21. The MCL for haloacetic acids is the sum of the concentrations of the individual haloacetic acids.

22. MRDLG—Maximum residual disinfectant level goal.

23. MRDL—Maximum residual disinfectant level.

[65 FR 26043, May 4, 2000; 65 FR 38629, June 21, 2000; 65 FR 40521, 40522, June 30, 2000, as amended at 65 FR 76751, Dec. 7, 2000; 66 FR 7065, Jan. 22, 2001; 66 FR 31104, June 8, 2001; 67 FR 1838, Jan. 14, 2002; 67 FR 70857, Nov. 27, 2002; 69 FR 14507, Mar. 25, 2003; 69 FR 38856, June 29, 2004; 71 FR 483, Jan. 4, 2006; 71 FR 65653, Nov. 8, 2006; 78 FR 10351, Feb. 13, 2013]

APPENDIX C TO SUBPART Q OF PART 141—LIST OF ACRONYMS USED IN PUBLIC NOTIFICATION REGULATION

CCR Consumer Confidence Report
CWS Community Water System
DBP Disinfection Byproduct
EPA Environmental Protection Agency
GWR Ground Water Rule
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 Office of Ground Water and Drinking Water
OW Office of Water
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
VOC Volatile Organic Chemical

[65 FR 26035, May 4, 2000, as amended at 71 FR 65653, Nov. 8, 2006]

Subpart R [Reserved]

Subpart S—Ground Water Rule

SOURCE: 71 FR 65653, Nov. 8, 2006, unless otherwise noted.

§ 141.400 General requirements and applicability.

(a) *Scope of this subpart.* The requirements of this subpart S constitute National Primary Drinking Water Regulations.

(b) *Applicability.* This subpart applies to all public water systems that use ground water except that it does not apply to public water systems that combine all of their ground water with surface water or with ground water under the direct influence of surface water prior to treatment under subpart H. For the purposes of this subpart, "ground water system" is defined as any public water system meeting this applicability statement, including consecutive systems receiving finished ground water.

(c) *General requirements.* Systems subject to this subpart must comply with the following requirements:

(1) Sanitary survey information requirements for all ground water systems as described in §141.401.

(2) Microbial source water monitoring requirements for ground water systems that do not treat all of their ground water to at least 99.99 percent (4-log) treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer as described in §141.402.

(3) Treatment technique requirements, described in §141.403, that apply to ground water systems that have fecally contaminated source waters, as determined by source water monitoring conducted under §141.402, or that have significant deficiencies that are identified by the State or that are identified by EPA under SDWA section 1445. A ground water system with fecally contaminated source water or with significant deficiencies subject to the treatment technique requirements of this subpart must implement one or more of the following corrective action options: correct all significant deficiencies; provide an alternate source of water; eliminate the source of contamination; or provide treatment that

reliably achieves at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer.

(4) Ground water systems that provide at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer are required to conduct compliance monitoring to demonstrate treatment effectiveness, as described in §141.403(b).

(5) If requested by the State, ground water systems must provide the State with any existing information that will enable the State to perform a hydrogeologic sensitivity assessment. For the purposes of this subpart, "hydrogeologic sensitivity assessment" is a determination of whether ground water systems obtain water from hydrogeologically sensitive settings.

(d) *Compliance date.* Ground water systems must comply, unless otherwise noted, with the requirements of this subpart beginning December 1, 2009.

§141.401 Sanitary surveys for ground water systems.

(a) Ground water systems must provide the State, at the State's request, any existing information that will enable the State to conduct a sanitary survey.

(b) For the purposes of this subpart, a "sanitary survey," as conducted by the State, includes but is not limited to, an onsite review of the water source(s) (identifying sources of contamination by using results of source water assessments or other relevant information where available), facilities, equipment, operation, maintenance, and monitoring compliance of a public water system 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 paragraphs (c)(1) through (8) of this section:

(1) Source,

(2) Treatment,

(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 State requirements.

§141.402 Ground water source microbial monitoring and analytical methods.

(a) *Triggered source water monitoring—*

(1) *General requirements.* A ground water system must conduct triggered source water monitoring if the conditions identified in paragraphs (a)(1)(i) and either (a)(1)(ii) or (a)(1)(iii) of this section exist.

(i) The system does not provide at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for each ground water source; and either

(ii) The system is notified that a sample collected under §141.21(a) is total coliform-positive and the sample is not invalidated under §141.21(c) until March 31, 2016, or

(iii) The system is notified that a sample collected under §§141.854 through 141.857 is total coliform-positive and the sample is not invalidated under §141.853(c) beginning April 1, 2016.

(2) *Sampling requirements.* A ground water system must collect, within 24 hours of notification of the total coliform-positive sample, at least one ground water source sample from each ground water source in use at the time the total coliform-positive sample was collected under §141.21(a) until March 31, 2016, or collected under §§141.854 through 141.857 beginning April 1, 2016, except as provided in paragraph (a)(2)(ii) of this section.

(i) The State may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the ground water source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the State must specify how much time the system has to collect the sample.

(ii) If approved by the State, systems with more than one ground water

source may meet the requirements of this paragraph (a)(2) by sampling a representative ground water source or sources. If directed by the State, systems must submit for State approval a triggered source water monitoring plan that identifies one or more ground water sources that are representative of each monitoring site in the system's sample siting plan under §141.21(a) until March 31, 2016, or under §141.853 beginning April 1, 2016, and that the system intends to use for representative sampling under this paragraph.

(iii) Until March 31, 2016, a ground water system serving 1,000 or fewer people may use a repeat sample collected from a ground water source to meet both the requirements of §141.21(b) and to satisfy the monitoring requirements of paragraph (a)(2) of this section for that ground water source only if the State approves the use of *E. coli* as a fecal indicator for source water monitoring under this paragraph (a). If the repeat sample collected from the ground water source is *E. coli*-positive, the system must comply with paragraph (a)(3) of this section.

(iv) Beginning April 1, 2016, a ground water system serving 1,000 or fewer people may use a repeat sample collected from a ground water source to meet both the requirements of subpart Y and to satisfy the monitoring requirements of paragraph (a)(2) of this section for that ground water source only if the State approves the use of *E. coli* as a fecal indicator for source water monitoring under this paragraph (a) and approves the use of a single sample for meeting both the triggered source water monitoring requirements in this paragraph (a) and the repeat monitoring requirements in §141.858. If the repeat sample collected from the ground water source is *E. coli*- positive, the system must comply with paragraph (a)(3) of this section.

(3) *Additional requirements.* If the State does not require corrective action under §141.403(a)(2) for a fecal indicator-positive source water sample collected under paragraph (a)(2) of this section that is not invalidated under paragraph (d) of this section, the system must collect five additional source water samples from the same source within 24 hours of being notified of the fecal indicator-positive sample.

(4) *Consecutive and wholesale systems.* (i) In addition to the other requirements of this paragraph (a), a consecutive ground water system that has a total coliform-positive sample collected under §141.21(a) until March 31, 2016, or under §§141.854 through 141.857 beginning April 1, 2016, must notify the wholesale system(s) within 24 hours of being notified of the total coliform-positive sample.

(ii) In addition to the other requirements of this paragraph (a), a wholesale ground water system must comply with paragraphs (a)(4)(ii)(A) and (a)(4)(ii)(B) of this section.

(A) A wholesale ground water system that receives notice from a consecutive system it serves that a sample collected under §141.21(a) until March 31, 2016, or collected under §§141.854 through 141.857 beginning April 1, 2016, is total coliform-positive must, within 24 hours of being notified, collect a sample from its ground water source(s) under paragraph (a)(2) of this section and analyze it for a fecal indicator under paragraph (c) of this section.

(B) If the sample collected under paragraph (a)(4)(ii)(A) of this section is fecal indicator-positive, the wholesale ground water system must notify all consecutive systems served by that ground water source of the fecal indicator source water positive within 24 hours of being notified of the ground water source sample monitoring result and must meet the requirements of paragraph (a)(3) of this section.

(5) *Exceptions to the triggered source water monitoring requirements.* A ground water system is not required to comply with the source water monitoring requirements of paragraph (a) of this section if either of the following conditions exists:

(i) The State determines, and documents in writing, that the total coliform-positive sample collected under §141.21(a) until March 31, 2016, or under §§141.854 through 141.857 beginning April 1, 2016, is caused by a distribution system deficiency; or

(ii) The total coliform-positive sample collected under §141.21(a) until March 31, 2016, or under §§141.854 through 141.857 beginning April 1, 2016,

is collected at a location that meets State criteria for distribution system conditions that will cause total coliform-positive samples.

(b) *Assessment source water monitoring.* If directed by the State, ground water systems must conduct assessment source water monitoring that meets State-determined requirements for such monitoring. A ground water system conducting assessment source water monitoring may use a triggered source water sample collected under paragraph (a)(2) of this section to meet the requirements of paragraph (b) of this section. State-determined assessment source water monitoring requirements may include:

(1) Collection of a total of 12 ground water source samples that represent each month the system provides ground water to the public,

(2) Collection of samples from each well unless the system obtains written State approval to conduct monitoring at one or more wells within the ground water system that are representative of multiple wells used by that system and that draw water from the same hydrogeologic setting,

(3) Collection of a standard sample volume of at least 100 mL for fecal indicator analysis regardless of the fecal indicator or analytical method used,

(4) Analysis of all ground water source samples using one of the analytical methods listed in the in paragraph (c)(2) of this section for the presence of *E. coli*, enterococci, or coliphage,

(5) Collection of ground water source samples at a location prior to any treatment of the ground water source unless the State approves a sampling location after treatment, and

(6) Collection of ground water source samples at the well itself unless the system's configuration does not allow for sampling at the well itself and the State approves an alternate sampling location that is representative of the water quality of that well.

(c) *Analytical methods.* (1) A ground water system subject to the source water monitoring requirements of paragraph (a) of this section 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 ground water system must analyze all ground water source samples collected under paragraph (a) of this section using one of the analytical methods listed in the following table in paragraph (c)(2) of this section or one of the alternative methods listed in appendix A to subpart C of this part for the presence of *E. coli*, enterococci, or coliphage:

ANALYTICAL METHODS FOR SOURCE WATER MONITORING

Fecal indicator[1]	Methodology	Method citation
E. coli	Colilert[3]	9223 B.[2]
	Colisure[3]	9223 B.[2]
	Membrane Filter Method with MI Agar	EPA Method 1604.[4]
	m-ColiBlue24 Test[5]	
	E*Colite Test[6]	
	EC–MUG[7]	9221 F.[2]
	NA–MUG[7]	9222 G.[2]
Enterococci	Multiple-Tube Technique	9230B.[2]
	Membrane Filter Technique	9230C.[2]
	Membrane Filter Technique	EPA Method 1600.[8]
	Enterolert[9]	
Coliphage	Two-Step Enrichment Presence-Absence Procedure.	EPA Method 1601.[10]
	Single Agar Layer Procedure	EPA Method 1602.[11]

Analyses must be conducted in accordance with the documents listed below. The Director of the Federal Register approves the incorporation by reference of the documents listed in footnotes 2–11 in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the documents may be obtained from the sources listed below. Copies may be inspected at EPA's Drinking Water Docket, EPA West, 1301 Constitution Avenue, NW., EPA West, Room B102, Washington DC 20460 (Telephone: 202–566–2426); or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

[1] The time from sample collection to initiation of analysis may not exceed 30 hours. The ground water system is encouraged but is not required to hold samples below 10 °C during transit.

[2] Methods are described in Standard Methods for the Examination of Water and Wastewater 20th edition (1998) and copies may be obtained from the American Public Health Association, 1015 Fifteenth Street, NW., Washington, DC 20005–2605.

[3] Medium is available through IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092.

[4] EPA Method 1604: Total Coliforms and *Escherichia coli* in Water by Membrane Filtration Using a Simultaneous Detection Technique (MI Medium); September 2002, EPA 821–R–02–024. Method is available at *http://www.epa.gov/nerlcwww/1604sp02.pdf* or from EPA's Water Resource Center (RC–4100T), 1200 Pennsylvania Avenue, NW., Washington, DC 20460.

[5] A description of the m-ColiBlue24 Test, "Total Coliforms and *E. coli* Membrane Filtration Method with m-ColiBlue24® Broth," Method No. 10029 Revision 2, August 17, 1999, is available from Hach Company, 100 Dayton Ave., Ames, IA 50010 or from EPA's Water Resource Center (RC–4100T), 1200 Pennsylvania Avenue, NW., Washington, DC 20460.

[6] A description of the E*Colite Test, "Charm E*Colite Presence/Absence Test for Detection and Identification of Coliform Bacteria and *Escherichia coli* in Drinking Water, January 9, 1998, is available from Charm Sciences, Inc., 659 Andover St., Lawrence, MA 01843–1032 or from EPA's Water Resource Center (RC–4100T), 1200 Pennsylvania Avenue, NW., Washington, DC 20460.

[7] EC–MUG (Method 9221F) or NA–MUG (Method 9222G) can be used for *E. coli* testing step as described in § 141.21(f)(6)(i) or (ii) after use of Standard Methods 9221 B, 9221 D, 9222 B, or 9222 C.

[8] EPA Method 1600: Enterococci in Water by Membrane Filtration Using membrane-Enterococcus Indoxyl–β–D–Glucoside Agar (mEI) EPA 821–R–02–022 (September 2002) is an approved variation of Standard Method 9230C. The method is available at *http://www.epa.gov/nerlcwww/1600sp02.pdf* or from EPA's Water Resource Center (RC–4100T), 1200 Pennsylvania Avenue, NW., Washington, DC 20460. The holding time and temperature for ground water samples are specified in footnote 1 above, rather than as specified in Section 8 of EPA Method 1600.

[9] Medium is available through IDEXX Laboratories, Inc., One IDEXX Drive, Westbrook, Maine 04092. Preparation and use of the medium is set forth in the article "Evaluation of Enterolert for Enumeration of Enterococci in Recreational Waters," by Budnick, G.E., Howard, R.T., and Mayo, D.R., 1996, Applied and Environmental Microbiology, 62:3881–3884.

[10] EPA Method 1601: Male-specific (F+) and Somatic Coliphage in Water by Two-step Enrichment Procedure; April 2001, EPA 821–R–01–030. Method is available at *http://www.epa.gov/nerlcwww/1601ap01.pdf* or from EPA's Water Resource Center (RC–4100T), 1200 Pennsylvania Avenue, NW., Washington, DC 20460.

[11] EPA Method 1602: Male-specific (F+) and Somatic Coliphage in Water by Single Agar Layer (SAL) Procedure; April 2001, EPA 821–R–01–029. Method is available at *http://www.epa.gov/nerlcwww/1602ap01.pdf* or from EPA's Water Resource Center (RC–4100T), 1200 Pennsylvania Avenue, NW., Washington, DC 20460.

(d) *Invalidation of a fecal indicator-positive ground water source sample.* (1) A ground water system may obtain State invalidation of a fecal indicator-positive ground water source sample collected under paragraph (a) of this section only under the conditions specified in paragraphs (d)(1)(i) and (ii) of this section.

(i) The system provides the State with written notice from the laboratory that improper sample analysis occurred; or

(ii) The State determines and documents in writing that there is substantial evidence that a fecal indicator-positive ground water source sample is not related to source water quality.

(2) If the State invalidates a fecal indicator-positive ground water source sample, the ground water system must collect another source water sample under paragraph (a) of this section within 24 hours of being notified by the State of its invalidation decision and have it analyzed for the same fecal indicator using the analytical methods in paragraph (c) of this section. The State may extend the 24-hour time limit on a case-by-case basis if the system cannot collect the source water sample within 24 hours due to circumstances beyond its control. In the case of an extension, the State must specify how much time the system has to collect the sample.

(e) *Sampling location.* (1) Any ground water source sample required under paragraph (a) of this section must be collected at a location prior to any treatment of the ground water source unless the State approves a sampling location after treatment.

(2) If the system's configuration does not allow for sampling at the well itself, the system may collect a sample at a State-approved location to meet the requirements of paragraph (a) of this section if the sample is representative of the water quality of that well.

(f) *New sources.* If directed by the State, a ground water system that places a new ground water source into service after November 30, 2009, must conduct assessment source water monitoring under paragraph (b) of this section. If directed by the State, the system must begin monitoring before the ground water source is used to provide water to the public.

(g) *Public notification.* A ground water system with a ground water source sample collected under paragraph (a) or (b) of this section that is fecal indicator-positive and that is not invalidated under paragraph (d) of this section, including consecutive systems served by the ground water source, must conduct public notification under § 141.202.

(h) *Monitoring violations.* Failure to meet the requirements of paragraphs (a)–(f) of this section is a monitoring violation and requires the ground water system to provide public notification under § 141.204.

[71 FR 65653, Nov. 8, 2006; 71 FR 67427, Nov. 21, 2006, as amended at 74 FR 30958, June 29, 2009; 78 FR 10353, Feb. 13, 2013]

§ 141.403 Treatment technique requirements for ground water systems.

(a) *Ground water systems with significant deficiencies or source water fecal contamination.* (1) The treatment technique requirements of this section must be met by ground water systems when a significant deficiency is identified or when a ground water source sample collected under §141.402(a)(3) is fecal indicator-positive.

(2) If directed by the State, a ground water system with a ground water source sample collected under §141.402(a)(2), §141.402(a)(4), or §141.402(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 H public water system that uses both ground water and surface water or ground water under the direct influence of surface water, the system must comply with provisions of this paragraph except in cases where the State determines that the significant deficiency is in a portion of the distribution system that is served solely by surface water or ground water under the direct influence of surface water.

(4) Unless the State directs the ground water system to implement a specific corrective action, the ground water system must consult with the State regarding the appropriate corrective action within 30 days of receiving written notice from the State of a significant deficiency, written notice from a laboratory that a ground water source sample collected under §141.402(a)(3) was found to be fecal indicator-positive, or direction from the State that a fecal indicator'positive collected under §141.402(a)(2), §141.402(a)(4), or §141.402(b) requires corrective action. For the purposes of this subpart, significant deficiencies include, but are not limited to, defects in design, operation, or maintenance, or a failure or malfunction of the sources, treatment, storage, or distribution system that the State 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 State) of receiving written notification from the State of a significant deficiency, written notice from a laboratory that a ground water source sample collected under §141.402(a)(3) was found to be fecal indicator-positive, or direction from the State that a fecal indicator-positive sample collected under §141.402(a)(2), §141.402(a)(4), or §141.402(b) requires corrective action, the ground water system must either:

(i) Have completed corrective action in accordance with applicable State plan review processes or other State guidance or direction, if any, including State-specified interim measures; or

(ii) Be in compliance with a State-approved corrective action plan and schedule subject to the conditions specified in paragraphs (a)(5)(ii)(A) and (a)(5)(ii)(B) of this section.

(A) Any subsequent modifications to a State-approved corrective action plan and schedule must also be approved by the State.

(B) If the State specifies interim measures for protection of the public health pending State approval of the corrective action plan and schedule or pending completion of the corrective action plan, the system must comply with these interim measures as well as with any schedule specified by the State.

(6) *Corrective action alternatives.* Ground water systems that meet the conditions of paragraph (a)(1) or (a)(2) of this section must implement one or more of the following corrective action alternatives:

(i) Correct all significant deficiencies;

(ii) Provide an alternate source of water;

(iii) Eliminate the source of contamination; or

(iv) Provide treatment that reliably achieves at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source.

(7) *Special notice to the public of significant deficiencies or source water fecal contamination.* (i) In addition to the applicable public notification requirements of §141.202, a community ground water system that receives notice from

the State of a significant deficiency or notification of a fecal indicator-positive ground water source sample that is not invalidated by the State under §141.402(d) must inform the public served by the water system under §141.153(h)(6) of the fecal indicator-positive source sample or of any significant deficiency that has not been corrected. The system must continue to inform the public annually until the significant deficiency is corrected or the fecal contamination in the ground water source is determined by the State to be corrected under paragraph (a)(5) of this section.

(ii) In addition to the applicable public notification requirements of §141.202, a non-community ground water system that receives notice from the State of a significant deficiency must inform the public served by the water system in a manner approved by the State of any significant deficiency that has not been corrected within 12 months of being notified by the State, or earlier if directed by the State. The system must continue to inform the public annually until the significant deficiency is corrected. The information must include:

(A) The nature of the significant deficiency and the date the significant deficiency was identified by the State;

(B) The State-approved plan and schedule for correction of the significant deficiency, including interim measures, progress to date, and any interim measures completed; and

(C) For systems with a large proportion of non-English speaking consumers, as determined by the State, information in the appropriate language(s) regarding the importance of the notice or a telephone number or address where consumers may contact the system to obtain a translated copy of the notice or assistance in the appropriate language.

(iii) If directed by the State, a non-community water system with significant deficiencies that have been corrected must inform its customers of the significant deficiencies, how the deficiencies were corrected, and the dates of correction under paragraph (a)(7)(ii) of this section.

(b) *Compliance monitoring*—(1) *Existing ground water sources.* A ground water system that is not required to meet the source water monitoring requirements of this subpart for any ground water source because it provides at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for any ground water source before December 1, 2009, must notify the State in writing that it provides at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for the specified ground water source and begin compliance monitoring in accordance with paragraph (b)(3) of this section by December 1, 2009. Notification to the State must include engineering, operational, or other information that the State requests to evaluate the submission. If the system subsequently discontinues 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source, the system must conduct ground water source monitoring as required under §141.402.

(2) *New ground water sources.* A ground water system that places a ground water source in service after November 30, 2009, that is not required to meet the source water monitoring requirements of this subpart because the system provides at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source must comply with the requirements of paragraphs (b)(2)(i), (b)(2)(ii) and (b)(2)(iii) of this section.

(i) The system must notify the State in writing that it provides at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source. Notification to the State must include engineering, operational, or other information that the State requests to evaluate the submission.

(ii) The system must conduct compliance monitoring as required under §141.403(b)(3) of this subpart within 30 days of placing the source in service.

(iii) The system must conduct ground water source monitoring under §141.402 if the system subsequently discontinues 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for the ground water source.

(3) *Monitoring requirements.* A ground water system subject to the requirements of paragraphs (a), (b)(1) or (b)(2) of this section must monitor the effectiveness and reliability of treatment for that ground water source before or at the first customer as follows:

(i) *Chemical disinfection*—(A) *Ground water systems serving greater than 3,300 people.* A ground water system that serves greater than 3,300 people must continuously monitor the residual disinfectant concentration using analytical methods specified in §141.74(a)(2) at a location approved by the State and must record the lowest residual disinfectant concentration each day that water from the ground water source is served to the public. The ground water system must maintain the State-determined residual disinfectant concentration every day the ground water system serves water from the ground water source to the public. If there is a failure in the continuous monitoring equipment, the ground water system must conduct grab sampling every four hours until the continuous monitoring equipment is returned to service. The system must resume continuous residual disinfectant monitoring within 14 days.

(B) *Ground water systems serving 3,300 or fewer people.* A ground water system that serves 3,300 or fewer people must monitor the residual disinfectant concentration using analytical methods specified in §141.74(a)(2) at a location approved by the State and record the residual disinfection concentration each day that water from the ground water source is served to the public. The ground water system must maintain the State-determined residual disinfectant concentration every day the ground water system serves water from the ground water source to the public. The ground water system must take a daily grab sample during the hour of peak flow or at another time specified by the State. If any daily grab sample measurement falls below the State-determined residual disinfectant concentration, the ground water system must take follow-up samples every four hours until the residual disinfectant concentration is restored to the State-determined level. Alternatively, a ground water system that serves 3,300 or fewer people may monitor continuously and meet the requirements of paragraph (b)(3)(i)(A) of this section.

(ii) *Membrane filtration.* A ground water system that uses membrane filtration to meet the requirements of this subpart must monitor the membrane filtration process in accordance with all State-specified monitoring requirements and must operate the membrane filtration in accordance with all State-specified compliance requirements. A ground water system that uses membrane filtration is in compliance with the requirement to achieve at least 4-log removal of viruses when:

(A) The membrane has an absolute molecular weight cut-off (MWCO), or an alternate parameter that describes the exclusion characteristics of the membrane, that can reliably achieve at least 4-log removal of viruses;

(B) The membrane process is operated in accordance with State-specified compliance requirements; and

(C) The integrity of the membrane is intact.

(iii) *Alternative treatment.* A ground water system that uses a State-approved alternative treatment to meet the requirements of this subpart by providing at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer must:

(A) Monitor the alternative treatment in accordance with all State-specified monitoring requirements; and

(B) Operate the alternative treatment in accordance with all compliance requirements that the State determines to be necessary to achieve at least 4-log treatment of viruses.

(c) *Discontinuing treatment.* A ground water system may discontinue 4-log

treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source if the State determines and documents in writing that 4-log treatment of viruses is no longer necessary for that ground water source. A system that discontinues 4-log treatment of viruses is subject to the source water monitoring and analytical methods requirements of §141.402 of this subpart.

(d) Failure to meet the monitoring requirements of paragraph (b) of this section is a monitoring violation and requires the ground water system to provide public notification under §141.204.

§141.404 Treatment technique violations for ground water systems.

(a) A ground water system with a significant deficiency is in violation of the treatment technique requirement if, within 120 days (or earlier if directed by the State) of receiving written notice from the State of the significant deficiency, the system:

(1) Does not complete corrective action in accordance with any applicable State plan review processes or other State guidance and direction, including State specified interim actions and measures, or

(2) Is not in compliance with a State-approved corrective action plan and schedule.

(b) Unless the State invalidates a fecal indicator-positive ground water source sample under §141.402(d), a ground water system is in violation of the treatment technique requirement if, within 120 days (or earlier if directed by the State) of meeting the conditions of §141.403(a)(1) or §141.403(a)(2), the system:

(1) Does not complete corrective action in accordance with any applicable State plan review processes or other State guidance and direction, including State-specified interim measures, or

(2) Is not in compliance with a State-approved corrective action plan and schedule.

(c) A ground water system subject to the requirements of §141.403(b)(3) that fails to maintain at least 4-log treatment of viruses (using inactivation, removal, or a State-approved combination of 4-log virus inactivation and removal) before or at the first customer for a ground water source is in violation of the treatment technique requirement if the failure is not corrected within four hours of determining the system is not maintaining at least 4-log treatment of viruses before or at the first customer.

(d) Ground water system must give public notification under §141.203 for the treatment technique violations specified in paragraphs (a), (b) and (c) of this section.

§141.405 Reporting and recordkeeping for ground water systems.

(a) *Reporting.* In addition to the requirements of §141.31, a ground water system regulated under this subpart must provide the following information to the State:

(1) A ground water system conducting compliance monitoring under §141.403(b) must notify the State any time the system fails to meet any State-specified requirements including, but not limited to, minimum residual disinfectant concentration, membrane operating criteria or membrane integrity, and alternative treatment operating criteria, if operation in accordance with the criteria or requirements is not restored within four hours. The ground water system must notify the State as soon as possible, but in no case later than the end of the next business day.

(2) After completing any corrective action under §141.403(a), a ground water system must notify the State within 30 days of completion of the corrective action.

(3) If a ground water system subject to the requirements of §141.402(a) does not conduct source water monitoring under §141.402(a)(5)(ii), the system must provide documentation to the State within 30 days of the total coliform positive sample that it met the State criteria.

(b) *Recordkeeping.* In addition to the requirements of §141.33, a ground water system regulated under this subpart must maintain the following information in its records:

(1) Documentation of corrective actions. Documentation shall be kept for a period of not less than ten years.

(2) Documentation of notice to the public as required under §141.403(a)(7). Documentation shall be kept for a period of not less than three years.

(3) Records of decisions under §141.402(a)(5)(ii) and records of invalidation of fecal indicator-positive ground water source samples under §141.402(d). Documentation shall be kept for a period of not less than five years.

(4) For consecutive systems, documentation of notification to the wholesale system(s) of total coliform-positive samples that are not invalidated under §141.21(c) until March 31, 2016, or under §141.853 beginning April 1, 2016. Documentation shall be kept for a period of not less than five years.

(5) For systems, including wholesale systems, that are required to perform compliance monitoring under §141.403(b):

(i) Records of the State-specified minimum disinfectant residual. Documentation shall be kept for a period of not less than ten years.

(ii) Records of the lowest daily residual disinfectant concentration and records of the date and duration of any failure to maintain the State-prescribed minimum residual disinfectant concentration for a period of more than four hours. Documentation shall be kept for a period of not less than five years.

(iii) Records of State-specified compliance requirements for membrane filtration and of parameters specified by the State for State-approved alternative treatment and records of the date and duration of any failure to meet the membrane operating, membrane integrity, or alternative treatment operating requirements for more than four hours. Documentation shall be kept for a period of not less than five years.

[71 FR 65653, Nov. 8, 2006, as amended at 78 FR 10353, Feb. 13, 2013]

Subpart T—Enhanced Filtration and Disinfection—Systems Serving Fewer Than 10,000 People

SOURCE: 67 FR 1839, Jan. 14, 2002, unless otherwise noted.

GENERAL REQUIREMENTS

§141.500 General requirements.

The requirements of this subpart constitute national primary drinking water regulations. These regulations establish requirements for filtration and disinfection that are in addition to criteria under which filtration and disinfection are required under subpart H of this part. The regulations in this subpart establish or extend treatment technique requirements in lieu of maximum contaminant levels for the following contaminants: *Giardia lamblia*, viruses, heterotrophic plate count bacteria, *Legionella*, *Cryptosporidium* and turbidity. The treatment technique requirements consist of installing and properly operating water treatment processes which reliably achieve:

(a) At least 99 percent (2 log) removal of *Cryptosporidium* between a point where the raw water is not subject to recontamination by surface water runoff and a point downstream before or at the first customer for filtered systems, or *Cryptosporidium* control under the watershed control plan for unfiltered systems; and

(b) Compliance with the profiling and benchmark requirements in §§141.530 through 141.544.

§141.501 Who is subject to the requirements of subpart T?

You are subject to these requirements if your system:

(a) Is a public water system;

(b) Uses surface water or GWUDI as a source; and

(c) Serves fewer than 10,000 persons.

§141.502 When must my system comply with these requirements?

You must comply with these requirements in this subpart beginning January 1, 2005, except where otherwise noted.

[69 FR 38856, June 29, 2004]