)(1)(D) Practical Quantitation Levels (PQLS) For PFAS Contaminant

<u>Contaminant</u>	<u>PQL (in parts per trillion)</u>
<u>HFPO-DA</u>	<u>5.0</u>
<u>PFBS</u>	<u>3.0</u>
<u>PFHxS</u>	<u>3.0</u>
<u>PFNA</u>	<u>4.0</u>
<u>PFOA</u>	<u>4.0</u>
<u>PFOS</u>	<u>4.0</u>

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- 2) For each PFAS regulated under the Hazard Index MCL:
 - A) For suppliers monitoring quarterly, divide the observed sample analytical result for each analyte included in the Hazard Index by the corresponding HBWC listed in Section 611.311(c) to obtain a hazard quotient for each analyte for each sampling event at each sampling point. Sum the resulting hazard quotients together to determine the Hazard Index for the quarter. If the Agency requires a confirmation sample for an analyte in the quarter, suppliers must

33676 average these results for each analyte in that quarter and then
33677 determine the hazard quotient(s) from those average values, then
33678 sum the hazard quotients. Once the Hazard Indices for the
33679 individual quarters are calculated, they are averaged to determine a
33680 running annual average. If the running annual average Hazard
33681 Index exceeds the MCL and two or more Hazard Index analytes
33682 had an observed sample analytical result at or above the PQL in
33683 any of the quarterly samples collected to determine the running
33684 annual average, the supplier is in violation of the Hazard Index
33685 MCL. No rounding occurs until after the running annual average
33686 Hazard Index is calculated.

33687
33688 B) If the Hazard Index calculated using the results of an annual
33689 sample equals or exceeds the Hazard Index MCL, the supplier
33690 must initiate quarterly sampling for all regulated PFAS beginning
33691 in the next quarter at the sampling point, with the triggering sample
33692 result used as the first quarter of monitoring.

33693
33694 C) If the Hazard Index calculated using the results of a triennial
33695 sample equals or exceeds the Hazard Index trigger level, the
33696 supplier must initiate quarterly sampling for all regulated PFAS
33697 beginning in the next quarter at the sampling point, with the
33698 triggering sample result used as the first quarter of monitoring.

33699
33700 D) If a sample result is less than the practical quantitation level for a
33701 regulated PFAS, in compliance with the table 1 to subsection
33702 (f)(1)(D), zero is used for that analyte solely to calculate the
33703 running annual average.

33704
33705 BOARD NOTE: This Section derives from 40 CFR 141.903

33706
33707 (Source: Added at 50 Ill. Reg. _____, effective _____)

33708
33709 **Section 611.7904 Reporting and Recordkeeping Requirements**

33710
33711 Suppliers required to sample must report to the Agency according to the timeframes and
33712 provisions of Section 611.840 and retain records according to the provisions in Section 611.680.

33713
33714 a) Suppliers must report the information from initial monitoring specified in the
33715 following table:

33716
33717 Section 611.7904(a) Table 1: Data to Report from Initial Monitoring

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If you are a . . .

You must report . . .

Supplier monitoring for regulated PFAS under the requirements of Section 611.7902(b)(1) on a quarterly basis.

1. All sample results, including the locations, number of samples taken at each location, dates, and concentrations reported.

2. Whether a trigger level, defined in Section 611.7902(a)(5), was met or exceeded in any samples.

Supplier monitoring for regulated PFAS under the requirements of Section 611.7902(b)(1) less frequently than quarterly.

1. All sample results, including the locations, number of samples taken at each location, dates, and concentrations reported.

2. Whether a trigger level, defined in Section 611.7902(a)(5), was met or exceeded in any samples.

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b) Suppliers must report the information collected during the compliance monitoring period specified in the following table:

Section 611.7904(b) Table 1: Data to Report from Compliance Monitoring

If you are a . . .

You must report . . .

Supplier monitoring for regulated PFAS under the requirements of Section 611.7902(b)(2) on a quarterly basis.

1. All sample results, including the locations, number of samples taken at each location, dates, and concentrations during the previous quarter.

2. The running annual average at each sampling point of all compliance samples.

3. Whether a trigger level, defined in Section 611.7902(a)(5), was met or exceeded in any samples.

4. Whether an MCL for a regulated PFAS in Section 611.311(c) was met or exceeded in any samples.

5. Whether, based on Section 611.7903, an MCL was violated.

Supplier monitoring for regulated PFAS under the requirements of Section 611.7902(b)(2) less frequently than quarterly.

1. All sample results, including the locations, number of samples taken at each location, dates, and concentrations during the previous monitoring period.

2. Whether a trigger level, defined in Section 611.7902(a)(5), was met or exceeded in any samples.

3. Whether an MCL for a regulated PFAS in Section 611.311(c) was met or exceeded in any samples.

4. Whether, based on Section 611.7903, an MCL was violated (e.g., the results from a single sample are more than 4 times the MCL).

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BOARD NOTE: This Section derives from 40 CFR 141.904

(Source: Added at 50 Ill. Reg. _____, effective _____)

Section 611.7905 Violations

- a) PFAS MCL violations, both for the individual PFOA, PFOS, HFPO-DA, PFHxS, and PFNA MCLs, as well as the Hazard Index MCL, as listed in Section 611.311(c), are based on a running annual average, as outlined under Section 611.7903.
- b) Compliance with Section 611.311(c) must be determined based on the analytical results obtained at each sampling point. If one sampling point is in violation of an MCL, the supplier is in violation of the MCL.
- c) Each failure to monitor in compliance with the requirements under Section 611.7902 is a monitoring violation.

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- d) Failure to notify the Agency following a MCL violation and failure to submit monitoring data in compliance with the requirements of Sections 611.7904 and 611.840 are reporting violations.

- e) Results for PFAS with individual MCLs as listed in Section 611.311(c) are compared to their respective MCLs, and results for mixtures of two or more of the Hazard Index PFAS (HFPO-DA, PFBS, PFHxS, and PFNA) are compared to the Hazard Index MCL as listed in Section 611.311(c). For determining compliance with the Hazard Index MCL, if only PFBS is reported at any concentration and no other regulated PFAS are in the mixture, it is not a violation of the Hazard Index MCL. If only one of the other PFAS within the Hazard Index (HFPO-DA, PFHxS, or PFNA) is detected and the level of this PFAS exceeds its MCL as determined by Section 611.7903(f)(1)(A), only an individual MCL violation is assessed for the individual PFAS detected, and it is not a violation of the Hazard Index MCL. Exceedances of the Hazard Index caused by two or more of the Hazard Index PFAS (HFPO-DA, PFBS, PFHxS, or PFNA) and exceedances of one or more individual MCLs can result in multiple MCL exceedances. However, in this instance, for purposes of public notification under Section 611.APPENDIX G of this part, a PWS supplier must only report the Hazard Index MCL exceedance.

BOARD NOTE: This Section derives from 40 CFR 141.905

(Source: Added at 50 Ill. Reg. _____, effective _____)

33769 **Section 611.APPENDIX A Regulated Contaminants**

33770

33771 Microbiological Contaminants

33772

33773 Contaminant (units): Total Coliform Bacteria

33774 Traditional MCL in mg/ℓ: TT

33775 To convert for CCR, multiply by:=-

33776 MCL in CCR units: TT

33777 MCLG: N/A

33778 Major sources in drinking water: Naturally present in the environment.

33779 Health effects language: Use language found in Section 611.883(h)(7)(A)(i)

33780

33781 Contaminant (units): E. coli

33782 Traditional MCL in mg/ℓ: Routine and repeat samples are total coliform-positive and
 33783 either is E. coli-positive or system fails to take repeat samples following E. coli-positive
 33784 routine sample or system fails to analyze total coliform-positive repeat sample for E.
 33785 coli.

33786 To convert for CCR, multiply by:=-

33787 MCL in CCR units: Routine and repeat samples are total coliform-positive and either is
 33788 E. coli-positive or system fails to take repeat samples following E. coli-positive routine
 33789 sample or system fails to analyze total coliform-positive repeat sample for E. coli.

33790 MCLG: 0

33791 Major sources in drinking water: Human and animal fecal waste.

33792 Health effects language: E. coli are bacteria whose presence indicates that the water may
 33793 be contaminated with human or animal wastes. Human pathogens in these wastes can
 33794 cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other
 33795 symptoms. They may pose a special health risk for infants, young children, the
 33796 elderly, and people with severely-compromised immune systems.

33797

33798 Contaminant (units): Fecal Indicators (enterococci or coliphage).

33799 Traditional MCL in mg/ℓ: TT.

33800 To convert for CCR, multiply by:=-

33801 MCL in CCR units: TT.

33802 MCLG: N/A

33803 Major sources in drinking water: Human and animal fecal waste.

33804 Health effects language: Fecal indicators are microbes whose presence indicates that the
 33805 water may be contaminated with human or animal wastes. Microbes in these wastes
 33806 can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or
 33807 other symptoms. They may pose a special health risk for infants, young children,
 33808 some of the elderly, and people with severely compromised immune systems.

33809

33810 Contaminant (units): Total organic carbon (ppm)

33811 Traditional MCL in mg/ℓ: TT

33812 To convert for CCR, multiply by: —
33813 MCL in CCR units: TT
33814 MCLG: N/A
33815 Major sources in drinking water: Naturally present in the environment.
33816 Health effects language: Total organic carbon (TOC) has no health effects. However,
33817 total organic carbon provides a medium for the formation of disinfection byproducts.
33818 These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs).
33819 Drinking water containing these byproducts in excess of the MCL may lead to
33820 adverse health effects, liver or kidney problems, or nervous system effects, and may
33821 lead to an increased risk of getting cancer.

33822
33823 Contaminant (units): Turbidity (NTU)
33824 Traditional MCL in mg/l: TT
33825 To convert for CCR, multiply by: —
33826 MCL in CCR units: TT
33827 MCLG: N/A
33828 Major sources in drinking water: Soil runoff.
33829 Health effects language: Turbidity has no health effects. However, turbidity can interfere
33830 with disinfection and provide a medium for microbial growth. Turbidity may indicate
33831 the presence of disease-causing organisms. These organisms include bacteria, viruses,
33832 and parasites that can cause symptoms such as nausea, cramps, diarrhea, and
33833 associated headaches.

33834
33835 Radioactive Contaminants

33836
33837 Contaminant (units): Beta/photon emitters (mrem/yr)
33838 Traditional MCL in mg/l: 4 mrem/yr
33839 To convert for CCR, multiply by: —
33840 MCL in CCR units: 4
33841 MCLG: 0
33842 Major sources in drinking water: Decay of natural and man-made deposits.
33843 Health effects language: Certain minerals are radioactive and may emit forms of
33844 radiation known as photons and beta radiation. Some people who drink water
33845 containing beta particle and photon radioactivity in excess of the MCL over many
33846 years may have an increased risk of getting cancer.

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33848 Contaminant (units): Alpha emitters (pCi/l)
33849 Traditional MCL in mg/l: 15 pCi/l
33850 To convert for CCR, multiply by: —
33851 MCL in CCR units: 15
33852 MCLG: 0
33853 Major sources in drinking water: Erosion of natural deposits.
33854 Health effects language: Certain minerals are radioactive and may emit a form of

33855 radiation known as alpha radiation. Some people who drink water containing alpha
33856 emitters in excess of the MCL over many years may have an increased risk of getting
33857 cancer.
33858

33859 Contaminant (units): Combined radium (pCi/ℓ)

33860 Traditional MCL in mg/ℓ: 5 pCi/ℓ

33861 To convert for CCR, multiply by: —

33862 MCL in CCR units: 5

33863 MCLG: 0

33864 Major sources in drinking water: Erosion of natural deposits.

33865 Health effects language: Some people who drink water containing radium-226 or -228 in
33866 excess of the MCL over many years may have an increased risk of getting cancer.
33867

33868 Contaminant (units): Uranium (µg/ℓ)

33869 Traditional MCL in mg/ℓ: 30 µg/ℓ

33870 To convert for CCR, multiply by:—

33871 MCL in CCR units: 30

33872 MCLG: 0

33873 Major sources in drinking water: Erosion of natural deposits.

33874 Health effects language: Some people who drink water containing uranium in excess of
33875 the MCL over many years may have an increased risk of getting cancer and kidney
33876 toxicity.
33877

33878 Inorganic Contaminants

33879

33880 Contaminant (units): Antimony (ppb)

33881 Traditional MCL in mg/ℓ: 0.006

33882 To convert for CCR, multiply by: 1000

33883 MCL in CCR units: 6

33884 MCLG: 6

33885 Major sources in drinking water: Discharge from petroleum refineries; fire retardants;
33886 ceramics; electronics; solder.

33887 Health effects language: Some people who drink water containing antimony well in
33888 excess of the MCL over many years could experience increases in blood cholesterol
33889 and decreases in blood sugar.
33890

33891 Contaminant (units): Arsenic (ppb)

33892 Traditional MCL in mg/ℓ: 0.010

33893 To convert for CCR, multiply by: 1000

33894 MCL in CCR units: 50

33895 MCLG: 0

33896 Major sources in drinking water: Erosion of natural deposits; runoff from orchards;
33897 runoff from glass and electronics production wastes.

33898 Health effects language: Some people who drink water containing arsenic in excess of
33899 the MCL over many years could experience skin damage or problems with their
33900 circulatory system, and may have an increased risk of getting cancer.
33901

33902 Contaminant (units): Asbestos (MFL)
33903 Traditional MCL in mg/ℓ: 7 MFL
33904 To convert for CCR, multiply by:—
33905 MCL in CCR units: 7
33906 MCLG: 7
33907 Major sources in drinking water: Decay of asbestos cement water mains; erosion of
33908 natural deposits.
33909 Health effects language: Some people who drink water containing asbestos in excess of
33910 the MCL over many years may have an increased risk of developing benign intestinal
33911 polyps.
33912

33913 Contaminant (units): Barium (ppm)
33914 Traditional MCL in mg/ℓ: 2
33915 To convert for CCR, multiply by:—
33916 MCL in CCR units: 2
33917 MCLG: 2
33918 Major sources in drinking water: Discharge of drilling wastes; discharge from metal
33919 refineries; erosion of natural deposits.
33920 Health effects language: Some people who drink water containing barium in excess of
33921 the MCL over many years could experience an increase in their blood pressure.
33922

33923 Contaminant (units): Beryllium (ppb)
33924 Traditional MCL in mg/ℓ: 0.004
33925 To convert for CCR, multiply by: 1000
33926 MCL in CCR units: 4
33927 MCLG: 4
33928 Major sources in drinking water: Discharge from metal refineries and coal-burning
33929 factories; discharge from electrical, aerospace, and defense industries.
33930 Health effects language: Some people who drink water containing beryllium well in
33931 excess of the MCL over many years could develop intestinal lesions.
33932

33933 Contaminant (units): Bromate (ppb)
33934 Traditional MCL in mg/ℓ: 0.010
33935 To convert for CCR, multiply by: 1000
33936 MCL in CCR units: 10
33937 MCLG: 0
33938 Major sources in drinking water: By-product of drinking water disinfection.
33939 Health effects language: Some people who drink water containing bromate in excess of
33940 the MCL over many years may have an increased risk of getting cancer.

33941
33942 Contaminant (units): Cadmium (ppb)
33943 Traditional MCL in mg/ℓ: 0.005
33944 To convert for CCR, multiply by: 1000
33945 MCL in CCR units: 5
33946 MCLG: 5
33947 Major sources in drinking water: Corrosion of galvanized pipes; erosion of natural
33948 deposits; discharge from metal refineries; runoff from waste batteries and paints.
33949 Health effects language: Some people who drink water containing cadmium in excess of
33950 the MCL over many years could experience kidney damage.
33951
33952 Contaminant (units): Chloramines (ppm)
33953 Traditional MCL in mg/ℓ: MRDL=4
33954 To convert for CCR, multiply by:—
33955 MCL in CCR units: MRDL=4
33956 MCLG: MRDLG=4
33957 Major sources in drinking water: Water additive used to control microbes.
33958 Health effects language: Some people who drink water containing chloramines well in
33959 excess of the MRDL could experience irritating effects to their eyes and nose. Some
33960 people who drink water containing chloramines well in excess of the MRDL could
33961 experience stomach discomfort or anemia.
33962
33963 Contaminant (units): Chlorine (ppm)
33964 Traditional MCL in mg/ℓ: MRDL=4
33965 To convert for CCR, multiply by:—
33966 MCL in CCR units: MRDL=4
33967 MCLG: MRDLG=4
33968 Major sources in drinking water: Water additive used to control microbes.
33969 Health effects language: Some people who drink water containing chlorine well in
33970 excess of the MRDL could experience irritating effects to their eyes and nose. Some
33971 people who drink water containing chlorine well in excess of the MRDL could
33972 experience stomach discomfort.
33973
33974 Contaminant (units): Chlorine dioxide (ppb)
33975 Traditional MCL in mg/ℓ: MRDL=800
33976 To convert for CCR, multiply by: 1000
33977 MCL in CCR units: MRDL=800
33978 MCLG: MRDLG=800
33979 Major sources in drinking water: Water additive used to control microbes.
33980 Health effects language: Some infants and young children who drink water containing
33981 chlorine dioxide well in excess of the MRDL could experience nervous system
33982 effects. Similar effects may occur in fetuses of pregnant women who drink water

33983 containing chlorine dioxide in excess of the MRDL. Some people may experience
33984 anemia.

33985
33986 Contaminant (units): Chlorite (ppm)
33987 Traditional MCL in mg/ℓ: MRDL=1
33988 To convert for CCR, multiply by:—
33989 MCL in CCR units: MRDL=1
33990 MCLG: MRDLG=0.8
33991 Major sources in drinking water: By-product of drinking water disinfection.
33992 Health effects language: Some infants and young children who drink water containing
33993 chlorite well in excess of the MCL could experience nervous system effects. Similar
33994 effects may occur in fetuses of pregnant women who drink water containing chlorite
33995 in excess of the MCL. Some people may experience anemia.

33996
33997 Contaminant (units): Chromium (ppb)
33998 Traditional MCL in mg/ℓ: 0.1
33999 To convert for CCR, multiply by: 1000
34000 MCL in CCR units: 100
34001 MCLG: 100
34002 Major sources in drinking water: Discharge from steel and pulp mills; erosion of natural
34003 deposits.
34004 Health effects language: Some people who use water containing chromium well in
34005 excess of the MCL over many years could experience allergic dermatitis.

34006
34007 Contaminant (units): Copper (ppm)
34008 Traditional MCL in mg/ℓ: AL=1.3
34009 To convert for CCR, multiply by:—
34010 MCL in CCR units: AL=1.3
34011 MCLG: 1.3
34012 Major sources in drinking water: Corrosion of household plumbing systems; erosion of
34013 natural deposits.
34014 Health effects language: Copper is an essential nutrient, but some people who drink
34015 water containing copper in excess of the action level over a relatively short amount of
34016 time could experience gastrointestinal distress. Some people who drink water
34017 containing copper in excess of the action level over many years could suffer liver or
34018 kidney damage. People with Wilson's Disease should consult their personal doctor.

34019
34020 Contaminant (units): Cyanide (ppb)
34021 Traditional MCL in mg/ℓ: 0.2
34022 To convert for CCR, multiply by: 1000
34023 MCL in CCR units: 200
34024 MCLG: 200
34025 Major sources in drinking water: Discharge from steel/metal factories; discharge from

34026 plastic and fertilizer factories.
34027 Health effects language: Some people who drink water containing cyanide well in excess
34028 of the MCL over many years could experience nerve damage or problems with their
34029 thyroid.

34030
34031 Contaminant (units): Fluoride (ppm)

34032 Traditional MCL in mg/l: 4

34033 To convert for CCR, multiply by:—

34034 MCL in CCR units: 4

34035 MCLG: 4

34036 Major sources in drinking water: Erosion of natural deposits; water additive that
34037 promotes strong teeth; discharge from fertilizer and aluminum factories.

34038 Health effects language: Some people who drink water containing fluoride in excess of
34039 the MCL over many years could get bone disease, including pain and tenderness of
34040 the bones. Fluoride in drinking water at half the MCL or more may cause mottling of
34041 children's teeth, usually in children less than nine years old. Mottling, also known as
34042 dental fluorosis, may include brown staining or pitting of the teeth, and occurs only in
34043 developing teeth before they erupt from the gums.

34044

34045 Contaminant (units): Lead (ppb)

34046 Traditional MCL in mg/l: ~~AL=0.010~~AL=0.015

34047 To convert for CCR, multiply by: 1000

34048 MCL in CCR units: ~~AL=10~~AL=15

34049 MCLG: 0

34050 Major sources in drinking water: Corrosion of household plumbing systems and service
34051 lines connecting buildings to water mains; erosion of natural deposits.

34052 Health effects language: There is no safe level of lead in drinking water. Exposure to
34053 lead in drinking water can cause serious health effects in all age groups, especially
34054 pregnant people, infants (both formula-fed and breastfed), and young children. Some
34055 of the health effects to infants and children include decreases in IQ and attention
34056 span. Lead exposure can also result in new or worsened learning and behavior
34057 problems. The children of persons who are exposed to lead before or during
34058 pregnancy may be at increased risk of these harmful health effects. Adults hav e
34059 increased risks of heart disease, high blood pressure, kidney or nervous system
34060 problems. Contact your health care provider for more information about your risks.
34061 ~~Infants and children who drink water containing lead in excess of the action level~~
34062 ~~could experience delays in their physical or mental development. Children could~~
34063 ~~show slight deficits in attention span and learning abilities. Adults who drink this~~
34064 ~~water over many years could develop kidney problems or high blood pressure.~~

34065

34066 Contaminant (units): Mercury (inorganic) (ppb)

34067 Traditional MCL in mg/l: 0.002

34068 To convert for CCR, multiply by: 1000

34069 MCL in CCR units: 2
34070 MCLG: 2
34071 Major sources in drinking water: Erosion of natural deposits; discharge from refineries
34072 and factories; runoff from landfills; runoff from cropland.
34073 Health effects language: Some people who drink water containing inorganic mercury
34074 well in excess of the MCL over many years could experience kidney damage.
34075
34076 Contaminant (units): Nitrate (ppm)
34077 Traditional MCL in mg/ℓ: 10
34078 To convert for CCR, multiply by:—
34079 MCL in CCR units: 10
34080 MCLG: 10
34081 Major sources in drinking water: Runoff from fertilizer use; leaching from septic tanks,
34082 sewage; erosion of natural deposits.
34083 Health effects language: Infants below the age of six months who drink water containing
34084 nitrate in excess of the MCL could become seriously ill and, if untreated, may die.
34085 Symptoms include shortness of breath and blue baby syndrome.
34086
34087 Contaminant (units): Nitrite (ppm)
34088 Traditional MCL in mg/ℓ: 1
34089 To convert for CCR, multiply by:—
34090 MCL in CCR units: 1
34091 MCLG: 1
34092 Major sources in drinking water: Runoff from fertilizer use; leaching from septic tanks,
34093 sewage; erosion of natural deposits.
34094 Health effects language: Infants below the age of six months who drink water containing
34095 nitrite in excess of the MCL could become seriously ill and, if untreated, may die.
34096 Symptoms include shortness of breath and blue baby syndrome.
34097
34098 Contaminant (units): Selenium (ppb)
34099 Traditional MCL in mg/ℓ: 0.05
34100 To convert for CCR, multiply by: 1000
34101 MCL in CCR units: 50
34102 MCLG: 50
34103 Major sources in drinking water: Discharge from petroleum and metal refineries; erosion
34104 of natural deposits; discharge from mines.
34105 Health effects language: Selenium is an essential nutrient. However, some people who
34106 drink water containing selenium in excess of the MCL over many years could
34107 experience hair or fingernail losses, numbness in fingers or toes, or problems with
34108 their circulation.
34109
34110 Contaminant (units): Thallium (ppb)
34111 Traditional MCL in mg/ℓ: 0.002

34112 To convert for CCR, multiply by: 1000
34113 MCL in CCR units: 2
34114 MCLG: 0.5
34115 Major sources in drinking water: Leaching from ore-processing sites; discharge from
34116 electronics, glass, and drug factories.
34117 Health effects language: Some people who drink water containing thallium in excess of
34118 the MCL over many years could experience hair loss, changes in their blood, or
34119 problems with their kidneys, intestines, or liver.

34120
34121 Synthetic Organic Contaminants, Including Pesticides and Herbicides
34122

34123 Contaminant (units): 2,4-D (ppb)
34124 Traditional MCL in mg/ℓ: 0.07
34125 To convert for CCR, multiply by: 1000
34126 MCL in CCR units: 70
34127 MCLG: 70
34128 Major sources in drinking water: Runoff from herbicide used on row crops.
34129 Health effects language: Some people who drink water containing the weed killer 2,4-D
34130 well in excess of the MCL over many years could experience problems with their
34131 kidneys, liver, or adrenal glands.

34132
34133 Contaminant (units): 2,4,5-TP (silvex) (ppb)
34134 Traditional MCL in mg/ℓ: 0.05
34135 To convert for CCR, multiply by: 1000
34136 MCL in CCR units: 50
34137 MCLG: 50
34138 Major sources in drinking water: Residue of banned herbicide.
34139 Health effects language: Some people who drink water containing silvex in excess of the
34140 MCL over many years could experience liver problems.

34141
34142 Contaminant (units): Acrylamide
34143 Traditional MCL in mg/ℓ: TT
34144 To convert for CCR, multiply by:—
34145 MCL in CCR units: TT
34146 MCLG: 0
34147 Major sources in drinking water: Added to water during sewage/wastewater treatment.
34148 Health effects language: Some people who drink water containing high levels of
34149 acrylamide over a long period of time could have problems with their nervous system
34150 or blood, and may have an increased risk of getting cancer.

34151
34152 Contaminant (units): Alachlor (ppb)
34153 Traditional MCL in mg/ℓ: 0.002
34154 To convert for CCR, multiply by: 1000

34155 MCL in CCR units: 2
34156 MCLG: 0
34157 Major sources in drinking water: Runoff from herbicide used on row crops.
34158 Health effects language: Some people who drink water containing alachlor in excess of
34159 the MCL over many years could have problems with their eyes, liver, kidneys, or
34160 spleen, or experience anemia, and may have an increased risk of getting cancer.
34161
34162 Contaminant (units): Atrazine (ppb)
34163 Traditional MCL in mg/ℓ: 0.003
34164 To convert for CCR, multiply by: 1000
34165 MCL in CCR units: 3
34166 MCLG: 3
34167 Major sources in drinking water: Runoff from herbicide used on row crops.
34168 Health effects language: Some people who drink water containing atrazine well in excess
34169 of the MCL over many years could experience problems with their cardiovascular
34170 system or reproductive difficulties.
34171
34172 Contaminant (units): Benzo(a)pyrene (PAH) (nanograms/ℓ)
34173 Traditional MCL in mg/ℓ: 0.0002
34174 To convert for CCR, multiply by: 1,000,000
34175 MCL in CCR units: 200
34176 MCLG: 0
34177 Major sources in drinking water: Leaching from linings of water storage tanks and
34178 distribution lines.
34179 Health effects language: Some people who drink water containing benzo(a)pyrene in
34180 excess of the MCL over many years may experience reproductive difficulties and
34181 may have an increased risk of getting cancer.
34182
34183 Contaminant (units): Carbofuran (ppb)
34184 Traditional MCL in mg/ℓ: 0.04
34185 To convert for CCR, multiply by: 1000
34186 MCL in CCR units: 40
34187 MCLG: 40
34188 Major sources in drinking water: Leaching of soil fumigant used on rice and alfalfa.
34189 Health effects language: Some people who drink water containing carbofuran in excess
34190 of the MCL over many years could experience problems with their blood, or nervous
34191 or reproductive systems.
34192
34193 Contaminant (units): Chlordane (ppb)
34194 Traditional MCL in mg/ℓ: 0.002
34195 To convert for CCR, multiply by: 1000
34196 MCL in CCR units: 2
34197 MCLG: 0

34198 Major sources in drinking water: Residue of banned termiticide.
34199 Health effects language: Some people who drink water containing chlordane in excess of
34200 the MCL over many years could experience problems with their liver or nervous
34201 system, and may have an increased risk of getting cancer.
34202
34203 Contaminant (units): Dalapon (ppb)
34204 Traditional MCL in mg/l: 0.2
34205 To convert for CCR, multiply by: 1000
34206 MCL in CCR units: 200
34207 MCLG: 200
34208 Major sources in drinking water: Runoff from herbicide used on rights of way.
34209 Health effects language: Some people who drink water containing dalapon well in excess
34210 of the MCL over many years could experience minor kidney changes.
34211
34212 Contaminant (units): Di(2-ethylhexyl)adipate (ppb)
34213 Traditional MCL in mg/l: 0.4
34214 To convert for CCR, multiply by: 1000
34215 MCL in CCR units: 400
34216 MCLG: 400
34217 Major sources in drinking water: Discharge from chemical factories.
34218 Health effects language: Some people who drink water containing di(2-
34219 ethylhexyl)adipate well in excess of the MCL over many years could experience toxic
34220 effects, such as weight loss, liver enlargement, or possible reproductive difficulties.
34221
34222 Contaminant (units): Di(2-ethylhexyl)phthalate (ppb)
34223 Traditional MCL in mg/l: 0.006
34224 To convert for CCR, multiply by: 1000
34225 MCL in CCR units: 6
34226 MCLG: 0
34227 Major sources in drinking water: Discharge from rubber and chemical factories.
34228 Health effects language: Some people who drink water containing di(2-
34229 ethylhexyl)phthalate well in excess of the MCL over many years may have problems
34230 with their liver or experience reproductive difficulties, and they may have an
34231 increased risk of getting cancer.
34232
34233 Contaminant (units): Dibromochloropropane (DBCP) (ppt)
34234 Traditional MCL in mg/l: 0.0002
34235 To convert for CCR, multiply by: 1,000,000
34236 MCL in CCR units: 200
34237 MCLG: 0
34238 Major sources in drinking water: Runoff/leaching from soil fumigant used on soybeans,
34239 cotton, pineapples, and orchards.
34240 Health effects language: Some people who drink water containing DBCP in excess of the

34241 MCL over many years could experience reproductive problems and may have an
34242 increased risk of getting cancer.

34243
34244 Contaminant (units): Dinoseb (ppb)
34245 Traditional MCL in mg/l: 0.007
34246 To convert for CCR, multiply by: 1000
34247 MCL in CCR units: 7
34248 MCLG: 7

34249 Major sources in drinking water: Runoff from herbicide used on soybeans and
34250 vegetables.
34251 Health effects language: Some people who drink water containing dinoseb well in excess
34252 of the MCL over many years could experience reproductive difficulties.

34253
34254 Contaminant (units): Diquat (ppb)
34255 Traditional MCL in mg/l: 0.02
34256 To convert for CCR, multiply by: 1000
34257 MCL in CCR units: 20
34258 MCLG: 20

34259 Major sources in drinking water: Runoff from herbicide use.
34260 Health effects language: Some people who drink water containing diquat in excess of the
34261 MCL over many years could get cataracts.

34262
34263 Contaminant (units): Dioxin (2,3,7,8-TCDD) (ppq)
34264 Traditional MCL in mg/l: 0.00000003
34265 To convert for CCR, multiply by: 1,000,000,000
34266 MCL in CCR units: 30
34267 MCLG: 0

34268 Major sources in drinking water: Emissions from waste incineration and other
34269 combustion; discharge from chemical factories.
34270 Health effects language: Some people who drink water containing dioxin in excess of the
34271 MCL over many years could experience reproductive difficulties and may have an
34272 increased risk of getting cancer.

34273
34274 Contaminant (units): Endothall (ppb)
34275 Traditional MCL in mg/l: 0.1
34276 To convert for CCR, multiply by: 1000
34277 MCL in CCR units: 100
34278 MCLG: 100

34279 Major sources in drinking water: Runoff from herbicide use.
34280 Health effects language: Some people who drink water containing endothall in excess of
34281 the MCL over many years could experience problems with their stomach or
34282 intestines.

34283

34284 Contaminant (units): Endrin (ppb)
34285 Traditional MCL in mg/ℓ: 0.002
34286 To convert for CCR, multiply by: 1000
34287 MCL in CCR units: 2
34288 MCLG: 2
34289 Major sources in drinking water: Residue of banned insecticide.
34290 Health effects language: Some people who drink water containing endrin in excess of the
34291 MCL over many years could experience liver problems.
34292

34293 Contaminant (units): Epichlorohydrin
34294 Traditional MCL in mg/ℓ: TT
34295 To convert for CCR, multiply by: –
34296 MCL in CCR units: TT
34297 MCLG: 0
34298 Major sources in drinking water: Discharge from industrial chemical factories; an
34299 impurity of some water treatment chemicals.
34300 Health effects language: Some people who drink water containing high levels of
34301 epichlorohydrin over a long period of time could experience stomach problems, and
34302 may have an increased risk of getting cancer.
34303

34304 Contaminant (units): Ethylene dibromide (ppt)
34305 Traditional MCL in mg/ℓ: 0.00005
34306 To convert for CCR, multiply by: 1,000,000
34307 MCL in CCR units: 50
34308 MCLG: 0
34309 Major sources in drinking water: Discharge from petroleum refineries.
34310 Health effects language: Some people who drink water containing ethylene dibromide in
34311 excess of the MCL over many years could experience problems with their liver,
34312 stomach, reproductive system, or kidneys, and may have an increased risk of getting
34313 cancer.
34314

34315 Contaminant (units): Glyphosate (ppb)
34316 Traditional MCL in mg/ℓ: 0.7
34317 To convert for CCR, multiply by: 1000
34318 MCL in CCR units: 700
34319 MCLG: 700
34320 Major sources in drinking water: Runoff from herbicide use.
34321 Health effects language: Some people who drink water containing glyphosate in excess
34322 of the MCL over many years could experience problems with their kidneys or
34323 reproductive difficulties.
34324

34325 Contaminant (units): Hazard Index PFAS (HFPO-DA, PFBS, PFHxS, and PFNA)
34326 (unitless)

34327 Traditional MCL in ng/l: 1(unitless)
34328 To convert for CCR, multiply by:
34329 MCL in CCR units: 1
34330 MCLG: 1
34331 Major sources in drinking water: Discharge from manufacturing and industrial chemical
34332 facilities, use of certain consumer products, occupational exposures, and certain
34333 firefighting activities.
34334 Health effects language: Per- and polyfluoroalkyl substances (PFAS) can persist in the
34335 human body and exposure may lead to increased risk of adverse health effects. Low
34336 levels of multiple PFAS that individually would not likely result in increased risk of
34337 adverse health effects may result in adverse health effects when combined in a
34338 mixture. Some people who consume drinking water containing mixtures of PFAS in
34339 excess of the Hazard Index (HI) MCL may have increased health risks such as liver,
34340 immune, and thyroid effects following exposure over many years and developmental
34341 and thyroid effects following repeated exposure during pregnancy and/or childhood.
34342
34343 Contaminant (units): HFPO-DA (ng/l)
34344 Traditional MCL in ng/l: .00001
34345 To convert for CCR, multiply by: 1,000,000
34346 MCL in CCR units: 10
34347 MCLG: 10
34348 Major sources in drinking water: Discharge from manufacturing and industrial chemical
34349 facilities, use of certain consumer products, occupational exposures, and certain
34350 firefighting activities.
34351 Health effects language: Some people who drink water containing HFPO-DA in excess
34352 of the MCL over many years may have increased health risks such as immune, liver,
34353 and kidney effects. There is also a potential concern for cancer associated with
34354 HFPO-DA exposure. In addition, there may be increased risks of developmental
34355 effects for people who drink water containing HFPO-DA in excess of the MCL
34356 following repeated exposure during pregnancy and/or childhood.
34357
34358 Contaminant (units): Heptachlor (ppt)
34359 Traditional MCL in mg/l: 0.0004
34360 To convert for CCR, multiply by: 1,000,000
34361 MCL in CCR units: 400
34362 MCLG: 0
34363 Major sources in drinking water: Residue of banned pesticide.
34364 Health effects language: Some people who drink water containing heptachlor in excess
34365 of the MCL over many years could experience liver damage and may have an
34366 increased risk of getting cancer.
34367
34368 Contaminant (units): Heptachlor epoxide (ppt)
34369 Traditional MCL in mg/l: 0.0002

34370 To convert for CCR, multiply by: 1,000,000
34371 MCL in CCR units: 200
34372 MCLG: 0
34373 Major sources in drinking water: Breakdown of heptachlor.
34374 Health effects language: Some people who drink water containing heptachlor epoxide in
34375 excess of the MCL over many years could experience liver damage, and may have an
34376 increased risk of getting cancer.
34377
34378 Contaminant (units): Hexachlorobenzene (ppb)
34379 Traditional MCL in mg/l: 0.001
34380 To convert for CCR, multiply by: 1000
34381 MCL in CCR units: 1
34382 MCLG: 0
34383 Major sources in drinking water: Discharge from metal refineries and agricultural
34384 chemical factories.
34385 Health effects language: Some people who drink water containing
34386 hexachlorobenzene in excess of the MCL over many years could experience problems
34387 with their liver or kidneys, or adverse reproductive effects, and may have an
34388 increased risk of getting cancer.
34389
34390 Contaminant (units): Hexachlorocyclopentadiene (ppb)
34391 Traditional MCL in mg/l: 0.05
34392 To convert for CCR, multiply by: 1000
34393 MCL in CCR units: 50
34394 MCLG: 50
34395 Major sources in drinking water: Discharge from chemical factories.
34396 Health effects language: Some people who drink water containing
34397 hexachlorocyclopentadiene well in excess of the MCL over many years could
34398 experience problems with their kidneys or stomach.
34399
34400 Contaminant (units): Lindane (ppt)
34401 Traditional MCL in mg/l: 0.0002
34402 To convert for CCR, multiply by: 1,000,000
34403 MCL in CCR units: 200
34404 MCLG: 200
34405 Major sources in drinking water: Runoff/leaching from insecticide used on cattle,
34406 lumber, gardens.
34407 Health effects language: Some people who drink water containing lindane in excess of
34408 the MCL over many years could experience problems with their kidneys or liver.
34409
34410 Contaminant (units): Methoxychlor (ppb)
34411 Traditional MCL in mg/l: 0.04
34412 To convert for CCR, multiply by: 1000

34413 MCL in CCR units: 40
34414 MCLG: 40
34415 Major sources in drinking water: Runoff/leaching from insecticide used on fruits,
34416 vegetables, alfalfa, livestock.
34417 Health effects language: Some people who drink water containing methoxychlor in
34418 excess of the MCL over many years could experience reproductive difficulties.
34419
34420 Contaminant (units): Oxamyl (vydate) (ppb)
34421 Traditional MCL in mg/ℓ: 0.2
34422 To convert for CCR, multiply by: 1000
34423 MCL in CCR units: 200
34424 MCLG: 200
34425 Major sources in drinking water: Runoff/leaching from insecticide used on apples,
34426 potatoes and tomatoes.
34427 Health effects language: Some people who drink water containing oxamyl in excess of
34428 the MCL over many years could experience slight nervous system effects.
34429
34430 Contaminant (units): PCBs (polychlorinated biphenyls) (ppt)
34431 Traditional MCL in mg/ℓ: 0.0005
34432 To convert for CCR, multiply by: 1,000,000
34433 MCL in CCR units: 500
34434 MCLG: 0
34435 Major sources in drinking water: Runoff from landfills; discharge of waste chemicals.
34436 Health effects language: Some people who drink water containing PCBs in excess of the
34437 MCL over many years could experience changes in their skin, problems with their
34438 thymus gland, immune deficiencies, or reproductive or nervous system difficulties,
34439 and may have an increased risk of getting cancer.
34440
34441 Contaminant (units): Pentachlorophenol (ppb)
34442 Traditional MCL in mg/ℓ: 0.001
34443 To convert for CCR, multiply by: 1000
34444 MCL in CCR units: 1
34445 MCLG: 0
34446 Major sources in drinking water: Discharge from wood preserving factories.
34447 Health effects language: Some people who drink water containing pentachlorophenol in
34448 excess of the MCL over many years could experience problems with their liver or
34449 kidneys, and may have an increased risk of getting cancer.
34450
34451 Contaminant (units): PFHxS (ng/l)
34452 Traditional MCL in mg/ℓ: .00001
34453 To convert for CCR, multiply by: 1,000,000
34454 MCL in CCR units: 10
34455 MCLG: 10

34456 Major sources in drinking water: Discharge from manufacturing and industrial chemical
34457 facilities, use of certain consumer products, occupational exposures, and certain
34458 firefighting activities.

34459 Health effects language: Some people who drink water containing PFHxS in excess of
34460 the MCL over many years may have increased health risks such as immune, thyroid,
34461 and liver effects. In addition, there may be increased risks of developmental effects
34462 for people who drink water containing PFHxS in excess of the MCL following
34463 repeated exposure during pregnancy and/or childhood.

34464
34465 Contaminant (units): PFNA (ng/l)
34466 Traditional MCL in mg/l: .00001
34467 To convert for CCR, multiply by: 1,000,000
34468 MCL in CCR units: 10
34469 MCLG: 10

34470 Major sources in drinking water: Discharge from manufacturing and industrial chemical
34471 facilities, use of certain consumer products, occupational exposures, and certain
34472 firefighting activities.

34473 Health effects language: Some people who drink water containing PFNA in excess of the
34474 MCL over many years may have increased health risks such as elevated cholesterol
34475 levels, immune effects, and liver effects. In addition, there may be increased risks of
34476 developmental effects for people who drink water containing PFNA in excess of the
34477 MCL following repeated exposure during pregnancy and/or childhood.

34478
34479 Contaminant (units): PFOA Perfluorooctanoate (ng/l)
34480 Traditional MCL in ng/l: .0000040
34481 To convert for CCR, multiply by: 1,000,000
34482 MCL in CCR units: 4.0
34483 MCLG: 0

34484 Major sources in drinking water: Discharge from manufacturing and industrial chemical
34485 facilities, use of certain consumer products, occupational exposures, and certain
34486 firefighting activities.

34487 Health effects language: Some people who drink water containing PFOA in excess of the
34488 MCL over many years may have increased health risks such as cardiovascular,
34489 immune, and liver effects, as well as increased incidence of certain types of cancers
34490 including kidney and testicular cancer. In addition, there may be increased risks of
34491 developmental and immune effects for people who drink water containing PFOA in
34492 excess of the MCL following repeated exposure during pregnancy and/or childhood.

34493
34494 Contaminant (units): PFOS (ng/l)
34495 Traditional MCL in ng/l: .0000040
34496 To convert for CCR, multiply by: 1,000,000
34497 MCL in CCR units: 4
34498 MCLG: 0

34499 Major sources in drinking water: Discharge from manufacturing and industrial chemical
34500 facilities, use of certain consumer products, occupational exposures, and certain
34501 firefighting activities.

34502 Health effects language: Some people who drink water containing PFOS in excess of the
34503 MCL over many years may have increased health risks such as cardiovascular,
34504 immune, and liver effects, as well as increased incidence of certain types of cancers
34505 including liver cancer. In addition, there may be increased risks of developmental
34506 and immune effects for people who drink water containing PFOS in excess of the
34507 MCL following repeated exposure during pregnancy and/or childhood.

34508
34509 Contaminant (units): Picloram (ppb)

34510 Traditional MCL in mg/l: 0.5

34511 To convert for CCR, multiply by: 1000

34512 MCL in CCR units: 500

34513 MCLG: 500

34514 Major sources in drinking water: Herbicide runoff.

34515 Health effects language: Some people who drink water containing picloram in excess of
34516 the MCL over many years could experience problems with their liver.

34517

34518 Contaminant (units): Simazine (ppb)

34519 Traditional MCL in mg/l: 0.004

34520 To convert for CCR, multiply by: 1000

34521 MCL in CCR units: 4

34522 MCLG: 4

34523 Major sources in drinking water: Herbicide runoff.

34524 Health effects language: Some people who drink water containing simazine in excess of
34525 the MCL over many years could experience problems with their blood.

34526

34527 Contaminant (units): Toxaphene (ppb)

34528 Traditional MCL in mg/l: 0.003

34529 To convert for CCR, multiply by: 1000

34530 MCL in CCR units: 3

34531 MCLG: 0

34532 Major sources in drinking water: Runoff/leaching from insecticide used on cotton and
34533 cattle.

34534 Health effects language: Some people who drink water containing toxaphene in excess
34535 of the MCL over many years could have problems with their kidneys, liver, or thyroid,
34536 and may have an increased risk of getting cancer.

34537

34538 Volatile Organic Contaminants

34539

34540 Contaminant (units): Benzene (ppb)

34541 Traditional MCL in mg/l: 0.005

34542 To convert for CCR, multiply by: 1000
34543 MCL in CCR units: 5
34544 MCLG: 0
34545 Major sources in drinking water: Discharge from factories; leaching from gas storage
34546 tanks and landfills.
34547 Health effects language: Some people who drink water containing benzene in excess of
34548 the MCL over many years could experience anemia or a decrease in blood platelets,
34549 and may have an increased risk of getting cancer.

34550
34551 Contaminant (units): Carbon tetrachloride (ppb)
34552 Traditional MCL in mg/l: 0.005
34553 To convert for CCR, multiply by: 1000
34554 MCL in CCR units: 5
34555 MCLG: 0
34556 Major sources in drinking water: Discharge from chemical plants and other industrial
34557 activities.
34558 Health effects language: Some people who drink water containing carbon tetrachloride in
34559 excess of the MCL over many years could experience problems with their liver and
34560 may have an increased risk of getting cancer.

34561
34562 Contaminant (units): Chlorobenzene (ppb)
34563 Traditional MCL in mg/l: 0.1
34564 To convert for CCR, multiply by: 1000
34565 MCL in CCR units: 100
34566 MCLG: 100
34567 Major sources in drinking water: Discharge from chemical and agricultural chemical
34568 factories.
34569 Health effects language: Some people who drink water containing chlorobenzene in
34570 excess of the MCL over many years could experience problems with their liver or
34571 kidneys.

34572
34573 Contaminant (units): o-Dichlorobenzene (ppb)
34574 Traditional MCL in mg/l: 0.6
34575 To convert for CCR, multiply by: 1000
34576 MCL in CCR units: 600
34577 MCLG: 600
34578 Major sources in drinking water: Discharge from industrial chemical factories.
34579 Health effects language: Some people who drink water containing o-dichlorobenzene
34580 well in excess of the MCL over many years could experience problems with their
34581 liver, kidneys, or circulatory systems.

34582
34583 Contaminant (units): p-Dichlorobenzene (ppb)
34584 Traditional MCL in mg/l: 0.075

34585 To convert for CCR, multiply by: 1000
34586 MCL in CCR units: 75
34587 MCLG: 75
34588 Major sources in drinking water: Discharge from industrial chemical factories.
34589 Health effects language: Some people who drink water containing p-dichlorobenzene in
34590 excess of the MCL over many years could experience anemia; damage to their liver,
34591 kidneys, or spleen; or changes in their blood.
34592
34593 Contaminant (units): 1,2-Dichloroethane (ppb)
34594 Traditional MCL in mg/l: 0.005
34595 To convert for CCR, multiply by: 1000
34596 MCL in CCR units: 5
34597 MCLG: 0
34598 Major sources in drinking water: Discharge from industrial chemical factories.
34599 Health effects language: Some people who drink water containing 1,2-dichloroethane in
34600 excess of the MCL over many years may have an increased risk of getting cancer.
34601
34602 Contaminant (units): 1,1-Dichloroethylene (ppb)
34603 Traditional MCL in mg/l: 0.007
34604 To convert for CCR, multiply by: 1000
34605 MCL in CCR units: 7
34606 MCLG: 7
34607 Major sources in drinking water: Discharge from industrial chemical factories.
34608 Health effects language: Some people who drink water containing 1,1-dichloroethylene
34609 in excess of the MCL over many years could experience problems with their liver.
34610
34611 Contaminant (units): cis-1,2-Dichloroethylene (ppb)
34612 Traditional MCL in mg/l: 0.07
34613 To convert for CCR, multiply by: 1000
34614 MCL in CCR units: 70
34615 MCLG: 70
34616 Major sources in drinking water: Discharge from industrial chemical factories.
34617 Health effects language: Some people who drink water containing cis-1,2-
34618 dichloroethylene in excess of the MCL over many years could experience problems
34619 with their liver.
34620
34621 Contaminant (units): trans-1,2-Dichloroethylene (ppb)
34622 Traditional MCL in mg/l: 0.1
34623 To convert for CCR, multiply by: 1000
34624 MCL in CCR units: 100
34625 MCLG: 100
34626 Major sources in drinking water: Discharge from industrial chemical factories.
34627 Health effects language: Some people who drink water containing trans-1,2-

34628 dichloroethylene well in excess of the MCL over many years could experience
34629 problems with their liver.

34630

34631 Contaminant (units): Dichloromethane (ppb)

34632 Traditional MCL in mg/l: 0.005

34633 To convert for CCR, multiply by: 1000

34634 MCL in CCR units: 5

34635 MCLG: 0

34636 Major sources in drinking water: Discharge from pharmaceutical and chemical factories.

34637 Health effects language: Some people who drink water containing dichloromethane in
34638 excess of the MCL over many years could have liver problems and may have an
34639 increased risk of getting cancer.

34640

34641 Contaminant (units): 1,2-Dichloropropane (ppb)

34642 Traditional MCL in mg/l: 0.005

34643 To convert for CCR, multiply by: 1000

34644 MCL in CCR units: 5

34645 MCLG: 0

34646 Major sources in drinking water: Discharge from industrial chemical factories.

34647 Health effects language: Some people who drink water containing 1,2-dichloropropane
34648 in excess of the MCL over many years may have an increased risk of getting cancer.

34649

34650 Contaminant (units): Ethylbenzene (ppb)

34651 Traditional MCL in mg/l: 0.7

34652 To convert for CCR, multiply by: 1000

34653 MCL in CCR units: 700

34654 MCLG: 700

34655 Major sources in drinking water: Discharge from petroleum refineries.

34656 Health effects language: Some people who drink water containing ethylbenzene well in
34657 excess of the MCL over many years could experience problems with their liver or
34658 kidneys.

34659

34660 Contaminant (units): Haloacetic acids (HAA5) (ppb)

34661 Traditional MCL in mg/l: 0.060

34662 To convert for CCR, multiply by: 1000

34663 MCL in CCR units: 60

34664 MCLG: N/A

34665 Major sources in drinking water: Byproduct of drinking water disinfection.

34666 Health effects language: Some people who drink water containing haloacetic acids in
34667 excess of the MCL over many years may have an increased risk of getting cancer.

34668

34669 Contaminant (units): Styrene (ppb)

34670 Traditional MCL in mg/l: 0.1

34671 To convert for CCR, multiply by: 1000
34672 MCL in CCR units: 100
34673 MCLG: 100
34674 Major sources in drinking water: Discharge from rubber and plastic factories; leaching
34675 from landfills.
34676 Health effects language: Some people who drink water containing styrene well in excess
34677 of the MCL over many years could have problems with their liver, kidneys, or
34678 circulatory system.
34679
34680 Contaminant (units): Tetrachloroethylene (ppb)
34681 Traditional MCL in mg/l: 0.005
34682 To convert for CCR, multiply by: 1000
34683 MCL in CCR units: 5
34684 MCLG: 0
34685 Major sources in drinking water: Discharge from factories and dry cleaners.
34686 Health effects language: Some people who drink water containing tetrachloroethylene in
34687 excess of the MCL over many years could have problems with their liver, and may
34688 have an increased risk of getting cancer.
34689
34690 Contaminant (units): 1,2,4-Trichlorobenzene (ppb)
34691 Traditional MCL in mg/l: 0.07
34692 To convert for CCR, multiply by: 1000
34693 MCL in CCR units: 70
34694 MCLG: 70
34695 Major sources in drinking water: Discharge from textile-finishing factories.
34696 Health effects language: Some people who drink water containing 1,2,4-trichlorobenzene
34697 well in excess of the MCL over many years could experience changes in their adrenal
34698 glands.
34699
34700 Contaminant (units): 1,1,1-Trichloroethane (ppb)
34701 Traditional MCL in mg/l: 0.2
34702 To convert for CCR, multiply by: 1000
34703 MCL in CCR units: 200
34704 MCLG: 200
34705 Major sources in drinking water: Discharge from metal degreasing sites and other
34706 factories.
34707 Health effects language: Some people who drink water containing 1,1,1-trichloroethane
34708 in excess of the MCL over many years could experience problems with their liver,
34709 nervous system, or circulatory system.
34710
34711 Contaminant (units): 1,1,2-Trichloroethane (ppb)
34712 Traditional MCL in mg/l: 0.005
34713 To convert for CCR, multiply by: 1000

34714 MCL in CCR units: 5
34715 MCLG: 3
34716 Major sources in drinking water: Discharge from industrial chemical factories.
34717 Health effects language: Some people who drink water containing 1,1,2-trichloroethane
34718 well in excess of the MCL over many years could have problems with their liver,
34719 kidneys, or immune systems.
34720
34721 Contaminant (units): Trichloroethylene (ppb)
34722 Traditional MCL in mg/l: 0.005
34723 To convert for CCR, multiply by: 1000
34724 MCL in CCR units: 5
34725 MCLG: 0
34726 Major sources in drinking water: Discharge from metal degreasing sites and other
34727 factories.
34728 Health effects language: Some people who drink water containing trichloroethylene in
34729 excess of the MCL over many years could experience problems with their liver and
34730 may have an increased risk of getting cancer.
34731
34732 Contaminant (units): TTHMs (total trihalomethanes) (ppb)
34733 Traditional MCL in mg/l: 0.10/0.080
34734 To convert for CCR, multiply by: 1000
34735 MCL in CCR units: 100/80
34736 MCLG: N/A
34737 Major sources in drinking water: Byproduct of drinking water disinfection.
34738 Health effects language: Some people who drink water containing trihalomethanes in
34739 excess of the MCL over many years may experience problems with their liver,
34740 kidneys, or central nervous system, and may have an increased risk of getting cancer.
34741
34742 Contaminant (units): Toluene (ppm)
34743 Traditional MCL in mg/l: 1
34744 To convert for CCR, multiply by: –
34745 MCL in CCR units: 1
34746 MCLG: 1
34747 Major sources in drinking water: Discharge from petroleum factories.
34748 Health effects language: Some people who drink water containing toluene well in excess
34749 of the MCL over many years could have problems with their nervous system,
34750 kidneys, or liver.
34751
34752 Contaminant (units): Vinyl Chloride (ppb)
34753 Traditional MCL in mg/l: 0.002
34754 To convert for CCR, multiply by: 1000
34755 MCL in CCR units: 2
34756 MCLG: 0

34757 Major sources in drinking water: Leaching from PVC piping; discharge from plastics
 34758 factories.

34759 Health effects language: Some people who drink water containing vinyl chloride in
 34760 excess of the MCL over many years may have an increased risk of getting cancer.

34761
 34762 Contaminant (units): Xylenes (ppm)

34763 Traditional MCL in mg/ℓ: 10

34764 To convert for CCR, multiply by: –

34765 MCL in CCR units: 10

34766 MCLG: 10

34767 Major sources in drinking water: Discharge from petroleum factories; discharge from
 34768 chemical factories.

34769 Health effects language: Some people who drink water containing xylenes in excess of
 34770 the MCL over many years could experience damage to their nervous system.

34771
 34772 Key

Abbreviation	Meaning
AL	action level
MCL	maximum contaminant level
MCLG	maximum contaminant level goal
MFL	million fibers per liter
MRDL	maximum residual disinfectant level
MRDLG	maximum residual disinfectant level goal
mrem/year	millirems per year (a measure of radiation absorbed by the body)
N/A	not applicable
NTU	nephelometric turbidity units (a measure of water clarity)
pCi/ℓ	picocuries per liter (a measure of radioactivity)
ppm	parts per million, or milligrams per liter (mg/ℓ)
ppb	parts per billion, or micrograms per liter (μg/ℓ)
ppt	parts per trillion, or nanograms per liter
ppq	parts per quadrillion, or picograms per liter
TT	treatment technique

34774
 34775 BOARD NOTE: Derived from appendix A to subpart O to 40 CFR 141.

34776
 34777 (Source: Amended at 50 Ill. Reg. _____, effective _____)

34778

34779 **Section 611.APPENDIX E Mandatory Lead Public Education Information for**
 34780 **Community Water Systems**

34781
 34782 1) INTRODUCTION

34783
 34784 The United States Environmental Protection Agency (USEPA) and (insert name of water
 34785 supplier) are concerned about lead in your drinking water. Although most homes have very low
 34786 levels of lead in their drinking water, some homes in the community have lead levels above the
 34787 USEPA action level of 15 parts per billion (ppb), or 0.015 milligrams of lead per liter of water
 34788 (mg/l). Under Federal law we are required to have a program in place to minimize lead in your
 34789 drinking water by (insert date when corrosion control will be completed for your system). This
 34790 program includes corrosion control treatment, source water treatment, and public education. We
 34791 are also required to replace the portion of each lead service line that we own if the line
 34792 contributes lead concentrations of more than 15 ppb after we have completed the comprehensive
 34793 treatment program. If you have any questions about how we are carrying out the requirements of
 34794 the lead regulation please give us a call at (insert water system's phone number). This brochure
 34795 explains the simple steps you can take to protect you and your family by reducing your exposure
 34796 to lead in drinking water.

34797
 34798 2) HEALTH EFFECTS OF LEAD

34799
 34800 Lead is a common metal found throughout the environment in lead-based paint; air; soil;
 34801 household dust; food; certain types of pottery, porcelain, and pewter; and water. Lead can pose a
 34802 significant risk to your health if too much of it enters your body. Lead builds up in the body over
 34803 many years and can cause damage to the brain, red blood cells, and kidneys. The greatest risk is
 34804 to young children and pregnant women. Amounts of lead that won't hurt adults can slow down
 34805 normal mental and physical development of growing bodies. In addition, a child at play often
 34806 comes into contact with sources of lead contamination— like dirt and dust— that rarely affect an
 34807 adult. It is important to wash children's hands and toys often, and to try to make sure they only
 34808 put food in their mouths.

34809
 34810 3) LEAD IN DRINKING WATER

34811
 34812 A) Lead in drinking water, although rarely the sole cause of lead poisoning, can
 34813 significantly increase a person's total lead exposure, particularly the exposure of
 34814 infants who drink baby formulas and concentrated juices that are mixed with
 34815 water. The EPA estimates that drinking water can make up 20 percent or more of
 34816 a person's total exposure to lead.

34817
 34818 B) Lead is unusual among drinking water contaminants in that it seldom occurs
 34819 naturally in water supplies like rivers and lakes. Lead enters drinking water
 34820 primarily as a result of the corrosion, or wearing away, of materials containing
 34821 lead in the water distribution system and household plumbing. These materials

34822 include lead-based solder used to join copper pipe, brass and chrome plated brass
34823 faucets, and in some cases, pipes made of lead that connect your house to the
34824 water main (service lines). In 1986, Congress banned the use of lead solder
34825 containing greater than 0.2% lead, and restricted the lead content of faucets, pipes
34826 and other plumbing materials to 8.0%.

34827
34828 C) When water stands in lead pipes or plumbing systems containing lead for several
34829 hours or more, the lead may dissolve into your drinking water. This means the
34830 first water drawn from the tap in the morning, or later in the afternoon after
34831 returning from work or school, can contain fairly high levels of lead.

34832
34833 4) STEPS YOU CAN TAKE IN THE HOME TO REDUCE EXPOSURE TO LEAD IN
34834 DRINKING WATER

34835
34836 A) Despite our best efforts mentioned earlier to control water corrosivity and remove
34837 lead from the water supply, lead levels in some homes or buildings can be high.
34838 To find out whether you need to take action in your own home, have your
34839 drinking water tested to determine if it contains excessive concentrations of lead.
34840 Testing the water is essential because you cannot see, taste, or smell lead in
34841 drinking water. Some local laboratories that can provide this service are listed at
34842 the end of this booklet. For more information on having your water tested, please
34843 call (insert phone number of water system).

34844
34845 B) If a water test indicates that the drinking water drawn from a tap in your home
34846 contains lead above 15 ppb, then you should take the following precautions:

34847
34848 i) Let the water run from the tap before using it for drinking or cooking any
34849 time the water in a faucet has gone unused for more than six hours. The
34850 longer water resides in your home's plumbing the more lead it may
34851 contain. Flushing the tap means running the cold water faucet until the
34852 water gets noticeably colder, usually about 15-30 seconds. If your house
34853 has a lead service line to the water main, you may have to flush the water
34854 for a longer time, perhaps one minute, before drinking. Although toilet
34855 flushing or showering flushes water through a portion of your home's
34856 plumbing system, you still need to flush the water in each faucet before
34857 using it for drinking or cooking. Flushing tap water is a simple and
34858 inexpensive measure you can take to protect your family's health. It
34859 usually uses less than one or two gallons of water and costs less than
34860 (insert a cost estimate based on flushing two times a day for 30 days) per
34861 month. To conserve water, fill a couple of bottles for drinking water after
34862 flushing the tap, and whenever possible use the first flush water to wash
34863 the dishes or water the plants. If you live in a high-rise building, letting
34864 the water flow before using it may not work to lessen your risk from lead.

- 34865 The plumbing systems have more, and sometimes larger pipes than
 34866 smaller buildings. Ask your landlord for help in locating the source of the
 34867 lead and for advice on reducing the lead level.
 34868
- 34869 ii) Try not to cook with or drink water from the hot water tap. Hot water can
 34870 dissolve more lead more quickly than cold water. If you need hot water,
 34871 draw water from the cold tap and heat it on the stove.
 34872
- 34873 iii) Remove loose lead solder and debris from the plumbing materials installed
 34874 in newly constructed homes, or homes in which the plumbing has recently
 34875 been replaced, by removing the faucet strainers from all taps and running
 34876 the water from 3 to 5 minutes. ~~Then~~~~Thereafter~~, periodically remove the
 34877 strainers and flush out any debris that has accumulated over time.
 34878
- 34879 iv) If your copper pipes are joined with lead solder that has been installed
 34880 illegally since it was banned in 1986, notify the plumber who did the work
 34881 and request that he or she replace the lead solder with lead-free solder.
 34882 Lead solder looks dull gray, and when scratched with a key looks shiny.
 34883 In addition, notify the Illinois Environmental Protection Agency about the
 34884 violation.
 34885
- 34886 v) Determine whether or not the service line that connects your home or
 34887 apartment to the water main is made of lead. The best way to determine if
 34888 your service line is made of lead is by either hiring a licensed plumber to
 34889 inspect the line or by contacting the plumbing contractor who installed the
 34890 line. You can identify the plumbing contractor by checking the city's
 34891 record of building permits ~~that~~~~which~~ should be maintained in the files of
 34892 the (insert name of department that issues building permits). A licensed
 34893 plumber can at the same time check to see if your home's plumbing
 34894 contains lead solder, lead pipes, or pipe fittings that contain lead. The
 34895 public water system that delivers water to your home should also maintain
 34896 records of the materials located in the distribution system. If the service
 34897 line that connects your dwelling to the water main contributes more than
 34898 15 ppb to drinking water, after our comprehensive treatment program is in
 34899 place, we are required to replace the portion of the line that we own. If the
 34900 line is only partially owned by the (insert name of the city, county, or
 34901 water system that controls the line), we are required to provide the owner
 34902 of the privately-owned portion of the line with information on how to
 34903 replace the privately-owned portion of the service line, and offer to replace
 34904 that portion of the line at the owner's expense. If we replace only the
 34905 portion of the line that we own, we also are required to notify you in
 34906 advance and provide you with information on the steps that you can take
 34907 to minimize exposure to any temporary increase in lead levels ~~that~~~~which~~

- 34908 may result from the partial replacement, to take a follow-up sample at our
34909 expense from the line within 72 hours after the partial replacement, and to
34910 mail or otherwise provide you with the results of that sample within three
34911 business days after receiving the results. Acceptable replacement
34912 alternatives include copper, steel, iron, and plastic pipes.
34913
- 34914 vi) Have an electrician check your wiring. If grounding wires from the
34915 electrical system are attached to your pipes, corrosion may be greater.
34916 Check with a licensed electrician or your local electrical code to determine
34917 if your wiring can be grounded elsewhere. DO NOT attempt to change the
34918 wiring yourself because improper grounding can cause electrical shock
34919 and fire hazards.
34920
- 34921 C) The steps described above will reduce the lead concentrations in your drinking
34922 water. However, if a water test indicates that the drinking water coming from
34923 your tap contains lead concentrations in excess of 15 ppb after flushing, or after
34924 we have completed our actions to minimize lead levels, then you may want to
34925 take the following additional measures:
34926
- 34927 i) Purchase or lease a home treatment device. Home treatment devices are
34928 limited in that each unit treats only the water that flows from the faucet to
34929 which it is connected, and all of the devices require periodic maintenance
34930 and replacement. Devices such as reverse osmosis systems or distillers
34931 can effectively remove lead from your drinking water. Some activated
34932 carbon filters may reduce lead levels at the tap, however all lead reduction
34933 claims should be investigated. Be sure to check the actual performance of
34934 a specific home treatment device before and after installing the unit.
34935
- 34936 ii) Purchase bottled water for drinking and cooking.
34937
- 34938 D) You can consult a variety of sources for additional information. Your family
34939 doctor or pediatrician can perform a blood test for lead and provide you with
34940 information about the health effects of lead. State and local government agencies
34941 that can be contacted include the following:
34942
- 34943 i) (Insert the name of city or county department of public utilities) at (insert
34944 phone number) can provide you with information about your community's
34945 water supply, and a list of local laboratories that have been certified by
34946 EPA for testing water quality;
34947
- 34948 ii) (Insert the name of city or county department that issues building permits)
34949 at (insert phone number) can provide you with information about building
34950 permit records that should contain the names of plumbing contractors that

34951 plumbed your home; and

34952

34953 iii) The Illinois Department of Public Health at 217-782-4977 or 312-814-
34954 2608 or the (insert the name of the city or county health department) at
34955 (insert phone number) can provide you with information about the health
34956 effects of lead and how you can have your child's blood tested.

34957

34958 E) The following is a list of some State-approved laboratories in your area that you
34959 can call to have your water tested for lead. (Insert names and phone numbers of
34960 at least two laboratories.)

34961

34962 BOARD NOTE: Derived from 40 CFR 141.85(a)(1)-~~(2012)~~.

34963

34964 (Source: Amended at 50 Ill. Reg. _____, effective _____)

34965

34966 **Section 611.APPENDIX F Mandatory Lead Public Education Information for Non-**
 34967 **Transient Non-Community Water Systems**

34968
 34969
 34970

1) INTRODUCTION

34971 The United States Environmental Protection Agency (USEPA) and (insert name of water
 34972 supplier) are concerned about lead in your drinking water. Some drinking water samples taken
 34973 from this facility have lead levels above the USEPA action level of 15 parts per billion (ppb), or
 34974 0.015 milligrams of lead per liter of water (mg/l). Under Federal law we are required to have a
 34975 program in place to minimize lead in your drinking water by (insert date when corrosion control
 34976 will be completed for your system). This program includes corrosion control treatment, source
 34977 water treatment, and public education. We are also required to replace the portion of each lead
 34978 service line that we own if the line contributes lead concentrations of more than 15 ppb after we
 34979 have completed the comprehensive treatment program. If you have any questions about how we
 34980 are carrying out the requirements of the lead regulation please give us a call at (insert water
 34981 system's phone number). This brochure explains the simple steps you can take to protect you
 34982 and your family by reducing your exposure to lead in drinking water.

34983
 34984
 34985

2) HEALTH EFFECTS OF LEAD

34986 Lead is found throughout the environment in lead-based paint; air; soil; household dust; food;
 34987 certain types of pottery, porcelain, and pewter; and water. Lead can pose a significant risk to
 34988 your health if too much of it enters your body. Lead builds up in the body over many years and
 34989 can cause damage to the brain, red blood cells, and kidneys. The greatest risk is to young
 34990 children and pregnant women. Amounts of lead that won't hurt adults can slow down normal
 34991 mental and physical development of growing bodies. In addition, a child at play often comes
 34992 into contact with sources of lead contamination – like dirt and dust – that rarely affect an adult.
 34993 It is important to wash children's hands and toys often, and to try to make sure they only put food
 34994 in their mouths.

34995
 34996
 34997

3) LEAD IN DRINKING WATER

34998 A) Lead in drinking water, although rarely the sole cause of lead poisoning, can
 34999 significantly increase a person's total lead exposure, particularly the exposure of
 35000 infants who drink baby formulas and concentrated juices that are mixed with
 35001 water. The EPA estimates that drinking water can make up 20 percent or more of
 35002 a person's total exposure to lead.

35003
 35004
 35005
 35006
 35007
 35008

B) Lead is unusual among drinking water contaminants in that it seldom occurs
 naturally in water supplies like rivers and lakes. Lead enters drinking water
 primarily as a result of the corrosion, or wearing away, of materials containing
 lead in the water distribution system and household plumbing. These materials
 include lead-based solder used to join copper pipe, brass, and chrome plated brass

35009 faucets, and in some cases, pipes made of lead that connect houses and buildings
35010 to the water main (service lines). In 1986, Congress banned the use of lead solder
35011 containing greater than 0.2% lead, and restricted the lead content of faucets, pipes,
35012 and other plumbing materials to 8.0%.

- 35013 C) When water stands in lead pipes or plumbing systems containing lead for several
35014 hours or more, the lead may dissolve into your drinking water. This means the
35015 first water drawn from the tap in the morning, or later in the afternoon after
35016 returning from work or school, can contain fairly high levels of lead.
35017

35018 4) STEPS YOU CAN TAKE TO REDUCE EXPOSURE TO LEAD IN DRINKING
35019 WATER
35020

- 35021 A) Let the water run from the tap before using it for drinking or cooking any time the
35022 water in a faucet has gone unused for more than six hours. The longer water
35023 resides in plumbing the more lead it may contain. Flushing the tap means running
35024 the cold water faucet until the water gets noticeably colder, usually about 15-30
35025 seconds. Although toilet flushing or showering flushes water through a portion of
35026 the plumbing system, you still need to flush the water in each faucet before using
35027 it for drinking or cooking. Flushing tap water is a simple and inexpensive
35028 measure you can take to protect your family's health. It usually uses less than one
35029 gallon.
35030

- 35031 B) Do not cook with or drink water from the hot water tap. Hot water can dissolve
35032 more lead more quickly than cold water. If you need hot water, draw water from
35033 the cold tap and heat it.
35034

- 35035 C) The steps described above will reduce the lead concentrations in your drinking
35036 water. However, if you are still concerned, you may wish to use bottled water for
35037 drinking and cooking.
35038

- 35039 D) You can consult a variety of sources for additional information. Your family
35040 doctor or pediatrician can perform a blood test for lead and provide you with
35041 information about the health effects of lead. State and local government agencies
35042 that can be contacted include the following:
35043

35044 i) (Insert the name or title of facility official if appropriate) at (insert phone
35045 number) can provide you with information about your facility's water
35046 supply; and
35047

35048 ii) The Illinois Department of Public Health at 217-782-4977 ~~or 312-814-~~
35049 ~~2608~~ or the (insert the name of the city or county health department) at
35050 (insert phone number) can provide you with information about the health
35051 effects of lead.

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BOARD NOTE: Derived from 40 CFR 141.85(a)(2) ~~(2011)~~. The Department of Public Health (Department) regulates non-community water supplies, including non-transient, non-community water supplies. The Department has incorporated this Part into its regulations at 77 Ill. Adm. Code 900.15(a)(2)(A) and 900.20(k)(2). Thus, the Board has included the notice language of 40 CFR 141.85(a)(2) in this Section for the purposes of facilitating federal review and authorization of the Illinois drinking water regulations.

(Source: Amended at 50 Ill. Reg. _____, effective _____)

35062 **Section 611.APPENDIX G NPDWR Violations and Situations Requiring Public Notice**

35063
35064 See note 1 at the end of this Appendix G for an explanation of the Agency's authority to alter the
35065 magnitude of a violation from that ~~set forth~~ in the following table.
35066

Contaminant	MCL/MRDL/TT violations ²		Monitoring and testing procedure violations	
	Tier of public notice required	Citation	Tier of public notice required	Citation

35067
35068 I. Violations of National Primary Drinking Water Regulations (NPDWR):³

35069
35070 A. Microbiological Contaminants

1a. Corresponding row 1a in appendix A to subpart Q to 40 CFR 141 no longer applies by its own terms. This statement maintains structural consistency with the federal regulations.				
1b. Total coliform (TT violations resulting from failure to perform assessments or corrective actions, monitoring violations, and reporting violations)	2	611.1060(b)(1)	3	611.1060(c)(1) 611.1060(d)(1)
1c. Seasonal system failure to follow State-approved start-up plan prior to serving water to the public or failure to provide certification to the Agency	2	611.1060(b)(2)	3	611.1060(d)(3)
2a. Corresponding row 2a in appendix A to subpart Q to 40 CFR 141 no longer applies by its own terms. This statement maintains structural consistency with the federal regulations.				

2b. E. coli (MCL, monitoring, and reporting violations)	1	611.1060(a)	3	611.1060(c), 611.1060(d)(2)
2c. E. coli (TT violations resulting from failure to perform Level 2 assessments or corrective action)	2	611.1060(b)(1)		
3. This entry relates to the obsolete MCL for turbidity in 40 CFR 141.13 that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule.				
4. This entry relates to the obsolete MCL for turbidity in 40 CFR 141.13 that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule.				
5. Turbidity (for TT violations resulting from a single exceedance of maximum allowable turbidity level)	⁶ 2, 1	611.231(b), 611.233(b)(1), 611.250(a)(2), 611.250(b)(2), 611.250(c)(2), 611.250(d), 611.743(a)(2), 611.743(b), 611.955(b)(2)	3	611.531(a), 611.532(b), 611.533(a), 611.744, 611.956(a)(1)- (a)(3), 611.956(b)
6. Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. allowable turbidity level (TT)	2	611.211, 611.213, 611.220, 611.230- 611.233, 611.240- 611.242, 611.250	3	611.531- 611.533
7. Interim Enhanced Surface Water Treatment Rule violations, other than violations resulting from single exceedance of max. turbidity level (TT)	2	⁷ 611.740- 611.743, 611.950- 611.955	3	611.742, 611.744, 611.953, 611.954, 611.956
8. Filter Backwash Recycling Rule violations	2	611.276(c)	3	611.276(b), (d)
9. Long Term 1 Enhanced Surface Water Treatment Rule violations	2	611.950- 611.955	3	611.953, 611.954, 611.956

10. LT2ESWTR violations	2	611.1010-611.1020	¹⁹ 2, 3	611.1001-611.1005 and 611.1008-611.1009
11. Groundwater Rule violations	2	611.804	3	611.802(h)

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35072

B. Inorganic Chemicals (IOCs)

1. Antimony	2	611.301(b)	3	611.600, 611.601, 611.603
2. Arsenic	2	611.301(b)	3	611.601, 611.603
3. Asbestos (fibers greater than 10 µm)	2	611.301(b)	3	611.600, 611.601, 611.602
4. Barium	2	611.301(b)	3	611.600, 611.601, 611.603
5. Beryllium	2	611.301(b)	3	611.600, 611.601, 611.603
6. Cadmium	2	611.301(b)	3	611.600, 611.601, 611.603
7. Chromium (total)	2	611.301(b)	3	611.600, 611.601, 611.603
8. Cyanide	2	611.301(b)	3	611.600, 611.601, 611.603
9. Fluoride	2	611.301(b)	3	611.600, 611.601, 611.603
10. Mercury (inorganic)	2	611.301(b)	3	611.600, 611.601, 611.603
11. Nitrate	1	611.301(b)	⁸ 1, 3	611.600, 611.601, 611.604, 611.606

12. Nitrite	1	611.301(b)	⁸ 1, 3	611.600, 611.601, 611.605, 611.606
13. Total Nitrate and Nitrite	1	611.301(b)	3	611.600, 611.601
14. Selenium	2	611.301(b)	3	611.600, 611.601, 611.603
15. Thallium	2	611.301(b)	3	611.600, 611.601, 611.603

35073
35074 C. Lead and Copper Rule (Action Level for lead is 0.010 mg/L~~0.015 mg/L~~, for copper is 1.3 mg/L)

1. Lead and Copper Rule (TT)	2	611.350 (except 611.350(c))-611.354, 611.355(a)-(c) <u>(except subsection (c)(3), and (h) and (j), and 611.363.</u>	3	611.356-611.360, <u>and 611.362.</u>
2. Exceeding the lead action level	1	611.350(c)		

35075
35076 D. Synthetic Organic Chemicals (SOCs)

1. 2,4-D	2	611.311(c)	3	611.648
2. 2,4,5-TP (silvex)	2	611.311(c)	3	611.648
3. Aalachlor	2	611.311(c)	3	611.648
4. Atrazine	2	611.311(c)	3	611.648
5. Benzo(a)pyrene (PAHs)	2	611.311(c)	3	611.648
6. Carbofuran	2	611.311(c)	3	611.648
7. Chlordane	2	611.311(c)	3	611.648
8. Dalapon	2	611.311(c)	3	611.648
9. Di(2-ethylhexyl)adipate	2	611.311(c)	3	611.648
10. Di(2-ethylhexyl)phthalate	2	611.311(c)	3	611.648
11. Dibromochloropropane (DBCP)	2	611.311(c)	3	611.648
12. Dinoseb	2	611.311(c)	3	611.648
13. Dioxin (2,3,7,8-TCDD)	2	611.311(c)	3	611.648
14. Diquat	2	611.311(c)	3	611.648

15. Endothall	2	611.311(c)	3	611.648
16. Endrin	2	611.311(c)	3	611.648
17. Ethylene dibromide	2	611.311(c)	3	611.648
18. Glyphosate	2	611.311(c)	3	611.648
19. Heptachlor	2	611.311(c)	3	611.648
20. Heptachlor epoxide	2	611.311(c)	3	611.648
21. Hexachlorobenzene	2	611.311(c)	3	611.648
22. Hexachlorocyclopentadiene	2	611.311(c)	3	611.648
23. Lindane	2	611.311(c)	3	611.648
24. Methoxychlor	2	611.311(c)	3	611.648
25. Oxamyl (Vydate)	2	611.311(c)	3	611.648
26. Pentachlorophenol	2	611.311(c)	3	611.648
27. Picloram	2	611.311(c)	3	611.648
28. Polychlorinated biphenyls (PCBs)	2	611.311(c)	3	611.648
29. Simazine	2	611.311(c)	3	611.648
30. Toxaphene	2	611.311(c)	3	611.648
31. Hazard Index PFAS	<u>20*2</u>	611.311(c)	3	611.7905(c)
32. HFPO-DA	<u>*2</u>	611.311(c)	3	611.7905(c)
33. PFHxS	<u>*2</u>	611.311(c)	3	611.7905(c)
34. PFNA	<u>*2</u>	611.311(c)	3	611.7905(c)
35. PFOA	<u>*2</u>	611.311(c)	3	611.7905(c)
36. PFOS	<u>*2</u>	611.311(c)	3	611.7905(c)

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E. Volatile Organic Chemicals (VOCs)

1. Benzene	2	611.311(a)	3	611.646
2. Carbon tetrachloride	2	611.311(a)	3	611.646
3. Chlorobenzene (monochlorobenzene)	2	611.311(a)	3	611.646
4. o-Dichlorobenzene	2	611.311(a)	3	611.646
5. p-Dichlorobenzene	2	611.311(a)	3	611.646
6. 1,2-Dichloroethane	2	611.311(a)	3	611.646
7. 1,1-Dichloroethylene	2	611.311(a)	3	611.646
8. cis-1,2-Dichloroethylene	2	611.311(a)	3	611.646
9. trans-1,2-Dichloroethylene	2	611.311(a)	3	611.646
10. Dichloromethane	2	611.311(a)	3	611.646
11. 1,2-Dichloropropane	2	611.311(a)	3	611.646
12. Ethylbenzene	2	611.311(a)	3	611.646
13. Styrene	2	611.311(a)	3	611.646
14. Tetrachloroethylene	2	611.311(a)	3	611.646
15. Toluene	2	611.311(a)	3	611.646

16. 1,2,4-Trichlorobenzene	2	611.311(a)	3	611.646
17. 1,1,1-Trichloroethane	2	611.311(a)	3	611.646
18. 1,1,2-Trichloroethane	2	611.311(a)	3	611.646
19. Trichloroethylene	2	611.311(a)	3	611.646
20. Vinyl chloride	2	611.311(a)	3	611.646
21. Xylenes (total)	2	611.311(a)	3	611.646

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35080

F. Radioactive Contaminants

1. Beta/photon emitters	2	611.330(d)	3	611.720(a), 611.732
2. Alpha emitters	2	611.330(c)	3	611.720(a), 611.731
3. Combined radium (226 and 228)	2	611.330(b)	3	611.720(a), 611.731
4. Uranium	2	611.330(e)	3	611.720(a), 611.731

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G. Disinfection Byproducts (DBPs), Byproduct Precursors, Disinfectant Residuals. If disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). USEPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAAs).¹³

1. Total trihalomethanes (TTHMs)	2	¹¹ 611.312(b)	3	Subparts W and Y
2. Haloacetic Acids (HAA5)	2	611.312(b)	3	Subpart Y
3. Bromate	2	611.312(a)	3	611.382(a)-(b)
4. Chlorite	2	611.312(a)	3	611.382(a)-(b)
5. Chlorine (MRDL)	2	611.313(a)	3	611.382(a), (c)
6. Chloramine (MRDL)	2	611.313(a)	3	611.382(a), (c)
7. Chlorine dioxide (MRDL), if any two consecutive daily samples at entrance to distribution system only are above MRDL	2	611.313(a), 611.383(c)(3)	2 ¹² , 3	611.382(a), (c), 611.383(c)(2)
8. Chlorine dioxide (MRDL), if samples in distribution system the next day are also above MRDL	¹³ 1	611.313(a), 611.383(c)(3)	1	611.382(a), (c), 611.383(c)(2)
9. Control of DBP precursors – TOC (TT)	2	611.385(a)-(b)	3	611.382(a), (d)

10. Benchmarking and disinfection profiling	N/A	N/A	3	611.742, 611.953, 611.954
11. Development of monitoring plan	N/A	N/A	3	611.382(f)

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35088

H. Other Treatment Techniques

1. Acrylamide (TT)	2	611.296	N/A	N/A
2. Epichlorohydrin (TT)	2	611.296	N/A	N/A

35089
35090

II. Unregulated Contaminant Monitoring: ¹⁴

A. Unregulated contaminants	N/A	N/A	3	as required by USEPA under 40 CFR 141.40
B. Nickel	N/A	N/A	3	611.603, 611.611

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III. Public Notification for Relief Equivalent to a SDWA section 1415 Variance or a section 1416 Exemption.

A. Operation under relief equivalent to a SDWA section 1415 variance or a section 1416 exemption	3	¹⁵ 1415, 1416	N/A	N/A
B. Violation of conditions of relief equivalent to a SDWA section 1415 variance or a section 1416 exemption	2	1415, 1416, ¹⁶ 611.111, 611.112	N/A	N/A

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35095

IV. Other Situations Requiring Public Notification.

A. Fluoride secondary maximum contaminant level (SMCL) exceedance	3	611.858	N/A	N/A
B. Exceedance of nitrate MCL for a non-CWS supplier, as allowed by the Agency	1	611.300(d)	N/A	N/A
C. Availability of unregulated contaminant monitoring data	3	as required by USEPA under 40 CFR 141.40	N/A	N/A
D. Waterborne disease outbreak	1	611.101, 611.233(b)(2)	N/A	N/A

E. Other waterborne emergency ¹⁷	1	N/A	N/A	N/A
F. Source water sample positive for Groundwater Rule fecal indicators: E. coli, enterococci, or coliphage	1	611.802(g)	N/A	N/A
G. Other situations as determined by the Agency in a SEP under Section 602.600	¹⁸ 1, 2, 3	N/A	N/A	N/A

35096

35097 Appendix G – Endnotes

35098

35099 [*Beginning April 26, 2029.](#)

35100

35101 1. Violations and other situations not listed in this table (e.g., failure to prepare Consumer
 35102 Confidence Reports) do not require notice, unless ~~the Agency issues a SEP requiring~~
 35103 otherwise determined by the Agency. The Agency may ~~require issue a SEP further~~
 35104 ~~requiring~~ a more stringent public notice tier (e.g., Tier 1 instead of Tier 2 or Tier 2
 35105 instead of Tier 3) for specific violations and situations listed in this Appendix, as
 35106 authorized under Sections 611.902(a) and 611.903(a).

35107

35108 2. Definition of the abbreviations used: "MCL" means maximum contaminant level,
 35109 "MRDL" means maximum residual disinfectant level, and "TT" means treatment
 35110 technique.

35111

35112 3. The term "violations of National Primary Drinking Water Regulations (NPDWR)" is
 35113 used here to include violations of MCL, MRDL, treatment technique, monitoring, and
 35114 testing procedure requirements.

35115

35116 4. Failure to test for fecal coliform or E. coli is a Tier 1 violation if testing is not done after
 35117 any repeat sample tests positive for coliform. All other total coliform monitoring and
 35118 testing procedure violations are Tier 3 violations.

35119

35120 5. In the corresponding USEPA rule, this note relates to an entry for the obsolete MCL for
 35121 turbidity that does not apply to any supplier in Illinois. This statement maintains
 35122 structural consistency with the corresponding USEPA rule.

35123

35124 6. A supplier with a treatment technique violation involving a single exceedance of a
 35125 maximum turbidity limit under the Surface Water Treatment Rule (SWTR), the Interim
 35126 Enhanced Surface Water Treatment Rule (IESWTR), or the Long Term 1 Enhanced
 35127 Surface Water Treatment Rule are required to consult with the Agency within 24 hours

- 35128 after learning of the violation. Based on this consultation, the Agency may subsequently
 35129 decide to issue a SEP elevating the violation to a Tier 1 violation. If a supplier is unable
 35130 to make contact with the Agency in the 24-hour period, the violation is automatically
 35131 elevated to a Tier 1 violation.
 35132
- 35133 7. The Surface Water Treatment Rule (SWTR) remains in effect for a supplier serving at
 35134 least 10,000 persons; the Interim Enhanced Surface Water Treatment Rule adds
 35135 additional requirements and does not in many cases supersede the SWTR.
 35136
 - 35137 8. Failure to take a confirmation sample within 24 hours for nitrate or nitrite after an initial
 35138 sample exceeds the MCL is a Tier 1 violation. Other monitoring violations for nitrate are
 35139 Tier 3.
 35140
 - 35141 9. Failure to take a confirmation sample within 24 hours for nitrate or nitrite after an initial
 35142 sample exceeds the MCL is a Tier 1 violation. Other monitoring violations for nitrate are
 35143 Tier 3.
 35144
 - 35145 10. A Subpart B community or non-transient non-community system supplier must comply
 35146 with new DBP MCLs, disinfectant MRDLs, and related monitoring requirements. A
 35147 Subpart B transient non-community system supplier serving 10,000 or more persons
 35148 using chlorine dioxide as a disinfectant or oxidant or a Subpart B transient non-
 35149 community system supplier serving fewer than 10,000 persons, that uses only
 35150 groundwater not under the direct influence of surface water, and that uses chlorine
 35151 dioxide as a disinfectant or oxidant must comply with the chlorine dioxide MRDL.
 35152
 - 35153 11. Sections 611.312(b)(1) and 611.382(a) and (b) apply until Subpart Y takes effect under
 35154 the schedule ~~set forth~~ in Section 611.970(c).
 35155
 - 35156 12. Failure to monitor for chlorine dioxide at the entrance to the distribution system the day
 35157 after exceeding the MRDL at the entrance to the distribution system is a Tier 2 violation.
 35158
 - 35159 13. If any daily sample taken at the entrance to the distribution system exceeds the MRDL
 35160 for chlorine dioxide and one or more samples taken in the distribution system the next
 35161 day exceed the MRDL, Tier 1 notification is required. A failure to take the required
 35162 samples in the distribution system after the MRDL is exceeded at the entry point also
 35163 triggers Tier 1 notification.
 35164
 - 35165 14. Some water suppliers must monitor for certain unregulated contaminants as required by
 35166 USEPA under 40 CFR 141.40.
 35167
 - 35168 15. This citation refers to sections 1415 and 1416 of the federal Safe Drinking Water Act.
 35169 sections 1415 and 1416 require that "a schedule prescribed...for a public water system
 35170 granted relief equivalent to a SDWA section 1415 variance or a section 1416 exemption

35171 must require compliance by the system...."
35172

35173 16. In addition to sections 1415 and 1416 of the federal Safe Drinking Water Act, 40 CFR
35174 142.307 specifies the items and schedule milestones that must be included in relief
35175 equivalent to a SDWA section 1415 small system variance. In granting any form of relief
35176 from an NPDWR, the Board will consider all applicable federal requirements for and
35177 limitations on the State's ability to grant relief consistent with federal law.
35178

35179 17. Other waterborne emergencies require a Tier 1 public notice under Section 611.902(a) for
35180 situations that do not meet the definition of a waterborne disease outbreak given in
35181 Section 611.101, but that still have the potential to have serious adverse effects on health
35182 as a result of short-term exposure. These could include outbreaks not related to treatment
35183 deficiencies, as well as situations that have the potential to cause outbreaks, such as
35184 failures or significant interruption in water treatment processes, natural disasters that
35185 disrupt the water supply or distribution system, chemical spills, or unexpected loading of
35186 possible pathogens into the source water.
35187

35188 18. The Agency may place any other situation in any tier it deems appropriate in writing,
35189 based on the prospective threat which it determines that the situation poses to public
35190 health, and subject to Board review under Section 40 of the Act.
35191

35192 19. A failure to collect three or more samples for Cryptosporidium analysis is a Tier 2
35193 violation requiring special notice, as specified in Section 611.911. All other monitoring
35194 and testing procedure violations are Tier 3.
35195

35196 20. [Suppliers that violate the Hazard Index MCL and one or more individual MCLs based on](#)
35197 [the same contaminants may issue one notification to satisfy the public notification](#)
35198 [requirements for multiple violations pursuant to Section 611.903.](#)
35199

35200 BOARD NOTE: This Appendix G derives from appendix A to subpart Q of 40 CFR 141.
35201

35202 (Source: Amended at 50 Ill. Reg. _____, effective _____)
35203

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35205

Section 611.APPENDIX H Standard Health Effects Language for Public Notification

Contaminant	MCLG ¹ mg/L	MCL ² mg/L	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR):			
A. Microbiological Contaminants			
1a. Corresponding row 1a in appendix B to subpart Q to 40 CFR 141 no longer applies by its own terms. This statement maintains structural consistency with the federal regulations.			
1b. Corresponding row 1b in appendix B to subpart Q to 40 CFR 141 no longer applies by its own terms. This statement maintains structural consistency with the federal regulations.			
1c. Fecal indicators (GWR): i. E. coli ii. enterococci iii. coliphage	Zero None None	TT TT TT	Fecal indicators are microbes whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term health effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.
1d. Groundwater Rule TT Violations	None	TT	Inadequately treated or inadequately protected water may contain disease-causing organisms. These organisms can cause symptoms such as diarrhea, nausea, cramps, and associated headaches.

<p>1e. Subpart Y Coliform Assessment and/or Corrective Action Violations</p>	<p>N/A</p>	<p>TT</p>	<p>Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessments to identify problems and to correct any problems that are found. (The system must use the following applicable sentences:) We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment(s).</p>
---	------------	-----------	---

<p>1f. Subpart Y E. coli Assessment and Corrective Action Violations</p>	<p>N/A</p>	<p>TT</p>	<p>E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. We violated the standard for E. coli, indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct a detailed assessment to identify problems and to correct any problems that are found. (The system must use the following applicable sentences:) We failed to conduct the required assessment. We failed to correct all identified sanitary defects that were found during the assessment that we conducted.</p>
<p>1g. E. coli</p>	<p>Zero</p>	<p>See footnote 22</p>	<p>E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems.</p>

1h. Subpart Y Seasonal System TT Violations	N/A	TT	When this violation includes the failure to monitor for total coliforms or E. coli prior to serving water to the public, the mandatory language found at Section 611.905(d)(2) must be used. When this violation includes failure to complete other actions, the appropriate elements found in Section 611.905(a) to describe the violation must be used.
2a. This entry relates to the obsolete MCL for turbidity in 40 CFR 141.13 that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule.			
2b. Turbidity (SWTR TT)	None	TT ⁷	Turbidity has no health effects. However, ⁶ turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
2c. Turbidity (IESWTR TT and LT1ESWTR TT)	None	TT	Turbidity has no health effects. However, ⁸ turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.
B. Surface Water Treatment Rule (SWTR), Interim Enhanced Surface Water Treatment Rule (IESWTR), Long Term 1 Enhanced Surface Water Treatment Rule (LT1ESWTR), and Filter Backwash Recycling Rule (FBRR) violations:			
3. Giardia lamblia (SWTR/IESWTR/LT1ESWTR)	Zero	TT ¹⁰	Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

<p>4. Viruses (SWTR/IESWTR/ LT1ESWTR)</p>			<p>Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.</p>
<p>5. Heterotrophic plate count (HPC) bacteria⁹ (SWTR/IESWTR/ LT1ESWTR)</p>			<p>Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.</p>
<p>6. Legionella (SWTR/IESWTR/ LT1ESWTR)</p>			<p>Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.</p>
<p>7. Cryptosporidium (IESWTR/FBRR/ LT1ESWTR)</p>			<p>Inadequately treated water may contain disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.</p>
<p>C. Inorganic Chemicals (IOCs)</p>			
<p>8. Antimony</p>	<p>0.006</p>	<p>0.006</p>	<p>Some people who drink water containing antimony well in excess of the MCL over many years could experience increases in blood cholesterol and decreases in blood sugar.</p>
<p>9. Arsenic</p>	<p>0</p>	<p>0.010</p>	<p>Some people who drink water containing arsenic in excess of the MCL over many years could experience skin damage or problems with their circulatory system, and may have an increased risk of getting cancer.</p>

10. Asbestos (10 µm)	7 MFL ¹¹	7 MFL	Some people who drink water containing asbestos in excess of the MCL over many years may have an increased risk of developing benign intestinal polyps.
11. Barium	2	2	Some people who drink water containing barium in excess of the MCL over many years could experience an increase in their blood pressure.
12. Beryllium	0.004	0.004	Some people who drink water containing beryllium well in excess of the MCL over many years could develop intestinal lesions.
13. Cadmium	0.005	0.005	Some people who drink water containing cadmium in excess of the MCL over many years could experience kidney damage.
14. Chromium (total)	0.1	0.1	Some people who use water containing chromium well in excess of the MCL over many years could experience allergic dermatitis.
15. Cyanide	0.2	0.2	Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.
16. Fluoride	4.0	4.0	Some people who drink water containing fluoride in excess of the MCL over many years could get bone disease, including pain and tenderness of the bones. Fluoride in drinking water at half the MCL or more may cause mottling of children's teeth, usually in children less than nine years old. Mottling, also known as dental fluorosis, may include brown staining or pitting of the teeth, and occurs only in developing teeth before they erupt from the gums.

17. Mercury (inorganic)	0.002	0.002	Some people who drink water containing inorganic mercury well in excess of the MCL over many years could experience kidney damage.
18. Nitrate	10	10	Infants below the age of six months who drink water containing nitrate in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
19. Nitrite	1	1	Infants below the age of six months who drink water containing nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
20. Total Nitrate and Nitrite	10	10	Infants below the age of six months who drink water containing nitrate and nitrite in excess of the MCL could become seriously ill and, if untreated, may die. Symptoms include shortness of breath and blue baby syndrome.
21. Selenium	0.05	0.05	Selenium is an essential nutrient. However, some people who drink water containing selenium in excess of the MCL over many years could experience hair or fingernail losses, numbness in fingers or toes, or problems with their circulation.
22. Thallium	0.0005	0.002	Some people who drink water containing thallium in excess of the MCL over many years could experience hair loss, changes in their blood, or problems with their kidneys, intestines, or liver.
D. Lead and Copper Rule			

23. Lead	Zero	TT ¹³ TT¹²	<p><u>There is no safe level of lead in drinking water.</u> Exposure to lead in drinking water can cause serious health effects in all age groups, <u>especially pregnant people, infants (both formula-fed and breastfed), and young children.</u> Some of the health effects to infants Infants and children <u>include</u> can have decreases in IQ and attention span. Lead exposure can <u>also result in</u> lead to new <u>or worsened</u> learning and behavior problems, or exacerbate existing learning and behavior problems. The children of <u>persons</u> women who are exposed to lead before or during pregnancy <u>may be at</u> can have increased risk of these <u>harmful</u> adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems. <u>Contact your health care provider for more information about your risks.</u></p>
24. Copper	1.3	TT ¹³	<p>Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with Wilson's Disease should consult their personal doctor.</p>

E. Synthetic Organic Chemicals (SOCs)

25. 2,4-D	0.07	0.07	Some people who drink water containing the weed killer 2,4-D well in excess of the MCL over many years could experience problems with their kidneys, liver, or adrenal glands.
26. 2,4,5-TP (silvex)	0.05	0.05	Some people who drink water containing silvex in excess of the MCL over many years could experience liver problems.
27. Alachlor	Zero	0.002	Some people who drink water containing alachlor in excess of the MCL over many years could have problems with their eyes, liver, kidneys, or spleen, or experience anemia, and may have an increased risk of getting cancer.
28. Atrazine	0.003	0.003	Some people who drink water containing atrazine well in excess of the MCL over many years could experience problems with their cardiovascular system or reproductive difficulties.
29. Benzo(a)pyrene (PAHs).	Zero	0.0002	Some people who drink water containing benzo(a)pyrene in excess of the MCL over many years may experience reproductive difficulties and may have an increased risk of getting cancer.
30. Carbofuran	0.04	0.04	Some people who drink water containing carbofuran in excess of the MCL over many years could experience problems with their blood, or nervous or reproductive systems.
31. Chlordane	Zero	0.002	Some people who drink water containing chlordane in excess of the MCL over many years could experience problems with their liver or nervous system, and may have an increased risk of getting cancer.

32. Dalapon	0.2	0.2	Some people who drink water containing dalapon well in excess of the MCL over many years could experience minor kidney changes.
33. Di(2-ethylhexyl)adipate	0.4	0.4	Some people who drink water containing di(2-ethylhexyl)adipate well in excess of the MCL over many years could experience toxic effects, such as weight loss, liver enlargement, or possible reproductive difficulties.
34. Di(2-ethylhexyl)-phthalate	Zero	0.006	Some people who drink water containing di(2-ethylhexyl)-phthalate well in excess of the MCL over many years may have problems with their liver or experience reproductive difficulties, and they may have an increased risk of getting cancer.
35. Dibromochloropropane (DBCP)	Zero	0.0002	Some people who drink water containing DBCP in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
36. Dinoseb	0.007	0.007	Some people who drink water containing dinoseb well in excess of the MCL over many years could experience reproductive difficulties.
37. Dioxin (2,3,7,8-TCDD)	Zero	3×10^{-8}	Some people who drink water containing dioxin in excess of the MCL over many years could experience reproductive difficulties and may have an increased risk of getting cancer.
38. Diquat	0.02	0.02	Some people who drink water containing diquat in excess of the MCL over many years could get cataracts.

39. Endothall	0.1	0.1	Some people who drink water containing endothall in excess of the MCL over many years could experience problems with their stomach or intestines.
40. Endrin	0.002	0.002	Some people who drink water containing endrin in excess of the MCL over many years could experience liver problems.
41. Ethylene dibromide	Zero	0.00005	Some people who drink water containing ethylene dibromide in excess of the MCL over many years could experience problems with their liver, stomach, reproductive system, or kidneys, and may have an increased risk of getting cancer.
42. Glyphosate	0.7	0.7	Some people who drink water containing glyphosate in excess of the MCL over many years could experience problems with their kidneys or reproductive difficulties.
43. Heptachlor	Zero	0.0004	Some people who drink water containing heptachlor in excess of the MCL over many years could experience liver damage and may have an increased risk of getting cancer.
44. Heptachlor epoxide	Zero	0.0002	Some people who drink water containing heptachlor epoxide in excess of the MCL over many years could experience liver damage, and may have an increased risk of getting cancer.
45. Hexachlorobenzene	Zero	0.001	Some people who drink water containing hexachlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys, or adverse reproductive effects, and may have an increased risk of getting cancer.

46. Hexachlorocyclopentadiene	0.05	0.05	Some people who drink water containing hexachlorocyclopentadiene well in excess of the MCL over many years could experience problems with their kidneys or stomach.
47. Lindane	0.0002	0.0002	Some people who drink water containing lindane in excess of the MCL over many years could experience problems with their kidneys or liver.
48. Methoxychlor	0.04	0.04	Some people who drink water containing methoxychlor in excess of the MCL over many years could experience reproductive difficulties.
49. Oxamyl (Vydate)	0.2	0.2	Some people who drink water containing oxamyl in excess of the MCL over many years could experience slight nervous system effects.
50. Pentachlorophenol	Zero	0.001	Some people who drink water containing pentachlorophenol in excess of the MCL over many years could experience problems with their liver or kidneys, and may have an increased risk of getting cancer.
51. Picloram	0.5	0.5	Some people who drink water containing picloram in excess of the MCL over many years could experience problems with their liver.
52. Polychlorinated biphenyls (PCBs)	Zero	0.0005	Some people who drink water containing PCBs in excess of the MCL over many years could experience changes in their skin, problems with their thymus gland, immune deficiencies, or reproductive or nervous system difficulties, and may have an increased risk of getting cancer.

53. Simazine	0.004	0.004	Some people who drink water containing simazine in excess of the MCL over many years could experience problems with their blood.
54. Toxaphene	Zero	0.003	Some people who drink water containing toxaphene in excess of the MCL over many years could have problems with their kidneys, liver, or thyroid, and may have an increased risk of getting cancer.
F. Volatile Organic Chemicals (VOCs)			
61 55. Benzene	Zero	0.005	Some people who drink water containing benzene in excess of the MCL over many years could experience anemia or a decrease in blood platelets, and may have an increased risk of getting cancer.
62 56. Carbon tetrachloride	Zero	0.005	Some people who drink water containing carbon tetrachloride in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
63 57. Chlorobenzene (monochlorobenzene)	0.1	0.1	Some people who drink water containing chlorobenzene in excess of the MCL over many years could experience problems with their liver or kidneys.
64 58. o-Dichlorobenzene	0.6	0.6	Some people who drink water containing o-dichlorobenzene well in excess of the MCL over many years could experience problems with their liver, kidneys, or circulatory systems.
65 59. p-Dichlorobenzene	0.075	0.075	Some people who drink water containing p-dichlorobenzene in excess of the MCL over many years could experience anemia, damage to their liver, kidneys, or spleen, or changes in their blood.

66 ⁶⁰ . 1,2-Dichloroethane	Zero	0.005	Some people who drink water containing 1,2-dichloroethane in excess of the MCL over many years may have an increased risk of getting cancer.
67 ⁶⁴ . 1,1-Dichloroethylene	0.007	0.007	Some people who drink water containing 1,1-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
68 ⁶² . cis-1,2-Dichloroethylene	0.07	0.07	Some people who drink water containing cis-1,2-dichloroethylene in excess of the MCL over many years could experience problems with their liver.
69 ⁶³ . trans-1,2-Dichloroethylene	0.1	0.1	Some people who drink water containing trans-1,2-dichloroethylene well in excess of the MCL over many years could experience problems with their liver.
70 ⁶⁴ . Dichloromethane	Zero	0.005	Some people who drink water containing dichloromethane in excess of the MCL over many years could have liver problems and may have an increased risk of getting cancer.
71 ⁶⁵ . 1,2-Dichloropropane	Zero	0.005	Some people who drink water containing 1,2-dichloropropane in excess of the MCL over many years may have an increased risk of getting cancer.
72 ⁶⁶ . Ethylbenzene	0.7	0.7	Some people who drink water containing ethylbenzene well in excess of the MCL over many years could experience problems with their liver or kidneys.
73 ⁶⁷ . Styrene	0.1	0.1	Some people who drink water containing styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

7468 . Tetrachloroethylene	Zero	0.005	Some people who drink water containing tetrachloroethylene in excess of the MCL over many years could have problems with their liver, and may have an increased risk of getting cancer.
7569 . Toluene	1	1	Some people who drink water containing toluene well in excess of the MCL over many years could have problems with their nervous system, kidneys, or liver.
7670 . 1,2,4-Trichlorobenzene	0.07	0.07	Some people who drink water containing 1,2,4-trichlorobenzene well in excess of the MCL over many years could experience changes in their adrenal glands.
7771 . 1,1,1-Trichloroethane	0.2	0.2	Some people who drink water containing 1,1,1-trichloroethane in excess of the MCL over many years could experience problems with their liver, nervous system, or circulatory system.
7872 . 1,1,2-Trichloroethane	0.003	0.005	Some people who drink water containing 1,1,2-trichloroethane well in excess of the MCL over many years could have problems with their liver, kidneys, or immune systems.
7973 . Trichloroethylene	Zero	0.005	Some people who drink water containing trichloroethylene in excess of the MCL over many years could experience problems with their liver and may have an increased risk of getting cancer.
8074 . Vinyl chloride	Zero	0.002	Some people who drink water containing vinyl chloride in excess of the MCL over many years may have an increased risk of getting cancer.

75a ²² 75 . Xylenes (total)	10	10	Some people who drink water containing xylenes in excess of the MCL over many years could experience damage to their nervous system.
G. Radioactive Contaminants			
81 ⁷⁶ . Beta/photon emitters	Zero	4 mrem/yr ¹⁴	Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
82 ⁷⁷ . Alpha emitters	Zero	15 pCi/L ¹⁵	Certain minerals are radioactive and may emit a form of radiation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many years may have an increased risk of getting cancer.
83 ⁷⁸ . Combined radium (226 and 228)	Zero	5 pCi/L	Some people who drink water containing radium 226 or 228 in excess of the MCL over many years may have an increased risk of getting cancer.
84 ⁷⁹ . Uranium	Zero	30 µg/L	Some people who drink water containing uranium in excess of the MCL over many years may have an increased risk of getting cancer and kidney toxicity.
H. Disinfection Byproducts (DBPs), Byproduct Precursors, and Disinfectant Residuals: If disinfection is used in the treatment of drinking water, disinfectants combine with organic and inorganic matter present in water to form chemicals called disinfection byproducts (DBPs). USEPA sets standards for controlling the levels of disinfectants and DBPs in drinking water, including trihalomethanes (THMs) and haloacetic acids (HAA5) ¹⁶			

<p>85<u>80</u>. Total trihalomethanes (TTHMs)</p>	<p>N/A</p>	<p>0.080^{17,18}</p>	<p>Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous system, and may have an increased risk of getting cancer.</p>
<p>86<u>81</u>. Haloacetic Acids (HAA5)</p>	<p>N/A</p>	<p>0.060¹⁹</p>	<p>Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.</p>
<p>87<u>82</u>. Bromate</p>	<p>Zero</p>	<p>0.010</p>	<p>Some people who drink water containing bromate in excess of the MCL over many years may have an increased risk of getting cancer.</p>
<p>88<u>83</u>. Chlorite</p>	<p>0.08</p>	<p>1.0</p>	<p>Some infants and young children who drink water containing chlorite in excess of the MCL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorite in excess of the MCL. Some people may experience anemia.</p>
<p>89<u>84</u>. Chlorine</p>	<p>4 (MRDLG)²⁰</p>	<p>4.0 (MRDL)²¹</p>	<p>Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.</p>

<p><u>90</u>85. Chloramines</p>	<p>4 (MRDLG)</p>	<p>4.0 (MRDL)</p>	<p>Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.</p>
<p><u>91</u>85a. Chlorine dioxide, if any two consecutive daily samples taken at the entrance to the distribution system are above the MRDL</p>	<p>0.8 (MRDLG)</p>	<p>0.8 (MRDL)</p>	<p>Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.</p> <p>Add for public notification only: The chlorine dioxide violations reported today are the result of exceedances at the treatment facility only, not within the distribution system that delivers water to consumers. Continued compliance with chlorine dioxide levels within the distribution system minimizes the potential risk of these violations to consumers.</p>

<p><u>9286a</u>. Chlorine dioxide, if one or more distribution system samples are above the MRDL</p>	<p>0.8 (MRDLG)</p>	<p>0.8 (MRDL)</p>	<p>Some infants and young children who drink water containing chlorine dioxide in excess of the MRDL could experience nervous system effects. Similar effects may occur in fetuses of pregnant women who drink water containing chlorine dioxide in excess of the MRDL. Some people may experience anemia.</p> <p>Add for public notification only: The chlorine dioxide violations reported today include exceedances of the USEPA standard within the distribution system that delivers water to consumers. Violations of the chlorine dioxide standard within the distribution system may harm human health based on short-term exposures. Certain groups, including fetuses, infants, and young children, may be especially susceptible to nervous system effects from excessive chlorine dioxide exposure.</p>
<p><u>9387</u>. Control of DBP precursors (TOC)</p>	<p>None</p>	<p>TT</p>	<p>Total organic carbon (TOC) has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THMs) and haloacetic acids (HAAs). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.</p>
<p>I. Other Treatment Techniques:</p>			

<p>9488. Acrylamide</p>	<p>Zero</p>	<p>TT</p>	<p>Some people who drink water containing high levels of acrylamide over a long period of time could have problems with their nervous system or blood, and may have an increased risk of getting cancer.</p>
<p>9589. Epichlorohydrin</p>	<p>Zero</p>	<p>TT</p>	<p>Some people who drink water containing high levels of epichlorohydrin over a long period of time could experience stomach problems, and may have an increased risk of getting cancer.</p>

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Appendix H – Endnotes

1. "MCLG" means maximum contaminant level goal.
2. "MCL" means maximum contaminant level.
3. This endnote corresponds with endnote 3 to appendix B to subpart Q to 40 CFR 14, which applied only to paragraph 1a in the table, which no longer has operative effect. This statement maintains structural consistency with the corresponding federal rules.
4. In the corresponding USEPA rule, this note relates to an entry for the obsolete MCL for turbidity that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule.
5. In the corresponding USEPA rule, this note relates to an entry for the obsolete MCL for turbidity that does not apply to any supplier in Illinois. This statement maintains structural consistency with the corresponding USEPA rule.
6. There are various regulations that set turbidity standards for different types of systems, including the 1989 SWTR, the 1998 IESWTR, and the 2002 LT1ESWTR. A supplier subject to the SWTR (both filtered and unfiltered) may not exceed 5 NTU. In addition, in filtered systems, 95 percent of samples each month must not exceed 0.5 NTU in systems using conventional or direct filtration and must not exceed 1 NTU in systems using slow sand or diatomaceous earth filtration or other filtration technologies approved by the Agency.
7. "TT" means treatment technique.
8. There are various regulations that set turbidity standards for different types of systems,

35236 including the 1989 SWTR, the 1998 IESWTR, and the 2002 LT1ESWTR. For a supplier
 35237 subject to the IESWTR (a supplier serving at least 10,000 people, using surface water or
 35238 groundwater under the direct influence of surface water), that use conventional filtration
 35239 or direct filtration, the turbidity level of a system's combined filter effluent may not
 35240 exceed 0.3 NTU in at least 95 percent of monthly measurements, and the turbidity level
 35241 of a system's combined filter effluent must not exceed 1 NTU at any time. A supplier
 35242 subject to the IESWTR using technologies other than conventional, direct, slow sand, or
 35243 diatomaceous earth filtration must meet turbidity limits set by the Agency. For a supplier
 35244 subject to the LT1ESWTR (a supplier serving fewer than 10,000 people, using surface
 35245 water or groundwater under the direct influence of surface water) using conventional
 35246 filtration or direct filtration, the turbidity level of the supplier's combined filter effluent
 35247 may not exceed 0.3 NTU in at least 95 percent of monthly measurements, and the
 35248 turbidity level of the supplier's combined filter effluent must not exceed 1 NTU at any
 35249 time. A supplier subject to the LT1ESWTR using technologies other than conventional,
 35250 direct, slow sand, or diatomaceous earth filtration must meet turbidity limits set by the
 35251 Agency.

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- 35253 9. The bacteria detected by heterotrophic plate count (HPC) are not necessarily harmful.
 35254 HPC is simply an alternative method of determining disinfectant residual levels. The
 35255 number of ~~such~~ bacteria is an indicator of whether there is enough disinfectant in the
 35256 distribution system.
- 35257
- 35258 10. SWTR, IESWTR, and LT1ESWTR treatment technique violations that involve turbidity
 35259 exceedances may use the health effects language for turbidity instead.
- 35260
- 35261 11. Millions of fibers per liter.
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- 35263 12. Action Level = 0.015 mg/L.
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- 35265 13. Action Level = 1.3 mg/L.
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- 35267 14. Millirems per year.
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- 35269 15. Picocuries per liter.
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- 35271 16. A surface water system supplier or a groundwater system supplier under the direct
 35272 influence of surface water is regulated under Subpart B. A Subpart B community water
 35273 system supplier or a non-transient non-community system supplier must comply with
 35274 Subpart I DBP MCLs and disinfectant maximum residual disinfectant levels (MRDLs).
 35275 A Subpart B transient non-community system supplier using chlorine dioxide as a
 35276 disinfectant or oxidant must comply with the chlorine dioxide MRDL.
- 35277
- 35278 17. Community and non-transient non-community systems must comply with Subpart Y

35279 TTHM and HAA5 MCLs of 0.080 mg/L and 0.060 mg/L, respectively (with compliance
35280 calculated as a locational running annual average) on the schedule in Section 611.970.

- 35281
- 35282 18. The MCL for total trihalomethanes is the sum of the concentrations of the individual
35283 trihalomethanes.
- 35284
- 35285 19. The MCL for haloacetic acids is the sum of the concentrations of the individual
35286 haloacetic acids.
- 35287
- 35288 20. "MRDLG" means maximum residual disinfectant level goal.
- 35289
- 35290 21. "MRDL" means maximum residual disinfectant level.
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- 35292 22. The supplier is in compliance unless one of the following conditions occurs: (1) the
35293 supplier's system has an E. coli-positive repeat sample following a total coliform-positive
35294 routine sample; (2) the supplier's system has a total coliform-positive repeat sample
35295 following an E. coli-positive routine sample; (3) the supplier fails to take all required
35296 repeat samples following an E. coli-positive routine sample; or (4) the supplier fails to
35297 test for E. coli when any repeat sample tests positive for total coliform.

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35299 23 The above appendix B has two contaminants assigned to 75, the second contaminant with
35300 the number 75, xylene, is numbered 75a to retain structural integrity with 40 CFR 141
35301 Appendix B to subpart Q.

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35303 BOARD NOTE: This Appendix H derives from appendix B to subpart Q to 40 CFR 141.

35304

35305 (Source: Amended at 50 Ill. Reg. _____, effective _____)

35306

35307 **Section 611.APPENDIX I Acronyms Used in Public Notification Regulation**

35308

CCR	Consumer Confidence Report
CWS	Community Water System
DBP	Disinfection Byproduct
GWR	Groundwater Rule
<u>HI</u>	<u>Harzard Index</u>
HPC	Heterotrophic Plate Count
IESWTR	Interim Enhanced Surface Water Treatment Rule
IOC	Inorganic Chemical
LCR	Lead and Copper Rule
MCL	Maximum Contaminant Level
MCLG	Maximum Contaminant Level Goal
MRDL	Maximum Residual Disinfectant Level
MRDLG	Maximum Residual Disinfectant Level Goal
NCWS	Non-Community Water System
NPDWR	National Primary Drinking Water Regulation
NTNCWS	Non-Transient Non-Community Water System
NTU	Nephelometric Turbidity Unit
OGWDW	USEPA, Office of Ground Water and Drinking Water
OW	USEPA, Office of Water
<u>PFAS</u>	<u>Per- and Polyfluoroalkyl Substances</u>
PN	Public Notification
PWS	Public Water System
SDWA	Safe Drinking Water Act
SMCL	Secondary Maximum Contaminant Level
SOC	Synthetic Organic Chemical
SWTR	Surface Water Treatment Rule
TCR	Total Coliform Rule
TT	Treatment Technique
TWS	Transient Non-Community Water System
USEPA	United States Environmental Protection Agency
VOC	Volatile Organic Chemical

35309

35310 BOARD NOTE: Derived from Appendix C to Subpart Q to 40 CFR 141 (2012).

35311

35312 (Source: Amended at 50 Ill. Reg. _____, effective _____)

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35314 **Section 611.TABLE Z Federal Effective Dates**

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35316 The following are the effective dates of the various federal NPDWRs:

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<p>Fluoride (40 CFR 141.62(b)(1)) (corresponding with Section 611.301(b))</p>	<p>October 2, 1987</p>
<p>Phase I VOCs (40 CFR 141.61(a)(1) through (a)(8)) (corresponding with Section 611.311(a)) (benzene, carbon tetrachloride, p-dichlorobenzene, 1,2-dichloroethane, 1,1-dichloroethylene, 1,1,1-trichloroethane, trichloroethylene, and vinyl chloride)</p>	<p>January 9, 1989</p>
<p>Total Coliforms Rule (40 CFR 141.21 and 141.63) (corresponding with Sections 611.521-611.527 and 611.325) (total coliforms, fecal coliforms, and E. coli) Replaced by the Revised Total Coliforms Rule (40 CFR 141, subpart Y)</p>	<p>December 31, 1990</p>
<p>Surface Water Treatment Rule (40 CFR 141, subpart H) (corresponding with Subpart B) (filtration, disinfection, and turbidity)</p>	<p>Effective: December 31, 1990 Compliance: December 31, 1991</p>
<p>Lead and Copper (40 CFR 141, subpart I) (corresponding with Subpart G) (lead and copper monitoring, reporting, and recordkeeping requirements of 40 CFR 141.86 through 141.91)</p>	<p>July 7, 1991</p>
<p>Phase II IOCs (40 CFR 141.62(b)(2) and (b)(4) through (b)(10)) (corresponding with Section 611.301(b)) (asbestos, cadmium, chromium, mercury, nitrate, nitrite, and selenium)</p>	<p>July 30, 1992</p>
<p>Phase II VOCs (40 CFR 141.61(a)(9) through (a)(18)) (corresponding with Section 611.311(a)) (o-dichlorobenzene, cis-1,2-dichloroethylene, trans-1,2-dichloroethylene, 1,2-dichloropropane, ethylbenzene, monochlorobenzene, styrene, tetrachloroethylene, toluene, and xylenes (total))</p>	<p>July 30, 1992</p>

Phase II SOCs (40 CFR 141.61(c)(1) through (c)(18)) (corresponding with Section 611.311(c)) (alachlor, atrazine, carbofuran, chlordane, dibromochloropropane, ethylene dibromide, heptachlor, heptachlor epoxide, lindane, methoxychlor, polychlorinated biphenyls, toxaphene, 2,4-D, and 2,4,5-TP (silvex))	July 30, 1992
Phase V SOC (40 CFR 141.61(c)(3)) (corresponding with Section 611.311(c)) (endrin)	August 17, 1992
Lead and Copper (40 CFR141, subpart I) (corresponding with Subpart G of this Part) (lead and copper corrosion control, water treatment, public education, and lead service line replacement requirements of 40 CFR 141.81 through 141.85)	December 7, 1992
Phase IIB IOC (40 CFR 141.62(b)(3)) (corresponding with Section 611.301(b)) (barium)	January 1, 1993
Phase IIB SOCs (40 CFR 141.61(a)(9) through (a)(18)) (corresponding with Section 611.311(c)) (aldicarb, aldicarb sulfone, aldicarb sulfoxide, and pentachlorophenol. See the Board note appended to Section 611.311(c) for information relating to implementation of requirements relating to aldicarb, aldicarb sulfone, and aldicarb sulfoxide.)	January 1, 1993
Phase V IOCs (40 CFR 141.62(b)(11) through (b)(15)) (corresponding with Section 611.301(b)) (antimony, beryllium, cyanide, nickel, and thallium)	January 17, 1994
Phase V VOCs (40 CFR 141.61(b)(19) through (b)(21)) (corresponding with Section 611.311(a)) (dichloromethane, 1,2,4-trichlorobenzene, and 1,1,2- trichloroethane)	January 17, 1994
Phase V SOCs (40 CFR 141.61(c)(19) through (c)(25)) (corresponding with Section 611.311(c)) (benzo(a)pyrene, dalapon, di(2-ethylhexyl)adipate, di(2- ethylhexyl)phthalate dinoseb, diquat, endothall, glyphosate, hexachlorobenzene, hexachlorocyclopentadiene, oxamyl, picloram, simazine, and 2,3,7,8-TCDD)	January 17, 1994

<p>Consumer Confidence Report Rule (40 CFR 141, subpart Q) (corresponding with Subpart O) (notification to public of drinking water quality)</p>	<p>September 18, 1998</p>
<p>Interim Enhanced Surface Water Treatment Rule (40 CFR 141, subpart P) (corresponding with Subpart R) (applicable to suppliers providing water to fewer than 10,000 persons) (Giardia lamblia, viruses, heterotrophic plate count bacteria, Legionella, Cryptosporidium, and turbidity)</p>	<p>February 16, 1999</p>
<p>Public Notification Rule (40 CFR 141, subpart Q) (corresponding with Subpart V) (notification to public of NPDWR violations, variances or exemptions, or other situations that could bear on public health)</p>	<p>June 5, 2000</p>
<p>Filter Backwash Rule (40 CFR 141.76) (corresponding with Section 611.276) (reuse of spent filter backwash water, thickener supernatant, or liquids from dewatering processes)</p>	<p>August 7, 2001</p>
<p>Disinfection/Disinfectant Byproducts Rule (40 CFR 141.64, 141.65 and 141, subpart L) Smaller Systems (serving 10,000 or fewer persons) Larger Systems (serving more than 10,000 persons) (corresponding with Sections 611.312 and 611.313) (total trihalomethanes, haloacetic acids (five), bromate, chlorite, chlorine, chloramines, and chlorine dioxide)</p>	<p>December 16, 2001 December 16, 2003</p>
<p>Long Term 1 Enhanced Surface Water Treatment Rule (40 CFR 141, subpart T) (corresponding with subpart X) (applicable to suppliers providing water to 10,000 or more persons) (Giardia lamblia, viruses, heterotrophic plate count bacteria, Legionella, Cryptosporidium, and turbidity)</p>	<p>February 13, 2002</p>
<p>Radionuclides (40 CFR 141.66) (corresponding with Section 611.330) (combined radium (Ra-226 + Ra-228), gross alpha particle activity, beta particle and photon activity, and uranium)</p>	<p>December 8, 2003</p>
<p>Arsenic (40 CFR 141.62(b)(16))</p>	<p>January 23, 2006</p>

(corresponding with Section 611.301(b))
(arsenic)

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Stage 2 Disinfection/Disinfectant Byproducts Rule (40 CFR 141, subparts U and V)

Systems that serve fewer than 10,000 persons)

Submit plan	April 1, 2008
Complete monitoring or study	March 31, 2010
Submit IDSE report	July 1, 2010
Compliance with monitoring requirements	
If no Cryptosporidium monitoring is required	October 1, 2013
If Cryptosporidium monitoring is required	October 1, 2014

Systems that serve 10,000 to 49,999 persons)

Submit plan	October 1, 2007
Complete monitoring or study	September 30, 2009
Submit IDSE report	January 1, 2010
Compliance with monitoring requirements	October 1, 2013

Systems that serve 50,000 to 99,999 persons)

Submit plan	April 1, 2007
Complete monitoring or study	March 31, 2009
Submit IDSE report	July 1, 2009
Compliance with monitoring requirements	October 1, 2012

Systems that serve 100,000 or more persons)

Submit plan	October 1, 2006
Complete monitoring or study	September 30, 2008
Submit IDSE report	January 1, 2009
Compliance with monitoring requirements	April 1, 2012

(corresponding with Subparts W and Y)
(total trihalomethanes and haloacetic acids (five))

Long Term 2 Enhanced Surface Water Treatment Rule (40 CFR 141, subpart W)

Systems that serve fewer than 10,000 persons

And that monitor for E. coli	
Begin first round of monitoring	October 1, 2008
Begin treatment for Cryptosporidium	October 1, 2014
Begin second round of monitoring	October 1, 2017
And that monitor for cryptosporidium	
Begin first round of monitoring	April 1, 2010
Begin treatment for Cryptosporidium	October 1, 2014
Begin second round of monitoring	April 1, 2019

Systems that serve 10,000 to 49,999 persons

Begin first round of monitoring	April 1, 2008
Begin treatment for Cryptosporidium	October 1, 2013
Begin second round of monitoring	October 1, 2016

Systems that serve 50,000 to 99,999 persons	
Begin first round of monitoring	April 1, 2007
Begin treatment for Cryptosporidium	October 1, 2012
Begin second round of monitoring	October 1, 2015
Systems that serve 100,000 or more persons	
Begin first round of monitoring	October 1, 2006
Begin treatment for Cryptosporidium	April 1, 2012
Begin second round of monitoring	April 1, 2015
(corresponding with Subpart Z)	
(E. coli, Cryptosporidium, Giardia lamblia, viruses, and turbidity)	
Groundwater Rule (40 CFR 141, subpart S)	December 1, 2009
(corresponding with Subpart S)	
(E. coli, enterococci, and coliphage)	
Revised Total Coliforms Rule (40 CFR 141, Subpart Y)	Effective: April 15, 2013
(corresponding with subpart AA)	Compliance: April 1, 2016
(total coliforms (indicator), E. coli)	
Lead-Free Fixtures Rule (40 CFR 143, subpart B)	Effective: October 1, 2020
(corresponding with Subpart AG Section 611.126)	Compliance: September 1,
(lead in plumbing fixtures)	2023
Lead and Copper Rule Revisions (40 CFR 141, subpart I)	Effective: December 16, 2021
(corresponding with Subpart AHG)	Compliance: October 16, 2024
(lead and copper (indicator))	
Lead and Copper Rule Improvements (40 CFR 141, Subpart I)	Effective: December 30, 2024
(corresponding with Subpart G)	Compliance: November 1,
(lead and copper (indicator))	2027
Per- and Polyfluoroalkyl Rule (40 CFR 141, Subpart Z)	Effective: June 25, 2024
(corresponding with 40 CFR 141 Subparts O and Q)	Compliance: April 26, 2027
(PFOA and PFOS reporting and notification requirements 40 CFR 141.900)	
(corresponding with Section 611.7900)	
(MCL violation notifications, 40 CFR 141.60 and 40 CFR 141.203)	
(corresponding with section 611.903)	Compliance: April 26, 2029

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(Source: Amended at 50 Ill. Reg. _____, effective _____)