

RULES AND REGULATIONS

Title 25—ENVIRONMENTAL PROTECTION

ENVIRONMENTAL QUALITY BOARD

[25 PA. CODE CH. 109]

Safe Drinking Water; Revised Total Coliform Rule

The Environmental Quality Board (Board) amends Chapter 109 (relating to safe drinking water) to read as set forth in Annex A. The amendments supplement the Total Coliform Rule (TCR) by requiring public water systems (PWS) that are vulnerable to microbial contamination to perform assessments to identify sanitary defects and subsequently take action to correct them.

This final-form rulemaking will protect public health through a multibarrier approach designed to guard against microbial contamination by evaluating the effectiveness of treatment and the integrity of drinking water distribution systems, and by finding and fixing sanitary defects.

This final-form rulemaking applies to all PWSs.

The proposed rulemaking was included in a two-part proposal which was submitted to the Board for consideration at its meeting on April 21, 2015. One part contained proposed regulations necessary to assume primacy with respect to the Federal Revised Total Coliform Rule (RTCR) and the other part of the proposal included amendments to various other portions of Chapter 109. In response to a motion made at that meeting, the Board voted to approve the portion of the proposed rulemaking regarding the RTCR but to split the other proposed amendments into a separate rulemaking to provide an opportunity for further consideration by the Technical Assistance Center for Small Drinking Water Systems Advisory Board (TAC) and other interested parties. This final-form rulemaking exclusively concerns the RTCR.

This final-form rulemaking was adopted by the Board at its meeting on June 21, 2016.

A. Effective Date

This final-form rulemaking will go into effect upon publication in the *Pennsylvania Bulletin*.

B. Contact Persons

For further information, contact Lisa D. Daniels, Director, Bureau of Safe Drinking Water, P.O. Box 8467, Rachel Carson State Office Building, Harrisburg, PA 17105-8467, (717) 787-9633; or William Cumings, Assistant Counsel, Bureau of Regulatory Counsel, P.O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Persons with a disability may use the Pennsylvania AT&T Relay Service, (800) 654-5984 (TDD users) or (800) 654-5988 (voice users).

C. Statutory Authority

The final-form rulemaking is being made under the authority of section 4 of the Pennsylvania Safe Drinking Water Act (act) (35 P.S. § 721.4), which grants the Board the authority to adopt rules and regulations governing the provision of drinking water to the public, and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20), which authorizes the Board to promulgate rules and regulations necessary for the performance of the work of the Department.

D. Background and Purpose

In February 2013, the United States Environmental Protection Agency (EPA) adopted regulations amending 40 CFR Part 141 (relating to National primary drinking water regulations) to implement an RTCR. See 78 FR 10269 (February 13, 2013). Minor corrections to the RTCR were published at 79 FR 10665 (February 26, 2014). The compliance date for the RTCR is April 1, 2016. To maintain primacy with respect to the RTCR, it is imperative that the Board adopt regulations which are at least as stringent as those in the Federal regulations.

According to the preamble to the Federal RTCR, the rule aims to increase public health protection through the reduction of sanitary defects that could provide potential pathways of entry for fecal contamination into the distribution system of a PWS or could indicate a failure or imminent failure of a barrier that is already in place. See 78 FR 10269, 10276. Since fecal contamination may contain waterborne pathogens including bacteria, viruses and parasitic protozoa, a decrease in fecal contamination should reduce the risk from these contaminants.

In addition, the Federal rule aims for greater public health protection than the 1989 TCR in a cost-effective manner by: maintaining the objectives of the 1989 TCR (that is, to evaluate the effectiveness of treatment, to determine the integrity of the distribution system and to signal the possible presence of fecal contamination); using the optimal indicator for the intended objectives (that is, using total coliforms as an indicator of system operation and condition rather than an immediate public health concern and using *E. coli* as a fecal indicator); and requiring systems that may be vulnerable to contamination, as indicated by the nature of their operation, to have in place procedures that will minimize the incidence of contamination (for example, requiring start-up procedures for seasonal systems). The EPA, therefore, anticipates greater public health protection under the RTCR compared to the 1989 TCR because of the RTCR's more preventive approach to identifying and fixing problems that affect or may affect public health. See 78 FR 10269, 10272, 10273.

The final-form rulemaking was presented to the TAC on March 16, 2016. The TAC made several recommendations that were incorporated into this final-form rulemaking. Section E includes more information about the TAC's recommendations. The changes described in Section E reflect comments received on repeat monitoring and public notification. The TAC also requested that repeat monitoring requirements be further clarified in RTCR technical guidance, which the Department intends to do.

The Board requested comments on whether only fixed alternative repeat monitoring locations should be allowed or if a standard operating procedure (SOP) for choosing locations may also be allowed and why. The Department agrees with the comments received regarding the alternative fixed location and has incorporated that provision into this final-form rulemaking. However, a recommendation to allow the use of an SOP to establish criteria for selecting repeat sample sites on a case-by-case basis is not being added to this final-form rulemaking. The Department believes that repeat sample sites shall be properly documented in the system's sample siting plan to ensure appropriate monitoring by the system and allow for proper oversight by the Department. However, nothing in this final-form rulemaking discourages or prevents a

water system from using advanced technology to conduct investigations and collect additional special samples when determining the cause and extent of sanitary defects.

The Independent Regulatory Review Commission (IRRC) requested that the Board provide its rationale for requiring 1-hour notification to the Department for the detection of *E. coli*. The detection of *E. coli* warrants 1-hour reporting to the Department and this notification occurs under current § 109.701(a)(3)(i) and (ii) (relating to reporting and recordkeeping). However, there are situations under the RTCR that would not be covered under § 109.701(a)(3)(i) and (ii). For example, seasonal systems conducting start-up monitoring, as required under § 109.301(3)(v) (relating to general monitoring requirements), that learn of *E. coli*-positive start-up samples are not required to notify the Department under § 109.701(a)(3)(i) or (ii). Therefore, § 109.701(a)(3)(iv) is necessary so that seasonal systems notify the Department within 1 hour to confer with the Department regarding potential steps to take to address the *E. coli* results prior to serving water to the public thereby protecting the public health.

IRRC also requested that the Board explain how the Department's regulation of bottled water fits into the regulatory framework of the EPA's RTCR and the United States Food and Drug Administration's (FDA) regulations on bottled water. The FDA regulations do not pre-empt the Department from regulating bottled water systems in the manner set forth in Chapter 109. As noted in testimony presented to a Congressional subcommittee by a Deputy Commissioner of the FDA, "[i]n addition to FDA, state and local governments also regulate bottled water. FDA relies on state and local government agencies to approve water sources for safety and sanitary quality, as specified in [21 CFR] 129.3(a)." See Statement of Joshua M. Sharfstein, MD, Principal Deputy Commissioner of Food and Drugs, Food and Drug Administration before the Subcommittee on Oversight and Investigations of the House Committee on Energy and Commerce, July 8, 2009. Section 129.3(a) of 21 CFR (relating to definitions) provides that an "[a]pproved source . . . means a source of water and the water therefrom . . . that has been inspected and the water sampled, analyzed, and found to be of a safe and sanitary quality according to applicable laws and regulations of State and local government agencies having jurisdiction."

The act authorizes the Department to regulate PWSs in this Commonwealth. Section 3 of the act (35 P.S. § 721.3) defines "public water system" as including "[a] system which provides water for bottling or bulk hauling for human consumption." As stated in the preamble to the Permit by Rule for Bottled Water Systems published at 29 Pa.B. 2231 (April 24, 1999), systems providing water for bottling include:

- (1) Bottled water systems, which provide water for bottling in sealed containers.
- (2) Vended water systems, which provide water for bottling through the use of water vending machines.
- (3) Retail water facilities which provide water for bottling by dispensing at a store counter unit servings of water in a customer's or the system's containers.

E. Summary of Changes to the Proposed Rulemaking

§ 109.202. State MCLs, MRDLs and treatment technique requirements

Proposed § 109.202(c)(4)(iii) (relating to State MCLs, MRDLs and treatment technique requirements) was de-

leted in response to public comments. That subparagraph would have authorized the Department to direct a PWS to conduct a Level 1 or Level 2 assessment if circumstances exist which may adversely affect drinking water quality. Commentators suggested that § 109.4(4) (relating to general requirements) obligates PWSs to take investigative action when necessary, but that these investigations should not be confused with assessments under the RTCR.

§ 109.301. General monitoring requirements

Section 109.301(3) was amended in response to public comments. The language added in this final-form rulemaking clarifies that when PWSs forego *E. coli* testing and assume that a sample is *E. coli*-positive Tier 1 public notification is only required in the event that an *E. coli* violation occurs.

Section 109.301(3)(i)(E) was proposed to be added to reflect 40 CFR 141.854(c)(2) (relating to routine monitoring requirements for non-community water systems serving 1,000 or fewer people using only ground water), which provides that a community water system serving 1,000 people or fewer may be required to begin monitoring on an alternate schedule. Changes to § 109.301(3)(i)(E) are not being made in this final-form rulemaking; however, the TAC requested that clarification be provided in this preamble regarding this clause. To clarify, although required for primacy, this clause will not be applied in this Commonwealth as long as all PWSs are required to monitor for total coliform no less frequently than monthly. The special monitoring evaluation described in the Federal rule applies only to PWSs monitoring less frequently than monthly.

Proposed § 109.301(3)(ii)(B) regarding check samples was amended in response to public comments. The language added in this final-form rulemaking provides clarification that a PWS is not required to identify or collect a check sample at only one repeat monitoring location on either side of a routine location that tests positive for total coliform. Instead, a PWS may identify all connections within five connections upstream and five connections downstream as potentially available repeat monitoring locations and then, when needed, select from those identified sites the available taps for sampling. Further, the language added in this final-form rulemaking allows PWSs to obtain Department approval of sites identified in the sample siting plan that are located outside of five connections. This language incorporates the "alternative fixed locations" allowed under the Federal rule and offers greater flexibility to PWSs.

Proposed § 109.301(3)(ii)(D) was amended in response to public comment. The language added in this final-form rulemaking clarifies that when any check sample is total coliform positive and additional check samples are required, the PWS shall continue to collect check samples from the same three locations that were sampled in response to the routine sample testing positive. The language added in this final-form rulemaking is based on information provided from the EPA. The TAC provided comment regarding this language and its suggested language to provide additional clarification to this clause has been incorporated.

Section 109.301(3)(ii)(F) was added in this final-form rulemaking in response to public comment. The clause provides PWSs the opportunity to collect check samples from locations not identified in its sample siting plan in the event that the locations identified in the plan are unavailable. This added clause provides greater flexibility

to PWSs and dispels concerns that if an identified repeat monitoring location is unavailable then a PWS has no alternative for complying with the regulation. The TAC provided comment regarding this language and its suggested edits to provide additional clarification to this clause have been incorporated.

§ 109.409. Tier 2 public notice—categories, timing and delivery of notice

Proposed § 109.409(a)(3) (relating to Tier 2 public notice—categories, timing and delivery of notice), which concerned failure to report *E. coli* MCL or positive *E. coli* routine or check sampling results, was deleted and added to the Tier 3 requirements in § 109.410(a)(5) (relating to Tier 3 public notice—categories, timing and delivery of notice) in response to public comments.

§ 109.410. Tier 3 public notice—categories, timing and delivery of notice

Section 109.410(a)(5) was moved from proposed § 109.409(a)(3) in response to public comments and now reflects 40 CFR 141.204(a)(6) (relating to Tier 3 Public Notice—Form, manner, and frequency of notice).

Section 109.410(a)(6), concerning failure to submit a completed assessment form, was added as a Tier 3 notice category in response to public comments and now reflects 40 CFR 141.204(a)(6).

Section 109.410(a)(7), concerning failure to submit certification of completion of seasonal system start-up procedures, was added as a Tier 3 notice category in response to public comments and now reflects 40 CFR 141.204(a)(6).

§ 109.701. Reporting and recordkeeping

Proposed § 109.701(a)(9)(i), which would have required a PWS to provide notice to the Department if a Level 1 or Level 2 assessment was triggered, was deleted to eliminate a reporting burden on PWSs. The Federal rule does not require PWSs to notify the state when an assessment is triggered.

Section 109.701(a)(9)(ii) was renumbered as § 109.701(a)(9)(i).

Section 109.701(a)(9)(iii) was renumbered as § 109.701(a)(9)(ii).

§ 109.810. Reporting and notification requirements

Proposed language in § 109.810(b) (relating to reporting and notification requirements) was amended by adding language to ensure that laboratories also provide sufficient notification to a public water supplier and the Department in the event that a seasonal start-up sample tests positive for total coliform to help ensure seasonal systems do not open prior to obtaining a negative test result.

F. Benefits, Costs and Compliance

Benefits

This final-form rulemaking will affect all 8,868 PWSs serving approximately 12.75 million residents in this Commonwealth. The residents of this Commonwealth will benefit from the avoidance of a full range of health effects from the consumption of contaminated drinking water such as acute illness, endemic and epidemic disease, waterborne disease outbreaks and death.

As discussed by the EPA in the preamble to the Federal RTCR, the benefits of the Federal rule are largely unquantifiable but include the potential for decreased incidence of endemic illness from fecal contamination and

other waterborne pathogens, increased knowledge regarding system operation, accelerated maintenance and repair, avoided costs of outbreaks and reductions in averting behavior. See 78 FR 10269, 10308—10320.

Compliance costs

Compliance costs were derived from the EPA's economic analysis. The preamble published at 78 FR 10269, 10320 defined these costs as "the net change in costs resulting from revisions to the 1989 TCR rather than absolute total costs of implementing the 1989 TCR as revised by the RTCR." National costs were adjusted to represent the ratio of PWSs in this Commonwealth compared to the number of PWSs Nationwide. It is estimated that water systems in this Commonwealth will bear nearly \$1.72 million of this total annual cost. The following figures represent estimated annual cost by system type: community water systems—\$126.77 per system/year; nontransient noncommunity water systems—\$128.90 per system/year; and transient noncommunity water systems—\$229.31 per system/year.

This estimate includes costs for all PWSs being required to monitor for total coliform monthly. It is important to note that mandating monthly monitoring for all PWSs will eliminate the Federal requirement to collect three additional samples in the month following a total coliform positive sample. Based on a 5-year average of approximately 580 positive samples per year, regulated noncommunity water systems are expected to not incur approximately \$40,000 per year in these extra sampling costs.

Compliance assistance plan

The Safe Drinking Water Program utilizes the Commonwealth's Pennsylvania Infrastructure Investment Authority Program to offer financial assistance to eligible PWSs. This assistance is in the form of a low-interest loan, with some augmenting grant funds for hardship cases. Eligibility is based upon factors such as public health impact, compliance necessity and project/operational affordability.

The Safe Drinking Water Program established a network of regional and central office training staff that is responsive to identifiable training needs. The target audience in need of training may be either program staff or the regulated community.

In addition to this network of training staff, the Bureau of Safe Drinking Water has staff dedicated to providing both training and outreach support services to PWS operators. The Department's web site also provides timely and useful information for treatment plant operators.

Paperwork requirements

Paperwork requirements include the following: revisions to a sample siting plan; completion of a Level 1 or Level 2 assessment form, or both, when sample results indicate the presence of total coliform or *E. coli*, or both, in a sufficient number of samples as designated by the regulations; submission of a seasonal system start-up plan for PWSs that operate seasonally; and annual submission of a form to the Department certifying that a seasonal system start-up plan was implemented prior to opening for the season.

G. Sunset Review

These regulations will be reviewed in accordance with the sunset review schedule published by the Department to determine whether the regulations effectively fulfill the goals for which they were intended.

H. Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on September 22, 2015, the Department submitted a copy of the notice of proposed rulemaking, published at 45 Pa.B. 5943 (October 3, 2015), to IRRC and the Chairpersons of the House and Senate Environmental Resources and Energy Committees for review and comment.

Under section 5(c) of the Regulatory Review Act, the Department shall submit to IRRC and the House and Senate Committees copies of comments received during the public comment period, as well as other documents when requested. In preparing the final-form rulemaking, the Department has considered all comments from IRRC and the public.

Under section 5.1(j.2) of the Regulatory Review Act (71 P.S. § 745.5a(j.2)), on August 17, 2016, the final-form rulemaking was deemed approved by the House and Senate Committees. Under section 5.1(e) of the Regulatory Review Act, IRRC met on August 18, 2016, and approved the final-form rulemaking.

I. Findings

The Board finds that

(1) Public notice of proposed rulemaking was given under sections 201 and 202 of the act of July 31, 1968 (P.L. 769, No. 240) (45 P.S. §§ 1201 and 1202) and regulations promulgated thereunder, 1 Pa. Code §§ 7.1 and 7.2.

(2) A public comment period was provided as required by law, and all comments were considered.

(3) These regulations do not enlarge the purpose of the proposed rulemaking published 45 Pa.B. 5943.

(4) These regulations are necessary and appropriate for administration and enforcement of the authorizing acts identified in Section C of this preamble.

J. Order

The Board, acting under the authorizing statutes, orders that:

(a) The regulations of the Department, 25 Pa. Code Chapter 109, are amended by adding § 109.715 and amending §§ 109.1, 109.202, 109.301, 109.303, 109.408, 109.409, 109.410, 109.701, 109.702, 109.705, 109.810, 109.901, 109.903, 109.1003 and 109.1008 to read as set forth in Annex A, with ellipses referring to the existing text of the regulations

(*Editor's Note:* The amendment to § 109.410 was not included in the proposed rulemaking published at 45 Pa.B. 5943.)

(b) The Chairperson of the Board shall submit this order and Annex A to the Office of General Counsel and the Office of Attorney General for review and approval as to legality and form, as required by law.

(c) The Chairperson of the Board shall submit this order and Annex A to IRRC and the Senate and House Committees as required under the Regulatory Review Act (71 P.S. §§ 745.1—745.14).

(d) The Chairperson of the Board shall certify this order and Annex A and deposit them with the Legislative Reference Bureau, as required by law.

(e) This order shall take effect immediately.

PATRICK McDONNELL,
Acting Chairperson

(*Editor's Note:* See 46 Pa.B. 5790 (September 3, 2016) for IRRC's approval order.)

Fiscal Note: Fiscal Note 7-494 remains valid for the final adoption of the subject regulations.

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION PART I. DEPARTMENT OF ENVIRONMENTAL PROTECTION

Subpart C. PROTECTION OF NATURAL RESOURCES

ARTICLE II. WATER RESOURCES

CHAPTER 109. SAFE DRINKING WATER

Subchapter A. GENERAL PROVISIONS

§ 109.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

* * * * *

Lead service line—A service line made of lead which connects a water main to a building inlet and a lead pigtail, gooseneck or other fitting which is connected to the lead line.

Level 1 assessment—An evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices and, when possible, the likely reason that the system triggered the assessment.

Level 2 assessment—An evaluation to identify the possible presence of sanitary defects, defects in distribution system coliform monitoring practices and, when possible, the likely reason that the system triggered the assessment. This assessment provides a more detailed examination of the system, including the system's monitoring and operational practices, than does a Level 1 assessment through the use of more comprehensive investigation and review of available information, additional internal and external resources, and other relevant practices.

Liquid from dewatering processes—A stream containing liquids generated from a unit used to concentrate solids for disposal.

* * * * *

SUVA—Specific ultraviolet absorption at 254 nanometers (nm)—An indicator of the humic content of water. It is a calculated parameter obtained by dividing a sample's ultraviolet absorption at a wavelength of 254 nm (UV_{254}) (in m^{-1}) by its concentration of dissolved organic carbon (DOC) (in mg/L).

Sanitary defect—A defect that could provide a pathway of entry for microbial contamination into the distribution system or that is indicative of a failure or imminent failure in a barrier that is already in place.

Sanitary survey—An onsite review and evaluation of a public water system's source, facilities and equipment and the operation and maintenance procedures used by a public water supplier for producing and distributing safe drinking water.

Seasonal system—A noncommunity water system that is not operated as a public water system on a year-round basis and starts up and shuts down at the beginning and end of each operating season.

Sedimentation—A process for the removal of solids before filtration by gravity or separation.

* * * * *

Subchapter B. MCLs, MRDLs OR TREATMENT TECHNIQUE REQUIREMENTS

§ 109.202. State MCLs, MRDLs and treatment technique requirements.

* * * * *

(c) *Treatment technique requirements for pathogenic bacteria, viruses and protozoan cysts.* A public water system shall provide adequate treatment to reliably protect users from the adverse health effects of microbiological contaminants, including pathogenic bacteria, viruses and protozoan cysts. The number and type of treatment barriers and the efficacy of treatment provided shall be commensurate with the type, degree and likelihood of contamination in the source water.

* * * * *

(3) A community public water system shall provide continuous disinfection and comply with Subchapter M (relating to additional requirements for groundwater sources) for groundwater sources.

(4) Public water systems shall conduct assessments in accordance with § 109.705(b) (relating to system evaluations and assessments) after meeting any of the triggers under subparagraph (i) or (ii). Failure to conduct an assessment or complete a corrective action in accordance with § 109.705(b) is a treatment technique violation requiring 1-hour reporting in accordance with § 109.701(a)(3) and public notification in accordance with § 109.409 (relating to Tier 2 public notice—categories, timing and delivery of notice).

(i) A Level 1 assessment is triggered if any of the following conditions occur:

(A) For systems taking 40 samples or more per month under § 109.301(3), the system exceeds 5.0% total coliform-positive samples for the month.

(B) For systems taking fewer than 40 samples per month under § 109.301(3), the system has two or more total coliform-positive samples in the same month.

(C) The system fails to take every required check sample under § 109.301(3) after any single total coliform-positive sample.

(ii) A Level 2 assessment is triggered if any of the following conditions occur:

(A) A system fails to meet the *E. coli* MCL as specified under subsection (a)(2).

(B) A system triggers another Level 1 assessment, as defined in subparagraph (i), within a rolling 12-month period, unless the Department has determined a likely reason that the samples that caused the first Level 1 assessment were total coliform-positive and has established that the system has corrected the problem.

(5) Failure by a seasonal water system to complete the approved start-up procedure prior to serving water to the public as required under § 109.715 (relating to seasonal systems) is a treatment technique violation requiring 1-hour reporting in accordance with § 109.701(a)(3) and public notification in accordance with § 109.409.

(d) *Fluoride.* A public water system shall comply with the primary MCL for fluoride of 2 mg/L, except that a noncommunity water system implementing a fluoridation program approved by the Department of Health and

using fluoridation facilities approved by the Department under § 109.505 (relating to requirements for noncommunity water systems) may exceed the MCL for fluoride but may not exceed the fluoride level approved by the Department of Health. The secondary MCL for fluoride of 2 mg/L established by the EPA under 40 CFR 143.3 (relating to secondary maximum contaminant levels) is not incorporated into this chapter.

* * * * *

Subchapter C. MONITORING REQUIREMENTS

§ 109.301. General monitoring requirements.

Public water suppliers shall monitor for compliance with MCLs, MRDLs and treatment technique requirements in accordance with the requirements established by the EPA under the National Primary Drinking Water Regulations, 40 CFR Part 141 (relating to National primary drinking water regulations), except as otherwise established by this chapter unless increased monitoring is required by the Department under § 109.302 (relating to special monitoring requirements). Alternative monitoring requirements may be established by the Department and may be implemented in lieu of monitoring requirements for a particular National Primary Drinking Water Regulation if the alternative monitoring requirements are in conformance with the Federal act and regulations. The monitoring requirements shall be applied as follows:

* * * * *

(3) *Monitoring requirements for coliforms.* Public water systems shall determine the presence or absence of total coliforms for each routine or check sample; and, the presence or absence of *E. coli* for a total coliform positive sample in accordance with analytical techniques approved by the Department under § 109.304 (relating to analytical requirements). A system may forego *E. coli* testing on a total coliform-positive sample if the system assumes that any total coliform-positive sample is also *E. coli*-positive. A system which chooses to forego *E. coli* testing shall, under § 109.701(a)(3), notify the Department within 1 hour after the water system learns of the violation or the situation, and shall provide public notice in accordance with § 109.408 (relating to Tier 1 public notice—categories, timing and delivery of notice) if there is a violation of the *E. coli* MCL as set forth in subparagraph (iv).

(i) *Frequency.* Public water systems shall collect monthly samples at regular time intervals throughout the monitoring period as specified in the system distribution sample siting plan under § 109.303(a)(2) (relating to sampling requirements). Systems which use groundwater and serve 4,900 persons or fewer may collect all required samples on a single day if they are from different sampling sites in the distribution system.

(A) The number of monthly total coliform samples that a public water system shall take is based on the population served by the system as follows:

<i>Population Served</i>	<i>Minimum Number of Samples per Month</i>
25 to 1,000	1
1,001 to 2,500	2
2,501 to 3,300	3
3,301 to 4,100	4
4,101 to 4,900	5
4,901 to 5,800	6

<i>Population Served</i>	<i>Minimum Number of Samples per Month</i>
5,801 to 6,700	7
6,701 to 7,600	8
7,601 to 8,500	9
8,501 to 12,900	10
12,901 to 17,200	15
17,201 to 21,500	20
21,501 to 25,000	25
25,001 to 33,000	30
33,001 to 41,000	40
41,001 to 50,000	50
50,001 to 59,000	60
59,001 to 70,000	70
70,001 to 83,000	80
83,001 to 96,000	90
96,001 to 130,000	100
130,001 to 220,000	120
220,001 to 320,000	150
320,001 to 450,000	180
450,001 to 600,000	210
600,001 to 780,000	240
780,001 to 970,000	270
970,001 to 1,230,000	300
1,230,001 to 1,520,000	330
1,520,001 to 1,850,000	360
1,850,001 to 2,270,000	390
2,270,001 to 3,020,000	420
3,020,001 to 3,960,000	450
3,960,001 or more	480

(B) A public water system that uses either a surface water or a GUDI source and does not practice filtration in compliance with Subchapter B (relating to MCLs, MRDLs or treatment technique requirements) shall collect at least one total coliform sample at the entry point, or an equivalent location as determined by the Department, within 24 hours of each day that the turbidity level in the source water, measured as specified in paragraph (2)(i)(B), exceeds 1.0 NTU. The Department may extend this 24-hour collection limit to a maximum of 72 hours if the system adequately demonstrates a logistical problem outside the system's control in having the sample analyzed within 30 hours of collection. A logistical problem outside the system's control may include a source water turbidity result exceeding 1.0 NTU over a holiday or weekend in which the services of a Department certified laboratory are not available within the prescribed sample holding time. These sample results shall be included in determining compliance with the MCL for *E. coli* established under § 109.202(a)(2) and whether an assessment has been triggered under § 109.202(c)(4).

(C) Prior to serving water to the public each season, a seasonal system shall collect one or more total coliform samples in accordance with the Department-approved start-up procedure specified in § 109.715 (relating to seasonal systems) until coliforms are not detected in a set

of samples. These samples are considered special purpose samples under subparagraph (v).

(D) A system may take more than the minimum number of required routine samples only if the samples are collected in accordance with § 109.303(a)(2) and are included in the sample siting plan in accordance with § 109.701(a)(5). These samples shall be included in determining whether an assessment has been triggered under § 109.202(c)(4).

(E) A community water system serving 1,000 people or fewer or a noncommunity water system may be required to begin monitoring on an alternate schedule established by the Department. This determination will be made based on the results of a special monitoring evaluation performed during a sanitary survey. The system shall continue monitoring on the alternate schedule until otherwise notified by the Department.

(ii) *Repeat monitoring.* A public water system shall collect a set of check samples within 24 hours of being notified of a total coliform-positive routine sample, a total coliform-positive check sample or a total coliform-positive sample collected under subparagraph (i)(B). The Department may extend this 24-hour collection limit to a maximum of 72 hours if the system adequately demonstrates a logistical problem outside the system's control in having the check samples analyzed within 30 hours of collection. A logistical problem outside the system's control may include a coliform-positive sample result received over a holiday or weekend in which the services of a Department accredited laboratory are not available within the prescribed sample holding time.

(A) A public water system shall collect at least three check samples for each routine total coliform-positive sample found.

(B) The system shall collect at least one check sample from the sampling tap where the original total coliform-positive sample was taken. The system shall also collect at least one check sample at any tap within five service connections upstream of the original coliform-positive sample and at least one check sample at any tap within five service connections downstream of the original sampling site unless alternative locations are approved by the Department in accordance with § 109.701(a)(5). If a total coliform-positive sample occurs at the end of the distribution system or one service connection away from the end of the distribution system, the water supplier shall collect an additional check sample upstream of the original sample site in lieu of a downstream check sample.

(C) A system shall collect all check samples on the same day, except that a system with a single service connection may collect the required set of check samples all on the same day or consecutively over a 3-day period.

(D) At a minimum, the system shall collect one set of check samples for each total coliform-positive routine sample. If a check sample is total coliform-positive, the public water system shall collect an additional set of check samples from the same locations in the manner specified in this subparagraph. The system shall continue to collect additional sets of check samples from the same locations until either total coliforms are not detected in a set of check samples, or the system determines that an assessment has been triggered under § 109.202(c)(4).

(E) Results of all routine and check samples not invalidated by the Department shall be included in determining compliance with the MCL for *E. coli* as established under § 109.202(a)(2) or whether an assessment has been triggered under § 109.202(c)(4).

(F) If an upstream or downstream repeat monitoring location identified in the sample siting plan is not available in the time frame specified in this subparagraph, the public water system shall notify the Department prior to collecting the check sample that the check sample will be collected from a location within reasonable proximity to the routine monitoring location.

(iii) *Invalidation of total coliform samples.* A total coliform sample invalidated under this paragraph does not count towards meeting the minimum monitoring requirements of this section.

(A) The Department may invalidate a total coliform-positive sample if one of the following applies:

(I) The laboratory which performed the analysis establishes that improper sample analysis caused the total coliform-positive result.

(II) A domestic or other nondistribution system plumbing problem exists when a coliform contamination incident occurs that is limited to a specific service connection from which a coliform-positive sample was taken in a public water system with more than one service connection. The Department's determination to invalidate a sample will be based on a total coliform-positive check sample collected at the same tap as the original total coliform-positive sample and all total coliform-negative check samples collected within five service connections of the original total coliform positive sample. This type of sample invalidation does not apply to public water systems with only one service connection.

(III) A total coliform-positive sample result is due to a circumstance or condition which does not reflect water quality in the distribution system. The Department's decision to invalidate a sample will be based on evidence that the sample result does not reflect water quality in the distribution system. In this case, the system shall still collect all check samples required under subparagraph (ii) to determine compliance with the MCL for *E. coli* as established under § 109.202(a)(2) or whether an assessment has been triggered under § 109.202(c)(4). The decision to invalidate a total coliform-positive sample result and supporting evidence will be documented by the Department, in writing, and approved and signed by the supervisor of the Department official who recommended the decision.

(B) A laboratory shall invalidate a total coliform sample if no total coliforms are detected and one of the following occurs:

(I) The sample produces a turbid culture in the absence of gas production using an analytical method where gas formation is examined.

(II) The sample exhibits confluent growth or produces colonies too numerous to count with an analytical method using a membrane filter.

(III) The sample produces a turbid culture in the absence of an acid reaction in the Presence-Absence Coliform Test.

(C) If a laboratory invalidates a sample because of interference as specified in clause (B), the laboratory shall notify the system within 1 business day to collect another sample from the same location as the original sample within 24 hours of being notified of the interference and have it analyzed for the presence of total coliforms. The system shall resample within 24 hours of being notified of interference and continue to resample every 24 hours until it receives a valid result. The Department may extend this 24-hour limit to a maximum of 72 hours if the

system adequately demonstrates a logistical problem outside the system's control in having the resamples analyzed within 30 hours. A logistical problem outside the system's control may include a notification of a laboratory sample invalidation, due to interference, which is received over a holiday or weekend in which the services of a Department accredited laboratory are not available within the prescribed sample holding time.

(iv) *Compliance determinations.*

(A) A system is in compliance with the MCL for *E. coli* as specified under § 109.202(a)(2) for samples taken under this paragraph unless any of the following conditions occur:

(I) The system has an *E. coli*-positive check sample following a total coliform-positive routine sample.

(II) The system has a total coliform-positive check sample following an *E. coli*-positive routine sample.

(III) The system fails to take all required check samples following an *E. coli*-positive routine sample.

(IV) The system fails to test for *E. coli* when any check sample tests positive for total coliform.

(B) A public water system shall determine compliance with the MCL for *E. coli* in clause (A) for each month in which it is required to monitor for total coliforms.

(v) *Special purpose samples.* Special purpose samples, such as those taken to determine whether disinfection practices are sufficient following pipe placement, replacement or repair, those taken to investigate potential problems in the distribution system or those collected as part of a seasonal system start-up procedure, may not be used to determine compliance with the MCL for *E. coli* as established under § 109.202(a)(2) or whether an assessment has been triggered under § 109.202(c)(4). Check samples taken under subparagraph (ii) are not considered special purpose samples, and shall be used to determine compliance with the monitoring, MCL and treatment technique requirements for total coliforms and *E. coli* established under § 109.202(a)(2) and (c)(4).

* * * * *

§ 109.303. Sampling requirements.

(a) The samples taken to determine a public water system's compliance with MCLs or MRDLs or to determine compliance with monitoring requirements shall be taken at the locations identified in §§ 109.301 and 109.302 (relating to general monitoring requirements; and special monitoring requirements), or as follows:

(1) Samples for determining compliance with the turbidity MCL shall be taken at each entry point associated with a surface water source that the Department has determined shall be filtered.

(2) Samples for determining compliance with the *E. coli* MCL under § 109.202(a)(2) (relating to State MCLs, MRDLs and treatment technique requirements) and for determining whether an assessment is triggered under § 109.202(c)(4) shall be taken at regular intervals throughout the monitoring period at sites which are representative of water throughout the distribution system according to a written sample siting plan as specified under § 109.701(a)(5) (relating to reporting and recordkeeping). Representative locations include, but are not limited to, the following:

- (i) Dead ends.
- (ii) First service connection.

- (iii) Finished water storage facilities.
 - (iv) Interconnections with other public water systems.
 - (v) Areas of high water age.
 - (vi) Areas with previous coliform detections.
- (3) Samples for determining compliance with the fluoride MCL shall be taken at each entry point.

* * * * *

Subchapter D. PUBLIC NOTIFICATION

§ 109.408. Tier 1 public notice—categories, timing and delivery of notice.

(a) *General violation categories and other situations requiring a Tier 1 public notice.* A public water supplier shall provide Tier 1 public notice for the following circumstances:

- (1) Violation of the MCL for *E. coli*, as specified in § 109.202(a)(2) (relating to State MCLs, MRDLs and treatment technique requirements), or when the water supplier fails to test for *E. coli* when any check sample tests positive for coliforms, as specified in § 109.301(3) (relating to general monitoring requirements).

* * * * *

§ 109.409. Tier 2 public notice—categories, timing and delivery of notice.

(a) *General violation categories and other situations requiring a Tier 2 public notice.* A public water supplier shall provide Tier 2 public notice for the following circumstances:

- (1) All violations of the primary MCL, MRDL, treatment technique requirements and failure to take corrective action in Subchapters B, C, G, K, L or M, except when a Tier 1 notice is required under § 109.408 (relating to Tier 1 public notice—categories, timing and delivery of notice) or when the Department determines that a Tier 1 notice is required. The tier assignment for fluoride is not incorporated by reference. Under § 109.202(d) (relating to State MCLs, MRDLs and treatment technique requirements), a public water system shall comply with the primary MCL for fluoride of 2 mg/L. As such, a public water supplier shall provide Tier 2 public notice for violation of the primary MCL for fluoride.

(2) Violations of the monitoring requirements in Subchapter C, K or M (relating to monitoring requirements; lead and copper; and additional requirements for groundwater sources), when the Department determines that a Tier 2 rather than a Tier 3 public notice is required, taking into account potential health impacts and persistence of the violation.

(3) Failure to comply with the terms and conditions of any variance or exemption in place under Subchapter I (relating to variances and exemptions issued by the Department).

(4) Other violations or situations determined by the Department to require a Tier 2 public notice, taking into account potential chronic health impacts and persistence of the violation.

(b) *Timing for a Tier 2 public notice.* A public water supplier shall do the following:

- (1) Report the circumstances to the Department within 1 hour of discovery of a violation under subsection (a)(1), in accordance with § 109.701(a)(3) (relating to reporting and recordkeeping).

(2) Provide the public notice as soon as possible, but no later than 30 days after the system learns of the violation. If the public notice is posted, the notice must remain in place for as long as the violation or situation persists, but in no case for less than 7 days, even if the violation or situation is resolved. The Department may, in appropriate circumstances, allow additional time for the initial notice of up to 3 months from the date the system learns of the violation. The Department will not grant an extension across the board or for an unresolved violation. Extensions granted by the Department will be in writing.

(3) Repeat the notice every 3 months as long as the violation or situation persists, unless the Department determines that appropriate circumstances warrant a different repeat notice frequency. In no circumstances may the repeat notice be given less frequently than once per year. The Department will not allow less frequent repeat notices across the board; or for a violation of a treatment technique requirement for pathogenic bacteria, viruses and protozoan cysts as defined in § 109.202(c); or for other ongoing violations. Determinations granted by the Department for less frequent repeat notices will be in writing.

(c) *Form and manner of a Tier 2 public notice.* A public water supplier shall provide the initial public notice and any repeat notices in a form and manner that is reasonably designed to reach all 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 the public water supplier shall at a minimum meet the following requirements:

(1) Unless directed otherwise by the Department in writing, community water systems shall provide notice using the following forms of delivery:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system.

(ii) Any other method reasonably designed to reach other persons regularly served by the system, if they would not normally be reached by the notice required in subparagraph (i). Those persons may include those who do not pay water bills or do not have service connection addresses such as house renters, apartment dwellers, university students, nursing home patients or prison inmates. Other methods may include publication in a local newspaper, delivery of multiple copies for distribution by customers that provide their drinking water to others (such as apartment building owners or large private employers), posting in public places served by the system or on the Internet or delivery to community organizations.

(2) Unless directed otherwise by the Department in writing, noncommunity water systems shall provide notice using the following forms of delivery:

(i) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or by mail or direct delivery to each customer and service connection, when known.

(ii) Any other method reasonably designed to reach other persons served by the system if they would not normally be reached by the notice required in subparagraph (i). Those 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 publication in a local newspaper or newsletter distributed to customers, use of e-mail to notify

employees or students or delivery of multiple copies in central locations such as community centers.

§ 109.410. Tier 3 public notice—categories, timing and delivery of notice.

(a) *General violation categories and other situations requiring a Tier 3 public notice.* A public water supplier shall provide Tier 3 public notice for the following circumstances:

(1) Monitoring violations under Subchapter C, K, L or M, except when a Tier 1 notice is required under § 109.408 (relating to Tier 1 public notice—categories, timing and delivery of notice) or when the Department determines that a Tier 2 notice is required.

(2) Reporting and record maintenance violations under § 109.701(h) (relating to reporting and recordkeeping).

(3) Operation under a variance or an exemption granted under Subchapter I (relating to variances and exemptions issued by the Department).

(4) Availability of unregulated contaminant monitoring results, as required under 40 CFR 141.40 (relating to monitoring requirements for unregulated contaminants).

(5) Failure to report an *E. coli* MCL violation or an *E. coli*-positive routine or check sample as required under § 109.701(a)(3)(iv).

(6) Failure to submit a completed assessment form in accordance with § 109.701(a)(9).

(7) Failure to submit certification of completion of a Department-approved start-up procedure by a seasonal system in accordance with § 109.715(e) (relating to seasonal systems).

(b) *Timing for a Tier 3 public notice.*

(1) A public water supplier shall provide the public notice no later than 1 year after the public water system learns of the violation or situation or begins operating under a variance or exemption. Following the initial notice, the water supplier shall repeat the notice annually for as long as the violation, variance, exemption or other situation persists. If the public notice is posted, the notice shall remain in place for as long as the violation, variance, exemption or other situation persists, but in no case may the initial and annual repeat notice be posted for less than 7 days (even if the violation or situation is resolved).

(2) Instead of individual Tier 3 public notices, a public water supplier may use an annual report detailing all violations and situations that occurred during the previous 12 months, as long as the timing requirements of paragraph (1) are met.

(c) *Delivery of a Tier 3 public notice.* A public water supplier shall provide the initial notice and any repeat notices in a form and manner that is reasonably designed to reach all 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 the public water supplier shall, at a minimum, meet the following requirements:

(1) Unless directed otherwise by the Department in writing, community water systems shall provide notice using the following forms of delivery:

(i) Mail or other direct delivery to each customer receiving a bill and to other service connections to which water is delivered by the public water system.

(ii) Any other method reasonably designed to reach other persons regularly served by the system, if they would not normally be reached by the notice required in subparagraph (i). Those persons may include those who do not pay water bills or do not have service connection addresses such as house renters, apartment dwellers, university students, nursing home patients or prison inmates. Other methods may include publication in a local newspaper, delivery of multiple copies for distribution by customers that provide their drinking water to others (such as apartment building owners or large private employers), posting in public places or on the Internet or delivery to community organizations.

(2) Unless directed otherwise by the Department in writing, noncommunity water systems shall provide notice using the following forms of delivery:

(i) Posting the notice in conspicuous locations throughout the distribution system frequented by persons served by the system, or by mail or direct delivery to each customer and service connection, if known.

(ii) Any other method reasonably designed to reach other persons served by the system, if they would not normally be reached by the notice required in subparagraph (i). Those persons may include those who may not see a posted notice because the notice is not in a location they routinely pass by. Other methods may include publication in a local newspaper or newsletter distributed to customers, use of e-mail to notify employees or students or delivery of multiple copies in central locations such as community centers.

(d) *Use of a CCR to meet the Tier 3 public notice requirements.* For community water systems, the CCR required under § 109.416 (relating to CCR requirements) may be used as a vehicle for the initial Tier 3 public notice and all required repeat notices, as long as the following conditions are met:

(1) The CCR is provided to persons served no later than 12 months after the system learns of the violation or situation as required under subsection (b).

(2) The Tier 3 notice contained in the CCR follows the content requirements under § 109.411 (relating to content of a public notice).

(3) The CCR is distributed following the delivery requirements under subsection (c).

Subchapter G. SYSTEM MANAGEMENT RESPONSIBILITIES

§ 109.701. Reporting and recordkeeping.

(a) *Reporting requirements for public water systems.* Public water systems shall comply with the following requirements:

* * * * *

(3) *One-hour reporting requirements.* A public water supplier shall report the circumstances to the Department within 1 hour of discovery for the following violations or situations:

(i) A primary MCL or an MRDL has been exceeded or a treatment technique requirement has been violated under Subchapter B, K, L or M.

(ii) A sample result requires the collection of check samples under § 109.301.

(iii) Circumstances exist which may adversely affect the quality or quantity of drinking water including, but not limited to:

- (A) The occurrence of a waterborne disease outbreak.
- (B) A failure or significant interruption in key water treatment processes.
- (C) A natural disaster that disrupts the water supply or distribution system.
- (D) A chemical spill.
- (E) An unexpected loading of possible pathogens into the source water that significantly increases the potential for drinking water contamination.
- (F) An overfeed of a drinking water treatment chemical that exceeds a published maximum use value, such as National Sanitation Foundation's "Maximum Use Value," as applicable.
- (G) A situation that causes a loss of positive water pressure in any portion of the distribution system where there is evidence of contamination or a water supplier suspects a high risk of contamination.
- (H) A lack of resources that adversely affect operations, such as staff shortages, notification by the power utility of planned lengthy power outages or imminent depletion of treatment chemical inventories.
- (iv) Any sample result is *E. coli*-positive.
- (4) *Notice.* The water supplier shall, within 10 days of completion of each public notification required under Subchapter D (relating to public notification) with the exception of a CCR, submit to the Department a certification that it has fully complied with the public notification requirements. The water supplier shall include with this certification a representative copy of each type of notice distributed, published, posted and made available to persons served by the system and to the media and a description of the means undertaken to make the notice available.
- (5) *Siting plan.* The water supplier shall submit to the Department a written sample siting plan for routine and repeat coliform sampling as required under § 109.301(3) by September 24, 2016. A public water system that begins operation after September 24, 2016, shall submit the sample siting plan prior to serving water to the public.
- (i) A sample siting plan must include, at a minimum, the following:
- (A) A list of sample site locations as specified in § 109.303(a)(2) (relating to sampling requirements) in the distribution system to be used for routine monitoring purposes.
- (B) The name of the company or individual collecting the samples.
- (C) A sample collection schedule.
- (D) Available repeat monitoring locations for each routine monitoring location.
- (E) Triggered source water monitoring locations as specified under § 109.1303 (relating to triggered monitoring requirements for groundwater sources).
- (F) The population served by the system.
- (G) A description of the accessibility of sample sites.
- (H) The beginning and ending dates of each operating season for seasonal systems.
- (ii) A water supplier shall revise and resubmit its sample siting plan within 30 days of notification by the Department of a sample siting plan which fails to meet the criteria in subparagraph (i).

(iii) The water supplier shall notify the Department of subsequent revisions to a coliform sample siting plan as they occur. Revisions to a coliform sample siting plan shall be submitted in written form to the Department within 30 days of notifying the Department of the revisions.

(6) *Records.* Upon request by the Department, the water supplier shall submit copies of records required to be maintained under this subchapter.

(7) *Form.* Reports required by this chapter shall be submitted in a manner or form acceptable to the Department.

(8) *Reporting requirements for disinfectant residuals.* In addition to the reporting requirements specified in paragraph (1), public water systems shall report MRDL monitoring data as follows:

(i) Systems monitoring for chlorine dioxide under § 109.301(13) shall report the number of days chlorine dioxide was used at each entry point during the last month.

(ii) Systems monitoring for either chlorine or chloramines under § 109.301(13) shall report the following:

(A) The number of samples taken during the month.

(B) The arithmetic average of all distribution samples taken in the last month.

(9) *Level 1 and Level 2 assessments.* A public water supplier shall:

(i) Submit an assessment form completed in accordance with § 109.705(b) (relating to system evaluations and assessments) to the Department within 30 days after the system learns that it has exceeded a trigger under § 109.202(c)(4).

(ii) Submit a revised assessment form in accordance with § 109.705(b) within 30 days of notification from the Department that revisions are necessary.

(10) *Noncompliance report.* Except where a different reporting period is specified in this chapter, the water supplier shall report to the Department within 48 hours the failure to comply with any National Primary Drinking Water Regulation, including the failure to comply with any monitoring requirement set forth in this chapter.

(b) *Reporting requirements for community water systems.* In addition to the reporting requirements for a public water system, a community water supplier shall comply with the following requirements:

* * * * *

(d) *Record maintenance.* The public water supplier shall retain on the premises of the public water system or at a convenient location near the premises the following:

(1) Records of bacteriological and turbidity analyses which shall be kept for at least 5 years, and records of chemical analyses which shall be kept for at least 12 years. Actual laboratory reports may be kept, or data may be transferred to tabular summaries, if the following information is included:

(i) The date, place and time of sampling, and the name of the person who collected the sample.

(ii) Identification of the sample as to whether it was a routine distribution system sample, check sample, raw or finished water sample, or other special purpose sample.

(iii) The date of analysis.

(iv) The laboratory, certification number and person responsible for performing the analysis.

(v) The analytical technique and methods used.

(vi) The results of the analysis.

(2) Records of performance monitoring required under § 109.301, except for turbidity, which shall be kept for at least 3 years. Records of turbidity performance monitoring required under § 109.301 shall be kept for at least 5 years. At a minimum, these records must contain the reporting requirements under subsection (a).

(3) Records of action taken by the public water supplier to correct violations of MCLs, MRDLs or treatment technique requirements, which shall be kept for at least 3 years after the last action taken with respect to the particular violation involved.

(4) Copies of written reports or communications relating to sanitary surveys conducted by a water supplier or his agent, which shall be kept for at least 12 years.

(5) Records concerning a variance or exemption granted to the system which shall be kept at least 5 years following the expiration of the variance or exemption.

(6) Plans, specifications and permits for water system facilities which shall be kept for the life of the facility.

(7) Records concerning the use of acrylamide and epichlorohydrin shall be kept for at least 12 years. These records must include verification that the chemicals used were certified for conformance with ANSI/NSF Standard 60 in accordance with § 109.606 (relating to chemicals, materials and equipment) and that the combination— or product—of dose and monomer level did not exceed the following:

(i) Acrylamide = 0.05% dosed at 1 ppm (or equivalent).

(ii) Epichlorohydrin = 0.01% dosed at 20 ppm (or equivalent).

(8) Copies of public notifications issued under Subchapter D and certifications made to the Department under subsection (a)(4) shall be kept for 3 years after issuance.

(9) A copy of any assessment form and documentation of corrective actions completed as a result of those assessments or other available summary documentation of the sanitary defects and corrective actions taken under § 109.705(b) shall be kept at least 5 years after completion of the assessment or corrective action.

(e) *Reporting requirements for public water systems required to perform individual filter monitoring under § 109.301(1)(iv).*

* * * * *

§ 109.702. Operation and maintenance plan.

(a) A community water supplier shall develop an operation and maintenance plan for the community water system. The operation and maintenance plan must generally conform to the guidelines contained in the Department's *Public Water Supply Manual* and contain at least the following information:

(1) A description of the facilities.

(2) An explanation of startup and normal operation procedures.

(3) Procedures for repairing and replacing water mains that conform to the Department and water industry standards.

(4) A routine maintenance program.

(5) Records and reporting system.

(6) Sampling and analyses program.

(7) Public notification elements in accordance with Subchapter D (relating to public notification) that include:

(i) Public notice templates.

(ii) EPA contaminant fact sheets, when available.

(iii) An explanation of appropriate methods of delivery of public notice in accordance with Subchapter D.

(8) Staffing and training.

(9) System evaluation program as required under § 109.705(a) (relating to system evaluations and assessments) including the wellhead protection program for any water system that develops one under § 109.713 (relating to wellhead protection program).

(10) Safety program.

(11) Emergency plan and operating procedures.

(12) Manufacturer's manuals.

(13) An interconnect, valve and blowoff exercise and testing program.

(14) Date of last update.

(b) The community water supplier shall implement the operation and maintenance plan in accordance with accepted practices of the water supply industry.

(c) The community water supplier shall review and update the operation and maintenance plan as necessary to reflect changes in the operation or maintenance of the water system. The plan must be:

(1) Placed in secure locations which are readily accessible to the water system's personnel.

(2) Presented upon request to the Department.

(d) Noncommunity water suppliers may be directed by the Department to develop and implement an operation and maintenance plan as provided for in this section when the public health is threatened by inadequate operation and maintenance of the facilities.

§ 109.705. System evaluations and assessments.

(a) A community water supplier shall conduct an evaluation of the water system at least annually. The evaluation shall include the following activities:

(1) Watershed surveillance consisting of an inspection of portions of the drainage area or wellhead protection area necessary to identify and evaluate actual and probable sources of contamination. An inspection of a wellhead protection area shall include a review of available information pertaining to possible sources of contamination such as underground storage tanks, onlot disposal systems and other activities that may have an adverse impact on water quality or quantity. Specific hydrogeological studies of sources of contamination are not necessary unless required under § 109.4, § 109.602 or § 109.603 (relating to general requirements; acceptable design; and source quality and quantity) or other rules of the Department.

(2) Evaluation of source protection, intake structures and transmission facilities.

(3) Treatment facilities inspection consisting of an evaluation of the effectiveness of the operation and maintenance procedures and the condition and operability of permitted facilities.

(4) Evaluation of finished water storage facilities and the distribution system.

(5) Pressure surveys consisting of a measurement of pressures at representative points in the distribution system, which shall include new water line extensions. Surveys shall be made during periods of maximum and minimum usage. Records of these surveys shall show the date and time of the beginning and end of the test and the location at which the test was made.

(b) A public water system shall conduct Level 1 and 2 assessments required under § 109.202(c)(4) (relating to State MCLs, MRDLs and treatment technique requirements). The public water system shall also comply with any expedited actions or additional actions required by the Department in the case of an *E. coli* MCL violation.

(1) A Level 1 or Level 2 assessment must include review and identification of the following elements, at a minimum:

(i) Atypical events that could affect distributed water quality or indicate that distributed water quality was impaired.

(ii) Changes in distribution system maintenance and operation that could affect distributed water quality, including water storage.

(iii) Sources and treatment processes that impact distributed water quality.

(iv) Existing water quality monitoring data.

(v) Inadequacies in sample sites, sampling protocols and sample processing.

(2) Within 30 days of triggering a Level 1 or Level 2 assessment under § 109.202(c)(4), a public water system shall complete the appropriate assessment and submit a report to the Department on forms acceptable to the Department.

(3) A Level 1 assessment shall be conducted by competent personnel qualified to operate and maintain the water system's facilities.

(4) A Level 2 assessment shall be conducted by one or more individuals meeting the following criteria:

(i) Holds a valid certificate issued under Chapter 302 (relating to administration of the water and wastewater operators' certification program) to operate a water system.

(ii) Maintains certification in the appropriate class and subclassifications as defined in Chapter 302 for the size and treatment technologies for the water system being assessed.

(5) The Department may conduct a Level 1 or Level 2 assessment in addition to the assessment conducted by the public water system.

(6) In the completed assessment report, the public water system shall describe all sanitary defects identified, corrective actions completed and a proposed timetable for any corrective actions not already completed. The assessment report may also note that no sanitary defects were identified.

(7) If the Department determines that a Level 1 or Level 2 assessment is not sufficient, the public water system shall consult with the Department within 14 days of receiving written notification from the Department that the assessment is not sufficient. Following consultation, the Department may require a public water system to revise the assessment. A public water system shall submit

a revised assessment form to the Department no later than 30 days from the date of consultation.

(8) Public water systems shall correct sanitary defects found through either a Level 1 or Level 2 assessment conducted in accordance with this subsection. For corrections not completed by the time of submission of the assessment report, the public water system shall complete the corrective actions in compliance with a timetable approved by the Department in consultation with the system. The system shall notify the Department when each scheduled corrective action is completed.

(9) At any time during the assessment or corrective action phase, either the public water system or the Department may request a consultation with the other party to determine the appropriate actions to be taken. The public water system may consult with the Department on all relevant information that may impact its ability to comply with a requirement of this subsection.

(c) The following apply to significant deficiencies identified at public water systems supplied by a surface water source and public water systems supplied by a groundwater source under the direct influence of surface water:

(1) For sanitary surveys performed by the Department, a system shall 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 system will address significant deficiencies noted in the survey.

(2) A system shall correct significant deficiencies identified in sanitary survey reports according to the schedule approved by the Department, or if there is no approved schedule, according to the schedule reported under paragraph (1) if the deficiencies are within the control of the system.

(d) Significant deficiencies identified by the Department at public water systems using groundwater shall comply with § 109.1302(c) (relating to treatment technique requirements).

§ 109.715. Seasonal systems.

(a) A new seasonal system shall submit a start-up procedure with the construction permit application or brief description as required under § 109.505(a) (relating to requirements for noncommunity water systems).

(b) A seasonal system approved by the Department to operate prior to September 24, 2016, shall submit a start-up procedure to the Department by October 24, 2016.

(c) If the Department determines that a start-up procedure is not sufficient, the public water system shall submit a revised start-up procedure within 30 days of receiving written notification from the Department.

(d) A seasonal system shall submit to the Department for approval any revisions to an approved start-up procedure prior to serving water to the public the next season.

(e) A seasonal system shall demonstrate completion of a Department-approved start-up procedure by submitting written certification prior to serving water to the public each season.

Subchapter H. LABORATORY CERTIFICATION

§ 109.810. Reporting and notification requirements.

(a) Beginning November 13, 2009, a laboratory accredited under Chapter 252 (relating to environmental laboratory accreditation) shall electronically report to the Department on behalf of the public water supplier and in

accordance with the reporting requirements under § 109.701(a) (relating to reporting and recordkeeping) the results of test measurements or analyses performed by the laboratory under this chapter using a secure computer application provided by the Department. In the event of a Department computer application failure, the Department will notify the laboratory of an alternate reporting method. In the event that a laboratory is unable to submit data electronically, due to circumstances beyond its control, the laboratory shall notify the Department prior to the applicable reporting deadline. If the Department determines that the circumstances were beyond the control of the laboratory, the Department will specify a temporary, alternate reporting method the laboratory shall use to meet the reporting deadline.

(1) Unless a different reporting period is specified in this chapter, these results shall be reported within either the first 10 days following the month in which the result is determined or the first 10 days following the end of the required monitoring period as stipulated by the Department, whichever is shorter.

(2) Beginning November 23, 2009, an accredited laboratory and the public water supplier shall be given until the 10th of the following month to review and update submitted data using a secure computer application provided by the Department. Omissions and data errors remaining after the review period shall be considered reporting violations of the public water supplier.

(b) A laboratory accredited under Chapter 252 shall whenever the results of test measurements or analyses performed by the laboratory under this chapter indicate an MCL, MRDL or a treatment technique performance requirement under § 109.202 (relating to State MCLs, MRDLs and treatment technique requirements) is exceeded, or an action level under § 109.1102(a) (relating to action levels and treatment technique requirements) is exceeded, or a sample result requires the collection of check or confirmation samples under § 109.301 (relating to general monitoring requirements), or any check sample collected under § 109.301(3) is total coliform-positive, or a sample collected by a seasonal system as part of a Department-approved start-up procedure under § 109.301(3)(i)(c) is total coliform-positive, or a sample collected under Subchapter M (relating to additional requirements for groundwater sources) is *E. coli*-positive:

(1) Notify the public water supplier by telephone within 1 hour of the laboratory's determination. If the supplier cannot be reached within that time, notify the Department by telephone within 2 hours of the determination. If it is necessary for the laboratory to contact the Department after the Department's routine business hours, the laboratory shall contact the appropriate Department regional office's after-hours emergency response telephone number and provide information regarding the occurrence, the name of a contact person and the telephone number where that individual may be reached in the event further information is needed. If the Department's appropriate emergency number cannot be reached, the laboratory shall notify the appropriate Department regional office by telephone within 1 hour of the beginning of the next business day. Each accredited laboratory shall be responsible for the following:

(i) Obtaining and then maintaining the Department's current after-hours emergency response telephone numbers for each applicable regional office.

(ii) Establishing or updating a standard operating procedure by November 8, 2002, and at least annually

thereafter to provide the information needed to report the occurrences to the Department. The information regarding the public water system must include, but is not limited to, the PWSID number of the system, the system's name, the contaminant involved in the occurrence, the level of the contaminant found, where the sample was collected, the dates and times that the sample was collected and analyzed, the name and identification number of the accredited laboratory, the name and telephone number of a contact person at the laboratory and what steps the laboratory took to contact the public water system before calling the Department.

(2) Notify the appropriate Department district office in writing within 24 hours of the determination. For the purpose of determining compliance with this requirement, the postmark, if the notice is mailed, or the date the notice is received by the Department, whichever is earlier, will be used. Upon approval by the Department, the notice may be made electronically to the Department as long as the information is received within the 24-hour deadline.

(c) A laboratory accredited under Chapter 252 shall meet the requirements under subsections (a) and (b), regarding the results of test measurements or analyses performed by the laboratory under this chapter, unless the laboratory assigns in writing the responsibility for reporting and notification to another accredited laboratory.

(d) A laboratory accredited under Chapter 252 shall be responsible for the accurate reporting of data required under this section to the Department.

Subchapter I. VARIANCES AND EXEMPTIONS ISSUED BY THE DEPARTMENT

§ 109.901. Requirements for a variance.

(a) The Department may grant one or more variances to a public water system from a requirement respecting a MCL upon finding that:

(1) The public water system has installed and is using the best treatment technology, treatment methods or other means that the Department in concurrence with the Administrator finds are generally available to reduce the level of the contaminant, and has determined that alternative sources of water are not reasonably available.

(2) The water supplier has demonstrated to the Department that, because of characteristics of the raw water sources which are reasonably available to the system, the system cannot meet the requirements respecting the MCLs.

(3) The granting of a variance will not result in an unreasonable risk to the health of persons served by the system.

(b) The MCL for *E. coli* established under § 109.202(a) (relating to State MCLs, MRDLs and treatment technique requirements) is not eligible for a variance.

(c) The Department may grant one or more variances to a public water system from a treatment technique requirement upon a finding that the public water supplier applying for the variance has demonstrated that, because of the nature of the raw water source of the system the treatment technique is not necessary to protect the health of the persons served by the system. The treatment technique requirements established under § 109.202(c), the treatment technique requirements established under § 109.1102(b) (relating to action levels and treatment technique requirements), the treatment technique re-

quirements established under §§ 109.1203 and 109.1302 (relating to bin classification and treatment technique requirements; and treatment technique requirements) are not eligible for a variance.

§ 109.903. Requirements for an exemption.

(a) The Department may exempt a public water system from an MCL or treatment technique requirement upon finding that:

(1) Due to compelling factors, the public water system is unable to comply with the contaminant level or treatment technique requirement, or to implement measures to develop an alternative source of water supply.

(2) The public water system was in operation on the effective date of the contaminant level or treatment technique requirement or, for a system that was not in operation by that date, only if no reasonable alternative source of drinking water is available to the new system.

(3) The granting of the exemption will not result in an unreasonable risk to health.

(4) Management or restructuring changes or both as provided in 40 CFR 142.20(b)(1)(i) (relating to State-issued variances and exemptions under Section 1415(a) and Section 1416 of the Act) cannot reasonably be made that will result in compliance with the applicable MCL or treatment technique requirement or, if compliance cannot be achieved, improve the quality of the drinking water.

(b) The MCL for *E. coli* established under § 109.202(a) (relating to State MCLs, MRDLs and treatment technique requirements) is not eligible for an exemption.

(c) The treatment technique requirements established under § 109.202(c), the treatment technique requirements established under §§ 109.1102(b), 109.1203 and 109.1302 (relating to action levels and treatment technique requirements; bin classification and treatment technique requirements; and treatment technique requirements) are not eligible for an exemption.

Subchapter J. BOTTLED WATER AND VENDED WATER SYSTEMS, RETAIL WATER FACILITIES AND BULK WATER HAULING SYSTEMS

§ 109.1003. Monitoring requirements.

(a) *General monitoring requirements.* Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall monitor for compliance with the MCLs and MRDLs in accordance with § 109.301 (relating to general monitoring requirements) and shall comply with § 109.302 (relating to special monitoring requirements). The monitoring requirements shall be applied as follows, except that systems which have installed treatment to comply with primary MCL shall conduct quarterly operational monitoring for the contaminant which the facility is designed to remove:

(1) Bottled water systems, retail water facilities and bulk water hauling systems, for each entry point shall:

(i) Monitor weekly for the presence or absence of total coliform. For any total coliform positive routine or check sample, determine the presence or absence of *E. coli*. All analyses must be conducted in accordance with analytical techniques approved by the Department under § 109.304 (relating to analytical requirements). A system may forego *E. coli* testing on a total coliform-positive sample if the system assumes that any total coliform-positive sample is also *E. coli*-positive. A system which chooses to forego *E. coli* testing shall, under § 109.701(a)(3) (relating to reporting and recordkeeping), notify the Department within 1 hour after the water system learns of the

violation or the situation, and shall provide public notice in accordance with § 109.1004 (relating to public notification).

* * * * *

(2) Vended water systems shall monitor in accordance with paragraph (1) except that vended water systems qualifying for permit by rule under § 109.1005(b), for each entry point shall:

(i) Monitor monthly for the presence or absence of total coliform. For any total coliform positive routine or check sample, determine the presence or absence of *E. coli*. All analyses must be conducted in accordance with analytical techniques approved by the Department under § 109.304. A system may forego *E. coli* testing on a total coliform-positive sample if the system assumes that any total coliform-positive sample is also *E. coli*-positive. A system which chooses to forego *E. coli* testing shall, under § 109.701(a)(3), notify the Department within 1 hour after the water system learns of the violation or the situation, and shall provide public notice in accordance with § 109.1004.

* * * * *

(c) *Repeat monitoring for microbiological contaminants.*

(1) If a sample collected in accordance with subsection (a)(1)(i) or (2)(i) is found to be total coliform-positive:

(i) The bottled water system shall collect a set of three additional samples (check) from the same lot or batch of the type of product.

(ii) The vended water, retail water facility or bulk water hauling systems shall collect a set of three additional samples (check) from the same entry point (machine, point of delivery or carrier vehicle).

(2) Samples shall be collected for analysis within 24 hours of being notified of the total coliform-positive sample. The Department may extend this 24-hour collection limit to a maximum of 72 hours if the system adequately demonstrates a logistical problem outside the system's control in having the check samples analyzed within 30 hours of collection. A logistical problem outside the system's control may include a coliform-positive result received over a holiday or weekend in which the services of a Department certified laboratory are not available within the prescribed sample holding time.

(3) At a minimum, the system shall collect one set of check samples for each total coliform-positive routine sample. If a check sample is total coliform-positive, the public water system shall collect additional check samples in the manner specified in this subsection. The system shall continue to collect check samples until either total coliforms are not detected in a set of check samples, or the system determines that an assessment has been triggered under § 109.202(c)(4) (relating to State MCLs, MRDLs and treatment technique requirements).

(d) *A bulk water hauling system that serves at least 25 of the same persons year around.* A bulk water hauling system that is determined by the Department to serve at least 25 of the same persons year round shall comply with the monitoring requirements for community water systems in accordance with § 109.301.

(e) *A bulk water hauling or vended water system that serves at least 25 of the same persons over 6 months per year.* A bulk water hauling or vended water system that is determined by the Department to serve at least 25 of the same persons over 6 months per year shall comply with

the monitoring requirements for nontransient noncommunity water systems in accordance with § 109.301.

(f) *Additional monitoring requirements for surface water and GUDI sources.* Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall comply with the monitoring requirements under Subchapter L (relating to long-term 2 enhanced surface water treatment rule).

(g) *Additional monitoring requirements for groundwater sources.* Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall comply with the monitoring requirements under Subchapter M (relating to additional requirements for groundwater sources).

§ 109.1008. System management responsibilities.

* * * * *

(d) *Annual system evaluation requirements.* Bottled water and vended water systems, retail water facilities and bulk water hauling systems shall conduct an evaluation of the water system at least annually that includes the activities listed in paragraphs (1)–(4). A bottled water, vended water, bulk water hauling system or retail water facility obtaining finished water from a permitted public water system is not required to perform the activities in paragraphs (1) and (2) if the Department determines that there are no potential problems necessitating inspection and evaluation of the source.

(1) Watershed surveillance consisting of an inspection of portions of the drainage area necessary to identify and evaluate actual and probable sources of contamination.

(2) Evaluation of source construction and protection and, when appropriate, withdrawal and transmission facilities.

(3) Treatment facilities inspection consisting of an evaluation of the effectiveness of the operation and maintenance procedures and the condition and operability of permitted facilities.

(4) Evaluation of finished water storage facilities.

(e) *Emergency response requirements.*

(1) A bottled water, vended water, retail water or bulk water supplier who knows or has reason to believe that circumstances exist which may adversely affect the quality of drinking water supplied by the system, shall notify the Department immediately under § 109.1004 (relating to public notification).

(2) The bottled water, vended water, retail water or bulk water supplier shall develop a plan for product recall under emergency circumstances, and submit the plan to the Department for approval. The plan shall:

(i) Identify detailed procedures for implementing product recalls, including emergency communications and notifications.

(ii) Be kept on file in a readily accessible location by the bottled water, vended water, retail water or bulk water supplier.

(iii) Be reviewed and updated at least annually. A copy of the update shall be included in the annual water supply report to the Department under this section.

(f) *Cross-connection control program.* At the direction of the Department, the bottled water, vended water, retail water or bulk water supplier shall develop and implement a comprehensive control program for the elimination of existing cross-connections or the effective containment of sources of contamination, and prevention of future cross-connections. A description of the program, including the following information, shall be submitted to the Department for approval:

(1) A description of the methods and procedures to be used.

(2) An implementation schedule for the program.

(3) A description of the methods and devices which will be used to protect the water system.

(g) *Level 1 and Level 2 assessments.* Bottled water systems, vended water systems, retail water facilities and bulk water hauling systems shall comply with the requirements of § 109.705(b) (relating to system evaluations and assessments). Bottled water systems, vended water systems, retail water facilities and bulk water hauling systems may use a Nationally-recognized organization which inspects bottled water systems for compliance with 21 CFR Part 129, such as NSF, or another organization, state or country which utilizes an inspection protocol as stringent as NSF's protocols to conduct the Level 2 assessment.

(h) *Seasonal systems.* A bottled water system, vended water system, retail water facility or bulk water hauling system that operates as a seasonal system shall comply with the requirements of § 109.715 (relating to seasonal systems).

[Pa.B. Doc. No. 16-1640. Filed for public inspection September 23, 2016, 9:00 a.m.]