

Annex A

TITLE 25. ENVIRONMENTAL PROTECTION
PART 1. 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:

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Bulk water hauling system—A public water system which provides water piped into a carrier vehicle and withdrawn by a similar means into the user’s storage facility or vessel. The term includes, but it not limited to, the sources of water, treatment, storage or distribution facilities. The term does not include a public water system which provides only a source of water supply for a bulk water hauling system.

CASRN—Chemical Abstracts Service Registry Number.

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GAC— Granular Activated Carbon—A highly porous adsorbent carbon material produced by heating organic matter that can absorb various dissolved chemicals in the water.

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MCL—Maximum Contaminant Level—The maximum permissible level of a contaminant in water which is delivered to a user of a public water system, and includes the primary and secondary MCLs established under the Federal act, and MCLs adopted under the act.

MCLG—Maximum Contaminant Level Goal—

(i) The maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety.

(ii) The term includes the MCLGs established under the Federal act and MCLGs adopted under the act.

(iii) Maximum contaminant level goals are nonenforceable health goals.

MDL—Method detection limit—The minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results.

MRDL—Maximum Residual Disinfectant Level—The maximum permissible level of a disinfectant added for water treatment that may not be exceeded at the consumer’s tap without an unacceptable possibility of adverse health effects. The consumer’s tap means the entry point for bottled water and vended water systems, retail water facilities and bulk water hauling systems.

MRL—Minimum reporting level—The minimum quantitation limit that can practically and consistently be achieved, with 95% confidence, by capable analysts at 75% or more of laboratories using a specified analytical method.

Membrane filtration—

- (i) A pressure or vacuum driven separation process in which particulate matter larger than 1 micrometer is rejected by an engineered barrier, primarily through a size-exclusion mechanism, and which has a measurable removal efficiency of a target organism that can be verified through the application of a direct integrity test.
- (ii) The term includes the common membrane technologies of microfiltration, ultrafiltration, nanofiltration and reverse osmosis.

[Method detection limit—The amount of a substance which the EPA has determined to be the minimum concentration which can be measured and be reported with 99% confidence that the true value is greater than zero.]

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PDWEP—Guidelines for Public Drinking Water Equipment Performance issued by NSF.

PFAS—Perfluoroalkyl and Polyfluoroalkyl Substances.

PFOA—Perfluorooctanoic acid—CASRN 335-67-1.

PFOS—Perfluorooctanesulfonic acid—CASRN 1763-23-1.

Performance Evaluation Sample—A reference sample provided to a laboratory for the purpose of demonstrating that the laboratory can successfully analyze the sample within the limits of performance specified by the Department. The true value of the concentration of the reference material is unknown to the laboratory at the time of the analysis.

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Recycle flows—Any water, solid or semi-solid generated by a conventional or direct filtration plant’s treatment process and residual treatment processes that is returned to the plant’s treatment process.

Reliably and consistently below the MCL—

- (i) For **[VOCs, SOCs, and IOCs (with the exception of nitrate and nitrite), VOCs, SOCs, IOCs (with the exception of nitrate and nitrite), and PFAS,** this means that each sample result is less than 80% of the MCL.
- (ii) For nitrate and nitrite, this means that each sample result is less than 50% of the MCL.

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Subchapter B. MCLs, MRDLs OR TREATMENT TECHNIQUE REQUIREMENTS

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

(a) *Primary MCLs, MRDLs and treatment technique requirements.*

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(3) A public water system that is installing granular activated carbon or membrane technology to comply with the MCL for TTHMs, HAA5, chlorite (where applicable) or bromate (where applicable) may apply to the Department for an extension of up to 24 months past the applicable compliance date specified in the Federal regulations, but not beyond December 31, 2003. In granting the extension, the Department will set a schedule for compliance and may specify any interim measures that the Department deems necessary. Failure to meet the schedule or interim treatment requirements constitutes a violation of National Primary Drinking Water Regulations.

(4) Other MCLs.

(i) **Effective dates. The MCLGs and MCLs in subparagraph (ii)(A)—(B) are effective on _____.** (*Editor's Note: The blank refers to the effective date of adoption of this proposed rulemaking when published as a final-form rulemaking.*)

(ii) The MCLGs and MCLs for PFAS are:

	<u>CASRN</u>	<u>Contaminant</u>	<u>MCLG</u> <u>(mg/L)</u>	<u>MCL</u> <u>(mg/L)</u>	<u>MCLG</u> <u>(ng/L)</u>	<u>MCL</u> <u>(ng/L)</u>
<u>(A)</u>	<u>335-67-1</u>	<u>PFOA</u>	<u>0.000008</u>	<u>0.000014</u>	<u>8</u>	<u>14</u>
<u>(B)</u>	<u>1763-23-1</u>	<u>PFOS</u>	<u>0.000014</u>	<u>0.000018</u>	<u>14</u>	<u>18</u>

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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:

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(2) *Performance monitoring for unfiltered surface water and GUDI.* A public water supplier using unfiltered surface water or GUDI sources shall conduct the following source water and performance monitoring requirements on an interim basis until filtration is provided, unless increased monitoring is required by the Department under § 109.302:

(i) Except as provided under subparagraphs (ii) and (iii), a public water supplier:

(A) Shall perform *E. coli* or total coliform density determinations on samples of the source water immediately prior to disinfection. Regardless of source water turbidity, the minimum

frequency of sampling for total coliform or *E. coli* determinations may be no less than the following:

<i>System Size (People)</i>	<i>Samples/Week</i>
<500	1
500—3,299	2
3,300—10,000	3
10,001—25,000	4
25,001 or more	5

(B) Shall measure the turbidity of a representative grab sample of the source water immediately prior to disinfection as follows until August 19, 2019:

(I) For systems that operate continuously, at least once every 4 hours that the system is in operation, except as provided in clause (C).

(II) For systems that do not operate continuously, at start-up, at least once every 4 hours that the system is in operation, and also prior to shutting down the plant, except as provided in clause (C).

(C) May substitute continuous turbidity monitoring for grab sample monitoring until August 19, 2019, if it validates the continuous measurement for accuracy on a regular basis using a procedure specified by the manufacturer. At a minimum, calibration with an EPA-approved primary standard shall be conducted at least quarterly.

(D) Shall continuously monitor and record the turbidity of the source water immediately prior to disinfection beginning August 20, 2019, using an analytical method specified in 40 CFR 141.74(a) and record the results at least every 15 minutes while the source is operating. If there is a failure in the continuous turbidity monitoring or recording equipment, or both, the supplier shall conduct grab sampling or manual recording, or both, every 4 hours in lieu of continuous monitoring or recording. The public water supplier shall notify the Department within 24 hours of the equipment failure. Grab sampling or manual recording may not be substituted for continuous monitoring for longer than 5 working days after the equipment fails. The Department will consider case-by-case extensions of the time frame to comply if the water supplier provides written documentation that it was unable to repair or replace the malfunctioning equipment within 5 working days due to circumstances beyond its control.

(E) Shall continuously monitor and record the residual disinfectant concentration required under § 109.202(c)(1)(iii) of the water being supplied to the distribution system and record the lowest value for each day. If a public water system's continuous monitoring or recording equipment fails, the public water supplier may, upon notification of the Department under § 109.701(a)(3), substitute grab sampling or manual recording, or both, every 4 hours in lieu of continuous monitoring. Grab sampling or manual recording may not be substituted for continuous monitoring for longer than 5 days after the equipment fails.

(F) Until April 28, 2019, shall measure the residual disinfectant concentration at representative points in the distribution system no less frequently than the frequency required for total coliform sampling for compliance with the MCL for microbiological contaminants.

(G) Beginning April 29, 2019, shall measure and record the residual disinfectant concentration at representative points in the distribution system in accordance with a sample siting plan as specified in § 109.701(a)(8) and as follows:

(I) A public water supplier shall monitor the residual disinfectant concentration at the same time and from the same location that a total coliform sample is collected as specified in paragraph (3)(i) and (ii). Measurements taken under this subclause may be used to meet the requirements under subclause (II).

(II) A public water supplier shall monitor the residual disinfectant concentration at representative locations in the distribution system at least once per week.

(III) A public water supplier that does not maintain the minimum residual disinfectant concentration specified in § 109.710 at one or more sample sites shall include those sample sites in the monitoring conducted the following month.

(IV) Compliance with the minimum residual disinfectant concentration shall be determined in accordance with § 109.710.

(V) A public water system may substitute online residual disinfectant concentration monitoring and recording for grab sample monitoring and manual recording if it validates the online measurement for accuracy in accordance with § 109.304.

(ii) Until August 19, 2019, for a public water supplier serving 3,300 or fewer people, the Department may reduce the residual disinfectant concentration monitoring for the water being supplied to the distribution system to a minimum of 2 hours between samples at the grab sampling frequencies prescribed as follows if the historical performance and operation of the system indicate the system can meet the residual disinfectant concentration at all times:

<i>System Size (People)</i>	<i>Samples/Day</i>
<500	1
500—1,000	2
1,001—2,500	3
2,501—3,300	4

If the Department reduces the monitoring, the supplier shall nevertheless collect and analyze another residual disinfectant measurement as soon as possible, but no longer than 4 hours from any measurement which is less than the residual disinfectant concentration approved under § 109.202(c)(1)(iii).

(iii) Until August 19, 2019, for a public water supplier serving fewer than 500 people, the Department may reduce the source water turbidity monitoring to one grab sample per day, if the historical performance and operation of the system indicate effective disinfection is maintained under the range of conditions expected to occur in the system's source water.

Editor's Note: The bracketed text below to be deleted is text that is duplicated due to a previous printing error.

[(iv) A public water supplier providing conventional filtration treatment or direct filtration and serving 10,000 or more people and using surface water or GUDI sources shall, beginning January 1, 2002, conduct continuous monitoring of turbidity for each individual filter using an approved method under the EPA regulation in 40 CFR 141.74(a) (relating to analytical and monitoring requirements) and record the results at least every 15 minutes. Beginning January 1, 2005, public water suppliers providing conventional or direct filtration and serving fewer than 10,000 people and using surface water or GUDI sources shall conduct continuous monitoring of turbidity for each individual filter using an approved method under the EPA regulation in 40 CFR 141.74(a) and record the results at least every 15 minutes.

(A) The water supplier shall calibrate turbidimeters using the procedure specified by the manufacturer. At a minimum, calibration with an EPA-approved primary standard shall be conducted at least quarterly.

(B) If there is failure in the continuous turbidity monitoring or recording equipment, or both, the system shall conduct grab sampling or manual recording, or both, every 4 hours in lieu of continuous monitoring or recording.

(C) A public water supplier serving 10,000 or more persons has a maximum of 5 working days following the failure of the equipment to repair or replace the equipment before a violation is incurred.

(D) A public water supplier serving fewer than 10,000 persons has a maximum of 14 days following the failure of the equipment to repair or replace the equipment before a violation is incurred.

(v) A public water supplier shall calculate the log inactivation of *Giardia*, using measurement methods established by the EPA, at least once per day during expected peak hourly flow. The log inactivation for *Giardia* must also be calculated whenever the residual disinfectant concentration at the entry point falls below the minimum value specified in § 109.202(c) (relating to State MCLs, MRDLs and treatment technique requirements) and continue to be calculated every 4 hours until the residual disinfectant concentration at the entry point is at or above the minimum value specified in § 109.202(c). Records of log inactivation calculations must be reported to the Department in accordance with § 109.701(a)(2).

(vi) In addition to the requirements specified in subparagraph (v), a public water supplier that uses a disinfectant other than chlorine to achieve log inactivation shall calculate the log inactivation of viruses at least once per day during expected peak hourly flow. The log inactivation for viruses shall also be calculated whenever the residual disinfectant concentration at the entry point falls below the minimum value specified in § 109.202(c) and continue to be calculated every 4 hours until the residual disinfectant concentration at the entry point is at or above the minimum value specified in § 109.202(c). Records of log inactivation calculations shall be reported to the Department in accordance with § 109.701(a).

(2) *Performance monitoring for unfiltered surface water and GUDI.* A public water supplier using unfiltered surface water or GUDI sources shall conduct the following source water and performance monitoring requirements on an interim basis until filtration is provided, unless increased monitoring is required by the Department under § 109.302:

(i) Except as provided under subparagraphs (ii) and (iii), a public water supplier:

(A) Shall perform *E. coli* or total coliform density determinations on samples of the source water immediately prior to disinfection. Regardless of source water turbidity, the minimum frequency of sampling for total coliform or *E. coli* determinations may be no less than the following:

<i>System Size (People)</i>	<i>Samples/Week</i>
<500	1
500—3,299	2
3,300—10,000	3
10,001—25,000	4
25,001 or more	5

(B) Shall measure the turbidity of a representative grab sample of the source water immediately prior to disinfection as follows until August 19, 2019:

(I) For systems that operate continuously, at least once every 4 hours that the system is in operation, except as provided in clause (C).

(II) For systems that do not operate continuously, at start-up, at least once every 4 hours that the system is in operation, and also prior to shutting down the plant, except as provided in clause (C).

(C) May substitute continuous turbidity monitoring for grab sample monitoring until August 19, 2019, if it validates the continuous measurement for accuracy on a regular basis using a procedure specified by the manufacturer. At a minimum, calibration with an EPA-approved primary standard shall be conducted at least quarterly.

(D) Shall continuously monitor and record the turbidity of the source water immediately prior to disinfection beginning August 20, 2019, using an analytical method specified in 40 CFR 141.74(a) and record the results at least every 15 minutes while the source is operating. If there is a failure in the continuous turbidity monitoring or recording equipment, or both, the supplier shall conduct grab sampling or manual recording, or both, every 4 hours in lieu of continuous monitoring or recording. The public water supplier shall notify the Department within 24 hours of the equipment failure. Grab sampling or manual recording may not be substituted for continuous monitoring for longer than 5 working days after the equipment fails. The Department will consider case-by-case extensions of the time frame to comply if the water supplier provides written documentation that it was unable to repair or replace the malfunctioning equipment within 5 working days due to circumstances beyond its control.

(E) Shall continuously monitor and record the residual disinfectant concentration required under § 109.202(c)(1)(iii) of the water being supplied to the distribution system and record the lowest value for each day. If a public water system's continuous monitoring or recording equipment fails, the public water supplier may, upon notification of the Department under § 109.701(a)(3), substitute grab sampling or manual recording, or both, every 4 hours in lieu of continuous monitoring. Grab sampling or manual recording may not be substituted for continuous monitoring for longer than 5 days after the equipment fails.

(F) Until April 28, 2019, shall measure the residual disinfectant concentration at representative points in the distribution system no less frequently than the frequency required for total coliform sampling for compliance with the MCL for microbiological contaminants.

(G) Beginning April 29, 2019, shall measure and record the residual disinfectant concentration at representative points in the distribution system in accordance with a sample siting plan as specified in § 109.701(a)(8) and as follows:

(I) A public water supplier shall monitor the residual disinfectant concentration at the same time and from the same location that a total coliform sample is collected as specified in paragraph (3)(i) and (ii). Measurements taken under this subclause may be used to meet the requirements under subclause (II).

(II) A public water supplier shall monitor the residual disinfectant concentration at representative locations in the distribution system at least once per week.

(III) A public water supplier that does not maintain the minimum residual disinfectant concentration specified in § 109.710 at one or more sample sites shall include those sample sites in the monitoring conducted the following month.

(IV) Compliance with the minimum residual disinfectant concentration shall be determined in accordance with § 109.710.

(V) A public water system may substitute online residual disinfectant concentration monitoring and recording for grab sample monitoring and manual recording if it validates the online measurement for accuracy in accordance with § 109.304.

(ii) Until August 19, 2019, for a public water supplier serving 3,300 or fewer people, the Department may reduce the residual disinfectant concentration monitoring for the water being supplied to the distribution system to a minimum of 2 hours between samples at the grab sampling frequencies prescribed as follows if the historical performance and operation of the system indicate the system can meet the residual disinfectant concentration at all times:

<i>System Size (People)</i>	<i>Samples/Day</i>
<500	1
500—1,000	2
1,001—2,500	3
2,501—3,300	4

If the Department reduces the monitoring, the supplier shall nevertheless collect and analyze another residual disinfectant measurement as soon as possible, but no longer than 4 hours from any measurement which is less than the residual disinfectant concentration approved under § 109.202(c)(1)(iii).

(iii) Until August 19, 2019, for a public water supplier serving fewer than 500 people, the Department may reduce the source water turbidity monitoring to one grab sample per day, if the historical performance and operation of the system indicate effective disinfection is maintained under the range of conditions expected to occur in the system’s source water.]

* * * * *

(6) *Monitoring requirements for SOCs (pesticides and PCBs).* Community water systems and nontransient noncommunity water systems shall monitor for compliance with the MCLs for SOCs established by the EPA under 40 CFR 141.61(c). The monitoring shall be conducted according to the requirements established by the EPA under 40 CFR 141.24(h), incorporated herein by reference except as modified by this chapter.

* * * * *

(vii) *Waivers.* A waiver will be granted to a public water supplier from conducting the initial compliance monitoring or repeat monitoring, or both, for an SOC based on documentation provided by the public water supplier and a determination by the Department that the criteria in clause (B), (C) or (D) has been met. A waiver is effective for one compliance period and may be renewed in each subsequent compliance period. If the Department has not granted a use waiver in accordance with clause (B), the public water supplier is responsible for submitting a waiver application and renewal application to the Department for review in accordance with clause (B), (C) or (D) for specific entry points. Waiver applications will be evaluated relative to the vulnerability assessment area described in clause (A) and the criteria in clause (B), (C) or (D).

Entry points at which treatment has been installed to remove an SOC are not eligible for a monitoring waiver for the SOCs for which treatment has been installed.

(A) *Vulnerability assessment area for SOCs including dioxin and PCBs.*

(I) For groundwater or GUDI entry points, the vulnerability assessment area shall consist of wellhead protection area Zones I and II **as defined under § 109.1 (relating to definitions).**

(II) For surface water entry points, the vulnerability assessment area shall consist of **[the area that supplies water to the entry point and is separated from other watersheds by the highest topographic contour] surface water intake protection area Zones A and B as defined under § 109.1.**

(B) *Use waivers.* A use waiver will be granted by the Department for contaminants which the Department has determined have not been used, stored, manufactured, transported or disposed of in this Commonwealth, or portions of this Commonwealth. A use waiver specific to a particular entry point requires that an SOC was not used, stored, manufactured, transported or disposed of in the vulnerability assessment area. If use waiver criteria cannot be met, a public water supplier may apply for a susceptibility waiver.

* * * * *

(8) *Monitoring requirements for public water systems that obtain finished water from another public water system.*

* * * * *

(iii) Consecutive water suppliers may be exempt from conducting monitoring for the MCLs for **[VOCs, SOCs and IOCs and radionuclides] VOCs, SOCs, IOCs, radionuclides and PFAS** if the public water system from which the finished water is obtained complies with paragraphs **[(5)—(7) and (14)] (5)—(7), (14) and (16)** and is in compliance with the MCLs, except that asbestos monitoring is required in accordance with subparagraph (ii).

* * * * *

(9) *Monitoring requirements for POE devices.* A public water supplier using a POE device shall, in addition to the monitoring requirements specified in paragraphs (1)—(8), **(10)—(16) and Subchapter K (relating to lead and copper)**, conduct monitoring on the devices installed. As a minimum, the monitoring shall include the MCLs for which the POE device is intended to treat and monthly microbiological monitoring. The Department may allow the water supplier to reduce the frequency of microbiological monitoring based upon historical performance. Except for microbiological contaminants, monitoring shall be performed quarterly on 25% of the installed POE devices with the locations rotated so that each device is monitored at least once annually, unless increased monitoring is required by the Department under § 109.302.

* * * * *

(11) *Monitoring requirements for entry points that do not provide water continuously.* Entry points from which water is not provided during every quarter of the year shall monitor in accordance with paragraphs **[(5)—(7) and (14)] (5)—(7), (14) and (16)**, except that monitoring is not required during a quarter when water is not provided to the public, unless special monitoring is required by the Department under § 109.302.

* * * * *

(15) *Monitoring requirements for reserve entry points and entry points supplied by one or more reserve sources.* Beginning August 20, 2019, a water supplier using reserve sources or reserve entry

points as defined and identified in the comprehensive monitoring plan in § 109.718(a) (relating to comprehensive monitoring plan) shall:

- (i) Monitor reserve entry points at the initial frequencies specified in paragraphs [(5)—(7) and (14)] (5)—(7), (14) and (16).
- (ii) Monitor permanent entry points at the initial frequencies specified in paragraphs [(5)—(7) and (14)] (5)—(7), (14) and (16) while the entry point is receiving water from a reserve source.
- (iii) Conduct special monitoring as required by the Department under § 109.302.

* * * * *

(16) Monitoring requirements for PFAS. Community water systems and nontransient noncommunity water systems shall monitor for compliance with the MCLs for PFAS established under § 109.202(a).

(i) Initial monitoring. Initial monitoring shall consist of 4 consecutive quarterly samples at each entry point in accordance with the following monitoring schedule.

(A) Systems serving more than 350 persons shall begin monitoring for the PFAS listed in § 109.202(a)(4)(ii)(A)—(B) during the quarter beginning January 1, 2024.

(B) Systems serving 350 or fewer persons shall begin monitoring for the PFAS listed in § 109.202(a)(4)(ii)(A)—(B) during the quarter beginning January 1, 2025.

(C) Systems that add new sources to new or existing entry points on or after the applicable dates in clauses (A)—(B), shall conduct initial monitoring according to this clause. An entry point with one or more new sources shall be monitored for 4 consecutive quarters, beginning the first full quarter the entry point begins serving the public.

(ii) Repeat monitoring for entry points at which at least one of the PFAS with an MCL is detected. For entry points at which at least one of the PFAS with an MCL established under § 109.202(a) is detected at a level equal to or greater than its corresponding MRL as defined in § 109.304(f), then:

(A) Monitoring for compliance with the MCLs for PFAS established under § 109.202(a) shall be repeated quarterly, beginning the quarter following the detection, until reduced monitoring is granted in accordance with this subparagraph.

(B) The Department may decrease the quarterly monitoring requirement specified in clause (A) if it has determined that monitoring results are reliably and consistently below all MCLs for PFAS established under § 109.202(a). The Department will not make this determination until the water system obtains results from a minimum of four consecutive quarterly samples that are reliably and consistently below all PFAS MCLs.

(C) If the Department determines that monitoring results are reliably and consistently below all PFAS MCLs, the Department may allow the system to monitor annually. Systems which monitor annually shall monitor for compliance with the MCLs for PFAS established under § 109.202(a) during the quarter that previously yielded the highest analytical result, or as specified by the Department.

(iii) Repeat monitoring at entry points at which none of the PFAS are detected. For entry points at which none of the PFAS with an MCL established under § 109.202(a) are detected during initial monitoring in accordance with subparagraph (i), required monitoring is reduced to one sample per entry point during each subsequent compliance period. This

reduced monitoring shall be conducted in the same year as reduced monitoring granted for VOCs under paragraph (5)(iv)(B) and SOCs under paragraph (6)(iii) as specified by the Department.

(iv) Repeat monitoring for entry points at which at least one of the PFAS exceeds an MCL. For entry points at which a result for at least one of the PFAS exceeds an MCL established under § 109.202(a), monitoring for compliance with the MCLs for PFAS established under § 109.202(a) shall be conducted quarterly, beginning the quarter following the exceedance. Quarterly monitoring shall continue until a minimum of 4 consecutive quarterly samples shows the system is in compliance as specified in subparagraph (ix) and the Department determines the system is reliably and consistently below all PFAS MCLs. If the Department determines that the system is in compliance and is reliably and consistently below all PFAS MCLs, the Department may allow the system to monitor in accordance with subparagraph (ii)(C).

(v) Confirmation samples. A confirmation sample shall be collected and analyzed for each of the PFAS detected in exceedance of its MCL during annual or less frequent compliance monitoring. The confirmation sample shall be collected within 2 weeks of notification from the accredited laboratory performing the analysis that an MCL has been exceeded.

(vi) Repeat and performance monitoring for entry points with PFAS removal treatment. The reduced monitoring option in subparagraph (iii) does not apply to entry points at which treatment has been installed for removal of at least one of the PFAS with an MCL established under § 109.202(a). Compliance monitoring shall be conducted at least annually at entry points with PFAS treatment. Performance monitoring shall be conducted quarterly for the specific PFAS for which treatment is provided.

(vii) Waivers. Systems conducting monitoring under subparagraph (ii) at groundwater or GUDI entry points may apply for a use waiver for those entry points which have 3 consecutive years of quarterly or annual samples with no detection of any of the PFAS with an MCL established under § 109.202(a). A use waiver from conducting monitoring under subparagraph (ii)(C) may be granted to a public water supplier with groundwater or GUDI entry points based on documentation provided by the public water supplier and a determination by the Department that the requirements in clauses (A) and (B) have been met. Entry points at which treatment has been installed to remove one or more of the PFAS with MCLs established under § 109.202(a) are not eligible for a waiver.

(A) A use waiver may be granted for a specific entry point after evaluating knowledge of previous use, including storage, manufacturing, transport or disposal of one or more PFAS within the wellhead protection area Zones I and II as defined under § 109.1. If a determination by the Department reveals no previous use, a waiver may be granted for the entry point.

(B) Waiver requests and renewals shall be submitted to the Department, on forms provided by the Department, for review and approval prior to the end of the applicable monitoring period. Until the waiver request or renewal is approved, the public water system is responsible for conducting all required monitoring.

(C) If a use waiver is granted by the Department, required monitoring at that entry point is reduced to one sample during the subsequent compliance period. This monitoring shall be conducted during the quarter that previously yielded the highest analytical result, or as specified by the Department, and in the same years as any

reduced monitoring granted for VOCs under paragraph (5)(iv)(B) and SOCs under paragraph (6)(iii) as specified by the Department.

(D) A waiver is effective for one compliance period and may be renewed in each subsequent compliance period.

(viii) Invalidation of PFAS samples.

(A) The Department may invalidate results of obvious sampling errors.

(B) A sample invalidated under this subparagraph does not count towards meeting the minimum monitoring requirements of this paragraph.

(ix) Compliance determinations. Compliance with the PFAS MCLs shall be determined based on the analytical results obtained at each entry point. If one entry point is in violation of an MCL, the system is in violation of the MCL.

(A) For systems monitoring more than once per year, compliance with the MCL is determined by a running annual average of all samples taken at each entry point.

(B) If monitoring is conducted annually or less frequently, the system is out of compliance if the level of a contaminant at any entry point is greater than the MCL. If a confirmation sample is collected as specified in subparagraph (v), compliance is determined using the average of the two sample results.

(C) If any sample result will cause the running annual average to exceed the MCL at any entry point, the system is out of compliance with the MCL immediately.

(D) If a system fails to collect the required number of samples, compliance with the MCL will be based on the total number of samples collected.

(E) If a sample result is less than the MRL, zero will be used to calculate compliance.

* * * * *

§ 109.303. Sampling requirements.

(a) The samples taken to determine a public water system's compliance with MCLs, MRDLs or treatment technique requirements or to determine compliance with monitoring requirements shall be taken at the locations identified in §§ 109.301, 109.302, 109.1003, 109.1103, 109.1202 and 109.1303 and as follows:

* * * * *

(4) Samples for determining compliance with MCLs for organic contaminants listed by the EPA under 40 CFR 141.61 (relating to maximum contaminant levels for organic contaminants), inorganic contaminants listed by the EPA under 40 CFR 141.62 (relating to maximum contaminant levels (MCLs) for inorganic contaminants), radionuclide contaminants listed by the EPA under 40 CFR 141.66 (relating to maximum contaminant levels for radionuclides) **[and with the special monitoring requirements for unregulated contaminants under § 109.302(f) (relating to special monitoring requirements)]** shall be taken at each entry point to the distribution system which is representative of each source after an application of treatment during periods of normal operating conditions. If a system draws water from more than one source and the sources are combined prior to distribution, the system shall sample at the entry point during periods of normal operating conditions when water is representative of all sources being used.

(5) Asbestos sampling points shall be at the distribution tap where asbestos contamination is expected to be the greatest based on the presence of asbestos cement pipe and lack of optimum corrosion control treatment, and at the entry point for each source which the Department has reason

to believe may contain asbestos, except that a collected distribution sample which is representative of a source may be substituted for a required entry point sample.

(6) Samples for determining compliance with MCLs for PFAS contaminants listed in § 109.202(a)(4) shall be taken as follows:

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

(ii) Samples shall be collected by a person properly trained by a laboratory accredited by the Department to conduct PFAS analysis.

* * * * *

§ 109.304. Analytical requirements.

(a) Sampling and analysis shall be performed in accordance with analytical techniques adopted by the EPA under the Federal act or methods approved by the Department.

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(f) For the purpose of determining compliance with the PFAS MCLs established in § 109.202(a)(4) (relating to State MCLs, MRDLs and treatment technique requirements), sampling and analysis for PFAS shall be conducted as follows:

(1) Sampling and analysis shall be according to the following approved methods and MRLs:

	<u>Contaminant</u>	<u>Methods</u>	<u>MRL (ng/L)</u>
(i)	<u>PFOA</u>	<u>EPA 533, EPA 537.1, EPA 537 Version 1.1</u>	<u>5</u>
(ii)	<u>PFOS</u>	<u>EPA 533, EPA 537.1, EPA 537 Version 1.1</u>	<u>5</u>

(2) Analysis shall be conducted by a laboratory accredited by the Department.

(3) Accredited laboratories must determine the MDL for each analyte, according to the procedure in Appendix B, Revision 2 to 40 CFR Part 136 (relating to definition and procedure for the determination of the method detection limit) or as specified in the method.

(4) Accredited laboratories must analyze Performance Evaluation Samples provided by a third party at least once per year by each method for which the laboratory maintains certification. Results of Performance Evaluation Samples must be within ±30% of the true value.

(5) The MRL must be contained within the range of calibration.

Subchapter D. PUBLIC NOTIFICATION

§ 109.411. Content of a public notice.

(a) *Elements of a public notice.* When a public water system is required to give public notice under this subchapter, each public notice must include the following elements:

* * * * *

(e) *Standard language for a public notice.* Public water systems shall include the following standard language in their public notice:

(1) *Standard health effects language for primary MCL or MRDL violations, treatment technique violations, and violations of the condition of a variance or exemption.* Public water systems shall include in each public notice appropriate health effects language. This subchapter incorporates by reference the health effects language specified in 40 CFR Part 141, Subpart Q, Appendix B (relating to standard health effects language for public notification), corresponding to each primary MCL, MRDL and treatment technique violation listed in 40 CFR Part 141, Subpart Q, Appendix A (relating to NPDWR violations and other situations requiring public notice), and for each violation of a condition of a variance or exemption, unless other health effects language is established by regulations or order of the Department. **[The health effects language for fluoride is not incorporated by reference. Public water systems shall include the following health effects language in each Tier 2 public notice for violation of the primary MCL of 2 mg/L for fluoride:]**

(i) The health effects language for fluoride is not incorporated by reference. Public water systems shall include the following health effects language in each Tier 2 public notice for violation of the primary MCL of 2 mg/L for fluoride:

“This is an alert about your drinking water and a cosmetic dental problem that might affect children under nine years of age. At low levels, fluoride can help prevent cavities, but children drinking water containing more than 2 milligrams per liter (mg/L) of fluoride may develop cosmetic discoloration of their permanent teeth (dental fluorosis). Dental fluorosis, in its moderate or severe forms, may result in a brown staining and or pitting of the permanent teeth. This problem occurs only in developing teeth, before they erupt from the gums. Drinking water containing more than 4 mg/L of fluoride (the U.S. Environmental Protection Agency’s drinking water standard) can increase your risk of developing bone disease.”

(ii) Public water systems shall include the following health effects language in each Tier 2 public notice for violation of the primary MCL for PFOA:

“Drinking water containing PFOA in excess of the MCL of 14 ng/L may cause adverse health effects, including developmental effects (neurobehavioral and skeletal effects).”

(iii) Public water systems shall include the following health effects language in each Tier 2 public notice for violation of the primary MCL for PFOS:

“Drinking water containing PFOS in excess of the MCL of 18 ng/L may cause adverse health effects, including decreased immune response.”

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§ 109.416. CCR requirements.

This section applies only to community water systems and establishes the minimum requirements for the content of the annual CCR that each system shall deliver to its customers. This report must contain information on the quality of the water delivered by the system and characterize the risks, if any, from exposure to contaminants detected in the drinking water in an accurate and understandable manner.

* * * * *

(3) Except as noted in subparagraphs (i)—(v), the annual report that a community water system provides to its customers shall contain all of the information, mandatory language and optional text specified by the EPA under 40 CFR 141.153 and 141.154 (relating to content of the reports; and

required additional health information), which are incorporated by reference, and under 40 CFR 141, Subpart O, Appendix A (relating to regulated contaminants), which is incorporated by reference, unless other information, mandatory language or optional text is established by regulations or order of the Department. The health effects language for fluoride is not incorporated by reference. Public water systems shall include the health effects language specified in § 109.411([d] e)(1)(i) (relating to content of a public notice) for violation of the primary MCL of 2 mg/L fluoride.

(i) If a water system wants to use wording of its own choice in place of optional text, the water supplier shall submit the proposed wording to the Department for review and written approval prior to including it in its annual CCR. Once approved, the water supplier's wording may be used in future CCRs without further approval from the Department as long as it is not changed and is still applicable.

(ii) The CCR shall contain information in Spanish regarding the importance of the report or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the report or to request assistance.

(iii) For each non-English-speaking group other than Spanish-speaking that exceeds 10% of the residents for systems serving at least 1,000 people or 100 residents for systems serving less than 1,000 people, and speaks the same language other than English, the report shall contain information in the appropriate languages regarding the importance of the report or contain a telephone number or address where persons served may contact the water system to obtain a translated copy of the report or to request assistance in the appropriate language. The Department will make the final determination of which systems need to include this information.

(iv) For the purpose of defining how certain portions of a CCR shall appear, the term "prominently display" as used in 40 CFR 141.154(a) means that the information shall be printed either in a larger size typeface or bolded or enclosed within a border or all these so as to make the information conspicuous in comparison to the rest of the text appearing before and after the prominently displayed text. Prominently displayed text placed away from other text (such as, in a highlighted or boxed area) shall be printed no smaller than the text used elsewhere in the body of the report, excluding main or section titles.

(v) Information contained in a CCR shall appear in an easy-to-read format. Font sizes below 10 points or color combinations, or both, that make it difficult for persons to read and understand the information contained in the CCR may not be used.

(3.1) Public water suppliers required to conduct monitoring for PFAS under § 109.301(16) (relating to monitoring requirements) shall also include at a minimum the following information:

(i) Information on results detected.

(A) MCL in ng/L.

(B) MCLG in ng/L.

(C) Highest level detected in ng/L.

(D) Range of detections in ng/L.

(E) Sample dates.

(F) Whether a violation occurred.

(G) Sources of contamination. The likely source(s) of detected contaminants to the best of the public water supplier's knowledge. Specific information regarding contaminants may be available in sanitary surveys or source water assessments and should be used

when available. If the public water supplier lacks specific information on the likely source or sources of the contaminant or contaminants, the following statement shall be used:

“Discharge from manufacturing facilities and runoff from land use activities.”

(ii) Health effects language. Public water systems shall include the health effects language specified in § 109.411(e)(1)(ii)-(iii) (relating to content of a public notice) for violation of a primary MCL for PFAS specified in § 109.202(a) (relating to State MCLs, MRDLs and treatment technique requirements).

(4) Each community water system shall do the following:

(i) Mail or otherwise directly deliver to each customer one copy of the annual CCR no later than the date specified in paragraph (2).

(ii) Mail a paper copy of the annual CCR to the Department no later than the date the water system is required to distribute the CCR to its customers.

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Subchapter E. PERMIT REQUIREMENTS

§ 109.503. Public water system construction permits.

(a) *Permit application requirements.* An application for a public water system construction permit shall be submitted in writing on forms provided by the Department and shall be accompanied by plans, specifications, engineer’s report, water quality analyses and other data, information or documentation reasonably necessary to enable the Department to determine compliance with the act and this chapter. The Department will make available to the applicant the Public Water Supply Manual, available from the Bureau of Safe Drinking Water, Post Office Box 8467, Harrisburg, Pennsylvania 17105 which contains acceptable design standards and technical guidance. Water quality analyses shall be conducted by a laboratory accredited under this chapter.

(1) *General requirements.* An application must include:

* * * * *

(iii) *Information describing new sources.* Information describing new sources must include the items specified in clauses (A)—(F). The information specified in clauses (C) and (D) may not be more than 2 years old from the date the permit application is submitted unless the Department approves the use of data more than 2 years old. The Department may accept approval of an out-of-State source by the agency having jurisdiction over drinking water in that state if the supplier submits adequate proof of the approval and the agency’s standards are at least as stringent as this chapter:

* * * * *

(D) An evaluation of the quality of the raw water from each new source. For groundwater sources, the evaluation shall be conducted at the conclusion of the constant rate aquifer test. This clause does not apply when the new source is finished water obtained from an existing permitted community water system unless the Department provides written notice that an evaluation is required. The evaluation must include analysis of all of the following:

* * * * *

(XIV) For groundwater sources, the monitoring specified in § 109.302(f) (relating to special monitoring requirements) if the Department determines that the source is susceptible to surface water influence.

(XIV.1) PFAS for which MCLs have been established under § 109.202(a).

(XV) Other contaminants that the Department determines necessary to evaluate the potability of the source.

* * * * *

Subchapter F. DESIGN AND CONSTRUCTION STANDARDS

§ 109.602. Acceptable design.

(a) A public water system shall be designed to provide an adequate and reliable quantity and quality of water to the public. The design must ensure that the system will, upon completion, be capable of providing water that complies with the primary and secondary MCLs, MRDLs and treatment techniques established in Subchapters B, K, L and M except as further provided in this section.

* * * * *

(i) PFAS.

(1) The Department identifies the following treatment technologies as acceptable for achieving compliance with the MCLs for PFAS, established under § 109.202(a) (relating to State MCLs, MRDLs and treatment technique requirements):

(i) GAC.

(ii) Ion exchange.

(iii) Reverse Osmosis.

(2) Other treatment technologies may be approved by the Department if the applicant demonstrates the alternate technology is capable of providing an adequate and reliable quantity and quality of water to the public.

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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:

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(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 **or confirmation** samples under § 109.301.

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

* * * * *

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, MRDLs and treatment techniques as follows, except that systems which have installed treatment to comply with a primary MCL shall conduct quarterly operational monitoring for the contaminant which the treatment is designed to remove:

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

* * * * *

(xiv) Beginning April 28, 2018, a system that uses or obtains finished water from another permitted public water system using surface water or GUDI sources shall comply with the following requirements:

* * * * *

(xv) Beginning January 1, 2024, monitor for compliance with the MCLs for PFAS established under § 109.202(a).

(A) Monitoring exemption. Systems that obtain finished water from another permitted public water system are exempt from conducting monitoring for PFAS if the public water system supplying the finished water performs the required monitoring at least annually and a copy of the analytical reports are received by the Department.

(B) Initial monitoring. Initial monitoring shall consist of 4 consecutive quarterly samples at each entry point. Systems that add new sources to new or existing entry points on or after January 1, 2024 shall conduct initial monitoring according to this clause. An entry point with one or more new sources shall be monitored for 4 consecutive quarters, beginning the first full quarter the entry point begins serving the public.

(C) Repeat monitoring. Repeat monitoring for entry points shall be conducted as follows:

(I) For an entry point at which at least one of the PFAS with an MCL established under § 109.202(a) is detected during initial monitoring or where one or more PFAS is detected anytime at a level in excess of its MCL, compliance monitoring shall be repeated quarterly for the PFAS for which an MCL has been established under § 109.202(a). After analyses of four consecutive quarterly samples at an entry point, including initial quarterly monitoring samples, demonstrate that the PFAS levels in each quarterly sample are less than the MCLs, the required compliance monitoring is reduced to one sample per year at that entry point for all PFAS for which an MCL has been established under § 109.202(a).

(II) For a groundwater or surface water entry point at which no PFAS for which an MCL has been established under § 109.202(a) are detected during the initial and subsequent repeat monitoring, repeat monitoring shall be one sample per year from that entry point.

(D) Confirmation samples. A confirmation sample shall be collected and analyzed for each of the PFAS detected in exceedance of its MCL during annual monitoring. The confirmation sample shall be collected within 2 weeks of notification from the accredited laboratory performing the analysis of the MCL exceedance.

(E) Repeat and performance monitoring for entry points with PFAS removal treatment. Compliance monitoring shall be conducted annually at entry points with PFAS treatment. Performance monitoring shall be conducted quarterly for the specific PFAS for which treatment is provided.

(F) Invalidation of PFAS samples.

(I) The Department may invalidate results of obvious sampling errors.

(II) A sample invalidated under this clause does not count towards meeting the minimum monitoring requirements of this subparagraph.

(G) Compliance determinations. Compliance with the PFAS MCLs shall be determined based on the analytical results obtained at each entry point. If one entry point is in violation of an MCL, the system is in violation of the MCL.

(I) For systems monitoring more than once per year, compliance with the MCL is determined by a running annual average of all samples taken at each entry point.

(II) If monitoring is conducted annually, the system is out of compliance if the level of a contaminant at any entry point is greater than the MCL. If a confirmation sample is collected as specified in clause (D), compliance is determined using the average of the two sample results.

(III) If any sample result will cause the running annual average to exceed the MCL at any entry point, the system is out of compliance with the MCL immediately.

(IV) If a system fails to collect the required number of samples, compliance with the MCL will be based on the total number of samples collected.

(V) If a sample result is less than the MRL, zero will be used to calculate compliance.

* * * * *

(b) *Sampling requirements.*

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(3) Sampling and analysis shall be performed in accordance with analytical techniques adopted by the EPA under the Federal act or methods approved by the Department **in accordance with § 109.304.**

(4) Compliance monitoring samples for VOCs, as required under subsection (a)(1)(iii), shall be collected by a person properly trained by a laboratory certified by the Department to conduct VOC or vinyl chloride analysis.

* * * * *

(6) [Sampling and analysis shall be performed in accordance with analytical techniques adopted by the EPA under the Federal act or methods approved by the Department.] **Compliance monitoring samples for PFAS, as required under subsection (a)(1)(xv), shall be collected by a person properly trained by a laboratory accredited by the Department to conduct PFAS analysis.**

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Subchapter N. DRINKING WATER FEES

§ 109.1403. Monitoring waiver fees.

- (a) *New waivers.* An application for a new waiver from the monitoring requirements in §§ 109.301 and 109.302 (relating to general monitoring requirements; and special monitoring requirements) for a single source must be accompanied by a fee as follows:

<i>Waiver Type</i>	<i>New Waiver Fee</i>
VOC use waiver	\$100
SOC use waiver	\$100
SOC susceptibility waiver	\$300
IOC waiver	\$100
<u>PFAS use waiver</u>	<u>\$100</u>

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