310 CMR 22.00: DRINKING WATER

Section

22.02: Definitions

(1) As used in 310 CMR 22.00, the following terms shall have the following meanings:

Compliance Cycle means the nine-year (calendar year) cycle during which public water systems must monitor. Each Compliance Cycle consists of three three-year Compliance Periods. The first calendar year cycle begins January 1, 1993 and ends December 31, 2001; the second begins January 1, 2002 and ends December 31, 2010; the third begins January 1, 2011 and ends December 31, 2019. Each

subsequent Compliance Cycle shall commence on the 1st day of January immediately following the last day of the prior Compliance Cycle, and shall end on the 31st day of December in its ninth calendar year.

Compliance Period means a three-year (calendar year) period within a Compliance Cycle. Each Compliance Cycle has three three-year Compliance Periods. Within the first Compliance Cycle, the first Compliance Period runs from January 1, 1993 to December 31, 1995; the second from January 1, 1996 to December 31, 1998; the third from January 1, 1999 to December 31, 2001. Each subsequent Compliance Period shall commence on the 1st day of January immediately following the last day of the prior Compliance Period, and shall end on the 31st day of December in its third calendar year.

Confirmatory Sample or Confirmation Sample shall mean a sample collected from the same Sampling Point as an initial sample for analysis, in order to verify the analytical results of the initial sample.

Method Detection Limit or MDL means the minimum concentration of substance that can be identified, measured, and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix containing the analyte. The method detection limit refers to samples that have been processed through all the steps of an established analytical procedure.

Minimum Reporting Level or MRL means the minimum concentration that can be reported as a quantitated value for a target analyte in a sample following analysis.

Reliably and Consistently Below the MCL means that though a system detects contaminants in its water supply, it has sufficient knowledge of the source or extent of the contamination to predict that the MCL would not be exceeded in the future. (*E.g.*, wide variations in analytical results or an analytical result which is close to the MCL are examples of situations where systems would not be Reliably and Consistently Below the MCL.).

22.03: Compliance

(13) A Supplier of Water shall submit or report to the Department all data or information required to be submitted or reported pursuant to 310 CMR 22.00, including without limitation 310 CMR 22.15, in the format and manner as specified and approved by the Department. Where required, including without limitation as specified in 310 CMR 22.07G(17), written submissions shall be made using the electronic filing system designated by the Department. A Supplier of Water may request in writing a waiver from any applicable electronic filing requirement, for a limited period of time. All such requests shall be based on a showing that internet access necessary to make the required electronic filings is not available, despite the reasonable efforts of the Supplier of Water or party acting on its behalf (*e.g.*, a laboratory) to acquire the needed internet access. All electronic filing waiver requests shall be made on a form provided by the Department and shall be subject to the Department's written approval. Any Supplier of Water whose waiver request is approved shall make paper filings in lieu of the applicable electronic filings during the period of the waiver using printed copies of the applicable filing forms.

22.07G: Per- and Polyfluoroalkyl Substances (PFAS) Monitoring and Analytical Requirements

(1) General Applicability. Every Supplier of Water operating a Community Water System or Non-transient, Non-community Water System shall be subject to 310 CMR 22.07G(3) through (17), inclusive.

(2) Special Applicability for Transient, Non-community Water Systems. Every Supplier of Water operating a Transient, Non-community Water System shall collect, analyze and report the results of one sample from each Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), no later than September 30, 2022. All such monitoring shall be performed in compliance with the provisions addressing monitoring protocols, invalidation of PFAS samples, PFAS analytical requirements, PFAS reporting requirements, PFAS6 minimum reporting levels and electronic filing requirement set forth in 310 CMR 22.07G(4), (9), (12), (13), (16) and (17), respectively.

(3) Per- and Polyfluoroalkyl Substances.

(a) PFAS. PFAS shall mean per- and polyfluoroalkyl substances.

(b) PFAS Detection. PFAS Detection shall mean a concentration of any PFAS measured in accordance with 310 CMR 22.07G(12) which is greater than or equal to the analytical laboratory's applicable Minimum Reporting Level (or MRL).

(c) PFAS6. PFAS6 shall mean the sum of the concentrations of the six contaminants listed in the following table:

CAS No.	Contaminant
1763-23-1	Perfluorooctane Sulfonic Acid (PFOS)
335-67-1	Perfluorooctanoic Acid (PFOA)
355-46-4	Perfluorohexane Sulfonic Acid (PFHxS)
375-95-1	Perfluorononanoic Acid (PFNA)
375-85-9	Perfluoroheptanoic Acid (PFHpA)
335-76-2	Perfluorodecanoic Acid (PFDA)

(d) PFAS6 Maximum Contaminant Level. The PFAS6 Maximum Contaminant Level (MCL) shall be 0.000020 milligrams per liter (mg/l) or 20 nanograms per liter (ng/l).

(e) Review of PFAS and Drinking Water. Not later than December 31, 2023, and once every three years thereafter, the Department shall perform a review of relevant developments in the science, assessment and regulation of PFAS in drinking water for the purpose of evaluating whether to amend 310 CMR 22.07G(3) in light of any advancements in analytical or treatment technology, toxicology and/or any other relevant information. Information about this review shall be made available to the public.

(4) Monitoring Protocols. For the purpose of determining compliance with the PFAS6 MCL set forth in 310 CMR 22.07G(3)(d), monitoring shall be conducted as follows:

(a) Single Source Entry Points. Each Public Water System that draws water from a single source shall take a minimum of one sample at every entry point to the Distribution System which is representative of each of its sources after treatment (Sampling Point). Each sample shall be taken at the same Sampling Point unless the Department determines, based upon local conditions (*e.g.*, facility design), that an alternate sampling location(s) would be more representative of each source or treatment plant.

(b) Multiple Source Entry Points. Any Public Water System that draws water from more than one source, where the sources are combined before distribution, shall sample at every entry point to the Distribution System which is representative of all such combined sources after treatment (Sampling Point) during periods of normal operating conditions (*i.e.*, when water representative of all sources is being used). If all sources are not operated simultaneously under normal operating conditions, then additional samples shall be collected representing each source that is operated alone and/or each combination of sources that are operated together. Each sample shall be taken at the same Sampling Point unless the Department determines, based upon local conditions (*e.g.*, facility design), that an alternate sampling location(s) would be more representative of each source or treatment plant.

(c) Consecutive Systems. Unless required by the Department to evaluate PFAS levels, each Consecutive Public Water System shall be exempt from conducting compliance monitoring for PFAS under 310 CMR 22.07G for its purchased portion of water, provided that the Public Water System from which the water is obtained has conducted the monitoring required under 310 CMR 22.07G.

(5) Initial Monitoring.

(a) Applicability. 310 CMR 22.07G(5) shall apply to each Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), where:

1. there have been no PFAS Detections;
2. there has been a PFAS Detection, but the average of the PFAS6 in such detection and of PFAS6 in an associated Confirmatory Sample is less than or equal to 0.000010 mg/l; or

3. subsequent to a PFAS Detection described in 310 CMR 22.07G(5)(a)2., there have been no PFAS Detection(s) where PFAS6 as determined for such detections is greater than 0.000010 mg/l.

(b) Frequency and Timing.

1. Except as provided in 310 CMR 22.07G(5)(b)2. or 3., for each such location required to be sampled pursuant to 310 CMR 22.07G(5), four consecutive quarterly samples shall be collected and each such sample shall be analyzed for PFAS in accordance with 310 CMR 22.07G(12). Each sample shall be collected the first month of every quarter during initial monitoring. A Supplier of Water serving the specified population shall commence initial monitoring on the date set forth below:
   a. greater than 50,000 individuals, January 1, 2021;
   b. 50,000 individuals or fewer, but greater than 10,000 individuals, April 1, 2021; or
   c. 10,000 or fewer individuals, October 1, 2021.
2. If a Supplier of Water meets any of the following conditions after the applicable commencement date described in 310 CMR 22.07G(5)(b)1., it shall commence initial monitoring of such locations within the first full calendar quarter of delivering water to the public:
   a. begins operation of a new Public Water System, or
   b. puts a New Source on-line.
3. If a Supplier of Water reactivates an existing source or opens a Seasonal System after the applicable commencement date described in 310 CMR 22.07G(5)(b)1, it shall commence initial monitoring of such locations within the first month of delivering water to the public.

(c) Waivers. Any Public Water System subject to 310 CMR 22.07G(5), all of whose analytical results for the first two quarters of monitoring described in 310 CMR 22.07G(5)(b) are below the applicable MRLs, may submit a written request to waive the third and fourth quarters of such monitoring, subject to the Department's written approval based upon a determination that there is no known or suspected PFAS contamination in the vicinity of the Public Water System or its sources of water.

(6) Routine Monitoring.

(a) Applicability. 310 CMR 22.07G(6) shall apply to any Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), at which there are no PFAS Detections during initial monitoring or during three years of annual monitoring.

(b) Frequency and Timing. A Public Water System may reduce the monitoring frequency for such locations in each subsequent Compliance Period to the following number of quarters all within any one calendar year, the selection of which quarters shall be subject to the Department's prior written approval:

1. if serving more than 3,300 individuals, to a minimum of one sample taken in the first month of any two selected quarters; or
2. if serving fewer than or equal to 3,300 individuals, to a minimum of one sample taken in the first month of any one selected quarter.

(c) Waivers.

1. Eligibility and Duration. Commencing January 1, 2023, any Supplier of Water subject to 310 CMR 22.07G(6) may submit a written request to the Department for a waiver from the monitoring requirements set forth in 310 CMR 22.07G(6)(b)1. or 2. for up to a single Compliance Period. A Supplier of Water may reapply to the Department for a waiver for each successive Compliance Period, provided however that sampling shall occur at least once during the first Compliance Period of each successive Compliance Cycle.
2. Application. Each waiver request made pursuant to 310 CMR 22.07G(6)(c)1. shall include a description of land uses (both current and prior) within the Watershed, Zone II or IWPA, that may potentially contribute PFAS to the Public Water System's source(s) of water supply, including without limitation all known manufacture, storage, use or disposal of PFAS or PFAS containing materials.
3. Basis. Approval of a waiver request made pursuant to 310 CMR 22.07G(6)(c)1. shall be subject to the Department's written determination that there is no reason to suspect PFAS contamination in the vicinity of the Public Water System or its sources of water. Such determination shall be based on the information submitted pursuant to 310 CMR 22.07G(6)(c)2. and any other

relevant information known to the Department, including without limitation the following factors:

a. previous analytical results;
b. proximity of the Public Water System or its sources of water to potential sources of contamination including but not limited to manufacturing, distribution, or storage facilities; hazardous and solid waste landfills and other waste handling or treatment facilities; locations where fires are known to have been extinguished with aqueous film forming foam; wastewater treatment plants; airports; current and former military bases; facilities where fire training occurs; and areas where the application of bio-solids occurs;
c. proximity of the Public Water System or its sources of water to known spills or leaks of chemicals, including but not limited to any release, site or disposal site as defined under 310 CMR 40.0000;
d. environmental persistence and transport of PFAS;
e. how well the source(s) of water supply is protected against contamination due to such factors as the depth of the well, the type of soil, the integrity of the well casing, and other relevant protective measures;
f. completed remediation activities that removed sources of PFAS;
g. source operations (*e.g.*, manifold or seasonal sources, blending, flow rates); and
h. use of existing treatment processes which have the potential to reduce PFAS concentrations in the finished water.

(7) PFAS Detections.

(a) Applicability. 310 CMR 22.07G(7) shall apply to any Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), following:

1. the first PFAS Detection during either initial or routine monitoring;
2. the second or later PFAS Detection during initial monitoring where PFAS6 as determined for such second or later detection is greater than 0.000010 mg/l;
3. the second or later PFAS Detection during routine monitoring where PFAS6 as determined for such second or later detection is greater than 0.000010 mg/l, unless the Department determines in writing that such location is Reliably and Consistently Below the MCL; or
4. the receipt by the Department of an analytical result during quarterly or annual monitoring which the Department determines is outside the historic range of PFAS results.

(b) Reporting. Any PFAS Detection described in 310 CMR 22.07G(7)(a)1., 2., or 3. shall be reported to the Department within seven days of receipt of such result from the laboratory.

(c) Confirmatory Sampling. The Supplier of Water shall obtain a Confirmatory Sample for any analytical result described in 310 CMR 22.07G(7)(a), as soon as possible after receipt of such result from the laboratory or notification from the Department, as applicable, and no later than two weeks from such date. Provided, however, a Supplier of Water may request a one-time extension not to exceed two weeks for obtaining such Confirmatory Sample, using a form specified by the Department, upon a demonstration of need due to circumstances beyond its control (*e.g.*, system design, etc.) to the satisfaction of and at the sole discretion of the Department.

(d) Source Sampling. If a PFAS Detection described in 310 CMR 22.07G(7)(a)1., 2. or 3. represents multiple sources, then samples representing the individual source water shall also be collected and analyzed for PFAS.

(e) Public Education. Any Supplier of Water subject to 310 CMR 22.07G(7), where there has been a PFAS Detection and the average of such detection and an associated Confirmatory Sample exceeds the PFAS6 MCL, shall provide public education materials regarding the exceedance in accordance with the following requirements:

1. notice of the exceedance shall be provided using materials approved by the Department;
2. such materials shall be provided to all persons served by the affected Public Water System, including without limitation consumers who do not receive water bills;
3. such materials shall be provided as soon as practical and no later than 30 days after receipt of Confirmatory Sample results from the laboratory;

4. in any community where such Supplier of Water's consumers include:
    a. either (i) 10% or more non-English speaking residents who speak a common language or (ii) more than 1000 non-English speaking residents who speak a common language, such materials must contain information in the language(s) appropriate for each such group of residents regarding the importance of the notice; or
    b. 25% or more non-English speaking residents who speak a common language, such materials must contain a statement in the appropriate language(s) for each such group of residents which includes a telephone number or address where those residents may contact the affected Public Water System to obtain a translated copy of the materials or assistance in the appropriate language(s).
5. such materials shall be provided by mail and/or other method approved by the Department (*e.g.*, a Non-transient Non-community Water System may be permitted to post the materials in one or more conspicuous locations in the facility for a minimum number of days);
6. such materials shall include all results from both the PFAS Detection and the Confirmatory Sample; the average PFAS6 concentration of the samples; the PFAS6 MCL as provided in 310 CMR 22.07G(3)(d) and the definition of MCL as provided in 310 CMR 22.02(1); an explanation of the health effects of PFAS6; steps consumers can take to reduce exposure to PFAS in drinking water; and contact information for the Supplier of Water;
7. until either the Public Water System obtains a monitoring result at or below the PFAS6 MCL at such locations as described in 310 CMR 22.07G(7)(a) or the Supplier of Water takes the contaminated source(s) off-line:
    a. if such materials were mailed, updated materials shall be re-mailed quarterly;
    b. if such materials were posted for an approved minimum number of days, updated materials shall be re-posted quarterly for the same minimum number of days;
    c. if such materials were published in a local newspaper, updated materials shall be re-published quarterly; and/or
    d. if such materials were provided by other Department-approved methods, updated materials shall be provided quarterly by the same methods; and
8. a copy of such materials shall be submitted to the Department upon initial and each subsequent issuance if required by 310 CMR 22.07G(7)(e)7. along with a written certification by the Supplier of Water that the materials have been distributed in compliance with 310 CMR 22.07G(7)(e)1. through 6., inclusive.

(8) Increased Monitoring Frequency Following PFAS Detection.

(a) Applicability. 310 CMR 22.07G(8) shall apply to each Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), at which there has been a PFAS Detection.

(b) Monthly Monitoring.

1. Except as provided in 310 CMR 22.07G(8)(b)2., a Supplier of Water shall monitor such locations on a monthly basis to determine compliance with the PFAS6 MCL as per 310 CMR 22.07G(10), if:
    a. there has been a PFAS Detection and the average of PFAS6 in such detection and of PFAS6 in an associated Confirmatory Sample is greater than 0.000010 mg/l; or
    b. the Department determines in writing that a location subject to quarterly or annual monitoring is no longer Reliably and Consistently Below the MCL.
2. After completing the first quarter of monthly monitoring pursuant to 310 CMR 22.07G(8)(b)1., a Supplier of Water who is in violation of the PFAS6 MCL, determined as per 310 CMR 22.07G(10), may request written approval from the Department to use the results from a single sample taken in the first month of each subsequent quarter to determine compliance with the PFAS6 MCL rather than using the average of the three monthly samples otherwise required, subject to the following:
    a. upon such written approval, if any such single sample alone exceeds the PFAS6 MCL, such Supplier of Water shall be in violation of the PFAS6

MCL immediately and shall provide public notice in accordance with 310 CMR 22.16; and

b. if any such single sample is less than or equal to the PFAS6 MCL, then such Supplier of Water shall continue monthly monitoring during the remaining two months of the quarter and compliance with the PFAS6 MCL shall be determined as per 310 CMR 22.07G(10).

(c) Quarterly Monitoring. If any such location has had PFAS treatment installed and the Department determines in writing that such location is Reliably and Consistently Below the MCL, then the Supplier of Water shall monitor that location in the first month of each quarter.

(d) Annual Monitoring. A Supplier of Water shall monitor such locations on an annual basis during the first month of the calendar quarter that previously yielded the highest analytical result. A Supplier of Water shall conduct this annual monitoring if:

1. all of the following are true:
   a. all four quarters of initial monitoring pursuant to 310 CMR 22.07G(5)(a) have been completed;
   b. the first PFAS Detection occurred during such initial monitoring and the average of PFAS6 in such detection and of PFAS6 in an associated Confirmatory Sample is less than or equal to 0.000010 mg/l; and
   c. for any second or later PFAS Detection occurring during such initial monitoring with PFAS6 greater than 0.000010 mg/l, the average of PFAS6 in such second or later detection and of PFAS6 in the Confirmatory Sample associated with each such detection is less than or equal to 0.000010 mg/l;
2. the Department determines in writing that a location subject to monthly monitoring under 310 CMR 22.07G(8)(b), without the installation of PFAS treatment, is Reliably and Consistently Below the MCL;
3. the Department determines in writing that a location subject to quarterly monitoring under 310 CMR 22.07G(8)(c), taking into consideration any documentation provided by such Supplier of Water and any other relevant factors, would be Reliably and Consistently Below the MCL without PFAS treatment; or
4. a location subject to routine monitoring under 310 CMR 22.07G(6):
   a. has its first PFAS Detection and the average of PFAS6 in such detection and of PFAS6 in an associated Confirmatory Sample is less than or equal to 0.000010 mg/l; or
   b. has a second or later PFAS Detection with a PFAS6 less than or equal to 0.000010 mg/l and the Department determines in writing that such location is not Reliably and Consistently Below the MCL.

(9) Invalidation of PFAS Samples. All PFAS results shall be subject to the Department's review and may be invalidated where the associated quality control information indicates a failure in sample collection, sample preparation or analytical measurement. Invalidated results shall not be used in determining compliance with the PFAS6 MCL established in 310 CMR 22.07G(3)(d). Unless waived in writing by the Department as unnecessary (*e.g.*, based upon the frequency of ongoing monitoring), a Supplier of Water shall collect and analyze a replacement sample for each invalidated result of a PFAS listed in 310 CMR 22.07G(3)(c).

(10) PFAS6 Compliance Calculations. Compliance with the PFAS6 MCL established in 310 CMR 22.07G(3)(d) shall be determined in accordance with the requirements set forth below. If any one sampling location is in violation, then the Public Water System shall be considered in violation.

(a) For a Supplier of Water monitoring monthly, compliance shall be determined once per calendar quarter:
   1. after completing a full quarter of monthly monitoring; and
   2. by calculating a quarterly average of that quarter's monthly compliance monitoring result(s) at each Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), rounded to the same number of significant figures as the Maximum Contaminant Level.

(b) Quarterly average calculation requirements:
   1. If multiple compliance monitoring samples are collected in any given calendar month, then the results of those samples shall be averaged in order to establish a single representative contaminant concentration for that calendar month. (An

initial sample and a Confirmatory Sample collected in the same month, shall be averaged both for the purpose of determining whether additional monthly samples would be required, and for the purpose of determining the representative contaminant concentration for the first month. An initial sample and a Confirmatory Sample collected in different months shall still be averaged for the purpose of determining whether additional monthly samples would be required, but shall not be averaged for the purpose of determining the representative contaminant concentration for the first month. Instead, because the Confirmatory Sample was collected in the second month, on the one hand if no other sample was collected in the second month, then it shall serve as the second month's representative contaminant concentration. But, on the other hand if a second sample was collected during the second month, then there would be two samples collected during the second month, namely the Confirmatory Sample (for the first month's initial sample) and the second month's sample, and they shall be averaged together to determine the second month's representative contaminant concentration.)

2. If any Supplier of Water fails to collect the required number of samples, compliance shall be determined based on the total number of samples collected. (*E.g.*, if no samples were collected in one month, then the quarterly average would be the sum of the representative contaminant concentrations from the other two months, divided by two.)
3. If an analytical result is less than the MRL, then the quarterly average shall be calculated using zero as the concentration for that PFAS.

(c) A Supplier of Water monitoring quarterly or less frequently who detects PFAS6 within its Public Water System shall not be in violation, except as provided in 310 CMR 22.07G(10)(d), until:
1. it has conducted monthly sampling pursuant to 310 CMR 22.07G(8)(b), and
2. a calculation made in accordance with 310 CMR 22.07G(10)(a) and (b) would result in a violation.

(d) If any sample result would cause the quarterly average to exceed the PFAS6 MCL at any Sampling Point, or alternate sampling location required by the Department pursuant to 310 CMR 22.07G(4)(a) or (b), then the Public Water System shall be in violation immediately and shall be subject to the requirements 310 CMR 22.07G(11).

(11) When a Quarterly Average Exceeds the PFAS6 MCL. If a quarterly average calculated pursuant to 310 CMR 22.07G(10)(a) and (b) and rounded to the same number of significant figures as the Maximum Contaminant Level, exceeds the PFAS6 MCL, then the Supplier of Water shall:
(a) report to the Department in accordance with 310 CMR 22.15,
(b) provide public notice in accordance with 310 CMR 22.16, and
(c) comply with the requirements of 310 CMR 22.03(14) and such other applicable provisions of 310 CMR 22.00, as specified by the Department.

(12) PFAS Analytical Requirements.
(a) Methods of Analysis. Analysis for PFAS listed in 310 CMR 22.07G(3)(c) shall be conducted using either of the following EPA methods:
1. *Method 537. US Environmental Protection Agency. September 2009. Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS). Ver. 1.1. EPA Document #: EPA/600/R-08/092*; or
2. *Method 537.1. US Environmental Protection Agency. November 2018. Determination of Selected Per- and Polyfluorinated Alkyl Substances in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS).* Ver. 1.0. *EPA Document #: EPA/600/R-18/352.*

(b) Scope of Analysis. All samples analyzed pursuant to 310 CMR 22.07G shall be analyzed for the full scope of PFAS covered by the method selected in 310 CMR 22.07G(12)(a).

(13) PFAS Reporting Requirements. All analytical results, for all PFAS within the scope of the analytical method selected in 310 CMR 22.07G(12)(a), whether obtained pursuant to a requirement of 310 CMR 22.00 or on a voluntary basis, shall be reported to the Department in accordance with 310 CMR 22.15.

(14) Use of Previously Collected PFAS Data.

(a) Eligibility. A Supplier of Water, prior to the applicable commencement date of initial monitoring specified in 310 CMR 22.07G(5)(b)1., may request the Department's written approval to substitute monitoring data which was obtained during different calendar quarters and prior to such commencement date for up to an equivalent number of sequential quarters of initial monitoring otherwise required pursuant to 310 CMR 22.07G(5).

(b) Basis of Approval. Such approval shall be based upon a determination as to whether the substitute monitoring data was collected and analyzed in a manner consistent with or otherwise equivalent to the requirements of 310 CMR 22.07G. A Supplier of Water shall notify the Department, prior to the commencement date of initial monitoring specified in 310 CMR 22.07G(5)(b)1., of its intention to substitute such approved monitoring data.

(c) Requirements Following Notification. Following the notification required by 310 CMR 22.07G(14)(b), such Supplier of Water shall be subject to the requirements of 310 CMR 22.07G, subject to any Department approved modification taking into account any actions the Supplier of Water has taken in response to such substitute monitoring data (*e.g.*, public notification, installation of treatment, etc.), as if the analytical results for such approved monitoring data were received on the date of such notification.

(15) Monitoring Schedules. A Supplier of Water shall monitor its Public Water System during each Compliance Period in accordance with the requirements 310 CMR 22.07G, unless otherwise directed in writing by the Department based on emergency considerations, laboratory capacity, and Public Water System operational considerations.

(16) PFAS6 Minimum Reporting Levels. Laboratories conducting PFAS analysis for each contaminant listed at 310 CMR 22.07G(3)(c) shall be capable of obtaining individual MRLs less than or equal to 0.0000020 mg/l or 2.0 ng/l.

(17) Electronic Filing Requirement. All analytical results required to be submitted to the Department pursuant to 310 CMR 22.07G shall be made by electronic submission, in accordance with 310 CMR 22.03(13).

22.13: Variances.

(7) …

(e) Engineering Assessment Option: If a system can demonstrate through comprehensive engineering assessments, which may include pilot plant studies, that the treatment methods identified in 310 CMR 22.13(7)(a) through (c), or (g), would only achieve a de minimis reduction in contaminants, the Department may issue a schedule of compliance that requires the system being granted the variance to examine other treatment methods as a condition of obtaining the variance.

…

(g) Best Available Technologies (BATs) for PFAS. Any Public Water System subject to 310 CMR 22.07G, as a condition for granting a variance under 310 CMR 22.13 or 22.13A, shall first install and use any of the following treatment technologies, except as provided in 310 CMR 22.13(7)(e):

1. granular activated carbon,
2. powdered activated carbon,
3. ion exchange resins,
4. nanofiltration, and
5. reverse osmosis.

22.16 Table 6, Violations and Other Situations Requiring Public Notice

Contaminant	MCL/MRDL/TT Violations[2]		Monitoring & testing procedure violations	
	Tier of public	Citation	Tier of public	Citation

	notice required		notice required	
I. Violations of National Primary Drinking Water Regulations and 310 CMR 22.00				
…				
I. Per- and Polyfluoroalkyl Substances (PFAS)				
1. PFAS6	2	310 CMR 22.07G	3	310 CMR 22.07G

22.16 Table 7, Standard Health Effects Language for Public Notification

Contaminant	MCLG[1] mg/l	MCL[2] mg/l	Standard health effects language for public notification
National Primary Drinking Water Regulations (NPDWR) and Massachusetts Drinking Water Regulations:			
…			
J. Per- and Polyfluoroalkyl Substances (PFAS)			
91. PFAS6	None	20 ng/l[24]	Some people who drink water containing these PFAS in excess of the MCL may experience certain adverse effects. These could include effects on the liver, blood, immune system, thyroid, and fetal development. These PFAS may also elevate the risk of certain cancers.

[24] Nanograms per liter.

22.16A(4)(l) … The report may also include health risk information which may be obtained from the Drinking Water Program's Consumer Confidence Report guidance available on the MassDEP website or by contacting the Drinking Water Program. Drinking Water Contaminant Human Health Effects Information is also available on USEPA's website.

22.16A(27)(a) Table 1: Regulated Contaminants Chart
Key:

AL= Action Level
CCR=Consumer Confidence Report
…

Contaminant	Traditional MCL	To convert for CCR, multiply by	MCL in CCR Units	MCLG in CCR units	Major Sources in Drinking Water	Health Effects Language
Per- and Polyfluoroalkyl Substances (PFAS)						
92. PFAS6	0.000020 mg/l	1,000,000	20 ng/l (or ppt)	None	Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and	Some people who drink water containing these PFAS in excess of the MCL may experience certain adverse effects. These could include effects on the liver, blood, immune system, thyroid, and fetal development. These PFAS may also elevate the risk of certain cancers.

					disposal of products containing these PFAS, such as fire-fighting foams.	

(b) Table 2 – Unregulated Contaminants Chart
Key:

CASRN – Chemical Abstract Services Registry Number
CCR – Consumer Confidence Report
…

Chemical (CASRN)	ORSG	To convert for CCR, multiply by	ORSG in CCR units	Source to Drinking Water	Health Effects
~~Perfluorooctane Sulfonic Acid (PFOS)(1763231).~~		-	-	-	-
~~Perfluorooctanoic Acid (PFOA)(335671)~~		-	-	-	-
Hexafluoropropylene oxide dimer acid (HFPO-DA) (13252-13-6)	*	-	-	-	-
N-ethyl perfluorooctanesulfonamidoacetic acid (NEtFOSAA) (2991-50-6)	*	-	-	-	-
N-methyl perfluorooctanesulfonamidoacetic acid (NMeFOSAA) (2355-31-9)	*	-	-	-	-
Perfluorobutancesulfonic Acid (PFBS) (375735)	*	-	-	-	-
~~Perfluorohexane Sulfonic Acid (PFHxS)(355464)~~					
~~Perfluoroheptanoic Acid (PFHpA)(375859)~~					
~~Perfluorononanoic Acid (PFNA)(375951)~~					
Perfluorododecanoic acid (PFDoA) (307-55-1)	*	-	-	-	-
Perfluorohexanoic acid (PFHxA) (307-24-4)	*	-	-	-	-
Perfluorotetradecanoic acid (PFTA) (376-06-7)	*	-	-	-	-
Perfluorotridecanoic acid (PFTrDA) (72629-94-8)	*	-	-	-	-
Perfluoroundecanoic acid (PFUnA) (2058-94-8)	*	-	-	-	-
11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS) (763051-92-9)	*	-	-	-	-
9-chlorohexadecafluoro-3-oxanone-1-sulfonic acid (9Cl-PF3ONS) (756426-58-1)	*	-	-	-	-
4,8-dioxa-3H-perfluorononanoic acid (ADONA) (919005-14-4)	*	-	-	-	-

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* There is no ORS Guideline issued as yet for these contaminants. Health risk information for these chemicals may be obtained from the Drinking Water Program's Consumer Confidence Report guidance available on the MassDEP website or by contacting the Drinking Water Program. Drinking Water Contaminant Human Health Effects Information is also available on USEPA's website.