

Per- and Polyfluoroalkyl Substances Initial Monitoring: A Quick Reference Guide

Overview

Rule Title	Per- and Polyfluoroalkyl Substances (PFAS) National Primary Drinking Water Regulation (NPDWR), 89 FR 32532, April 26, 2024, Vol. 89, No. 82
Focus of This Guide	This document describes initial monitoring requirements under the PFAS Rule. The initial monitoring data provided by drinking water systems is used by primacy agencies to determine compliance monitoring frequency when compliance monitoring begins.
Utilities Covered	The PFAS Rule applies to all community water systems (CWSs) and non-transient non-community water systems (NTNCWSs), hereafter referred to collectively as water systems.
Key Milestones	April 26, 2027: Initial monitoring ends and compliance monitoring begins. April 26, 2029: Deadline for compliance with Maximum Contaminant Levels (MCLs).
Code of Federal Regulations (CFR) Citations	See the following sections in Title 40, Part 141 of the CFR: <ul style="list-style-type: none"> ▶ For PFAS regulations, see Subpart Z. ▶ For Maximum Contaminant Levels (MCLs), see 40 CFR 141.61(c)(2). ▶ For Maximum Contaminant Level Goals, see 40 CFR 141.50. ▶ For compliance dates, see 40 CFR 141.6(l) and 40 CFR 141.900(b).

Key Terms

Practical Quantitation Level (PQL)	The lowest level at which a contaminant can be reliably quantified within specific limits of precision and accuracy during routine laboratory operating conditions using approved methods (89 FR 32573). The PQLs are used as part of determining compliance with the PFAS MCLs. This is different from a Practical Quantitation Limit, as defined at 40 CFR 141.2.
Trigger Levels	The trigger levels are used to determine an appropriate monitoring frequency and are set at one-half of the MCLs for regulated PFAS, including the Hazard Index MCL for mixtures of PFHxS, HFPO-DA (or GenX Chemicals), PFNA, and PFBS (see 40 CFR 141.902(a)(5)).

General Initial Monitoring Requirements (40 CFR 141.902(b)(1))

System Type	Initial Monitoring Requirements ¹
Groundwater CWSs and NTNCWSs serving 10,000 or fewer persons	For entry points to the distribution systems that only use groundwater sources, two consecutive samples per entry point within a 12-month period, unless the exception below applies ² . Samples must be taken five to seven months apart.
All other CWS and NTNCWS including: <ul style="list-style-type: none"> ▶ All surface water systems ▶ All groundwater under direct influence (GWUDI) ▶ Groundwater systems serving more than 10,000 persons ▶ Any entry point that blends surface water and groundwater ▶ Systems that change the source water type seasonally (e.g., surface water one part of the year, groundwater the remaining part of the year) 	Four consecutive quarters of samples per entry point within a 12-month period, unless the exception below applies. ² Samples must be taken two to four calendar months apart.

¹ Conducted at each entry point, under normal/representative operating conditions. Consecutive system interconnections that transmit finished water are not entry points.

² Water systems can use previously acquired data to satisfy some or all of these requirements. If a system has some previously collected results meeting PFAS Rule requirements, but less than necessary to meet the initial monitoring requirements, the system can supplement with additional monitoring events such that all required calendar periods are represented, regardless of the year. See 40 CFR 141.902(b)(1)(viii).

Per- and Polyfluoroalkyl Substances Initial Monitoring: A Quick Reference Guide

Timeframes for Initial Monitoring

January 1, 2019	Previously acquired PFAS data collected on or after this date, provided the approved methods were used, are eligible and may be approved by the primacy agency to satisfy some or all initial monitoring requirements (40 CFR 141.902(b)(1)(vi)).
June 25, 2024	Beginning on this date, analyses for regulated PFAS must only be conducted by laboratories that have been certified by the EPA or the primacy agency (40 CFR 141.900(b)(1)). Water systems must report data for concentrations as low as the trigger levels (40 CFR 141.901(b)(2)(iii)).
April 26, 2027	Initial monitoring and/or demonstration of previously collected PFAS data that satisfy initial monitoring requirements must be completed and provided to the primacy agency (40 CFR 141.900(b)(2)).

PFAS Regulatory Thresholds

The following are the PFAS trigger levels, MCLs, PQLs, and the number of significant figures to which sampling results are rounded:

Compound	Trigger Level (1/2 MCL)	MCL	PQL ¹	Significant Figures (in Trigger Levels and MCLs)
	Level (in parts per trillion, unless otherwise noted)			
PFOA	2.0 ²	4.0	4.0	Two
PFOS	2.0 ²	4.0	4.0	Two
PFHxS	5	10	3.0	One
HFPO-DA	5	10	5.0	One
PFNA	5	10	4.0	One
PFBS	N/A	N/A	3.0	N/A
Hazard Index ³	0.5 (unitless)	1 (unitless)	N/A	One

¹ All PQLs have two significant figures.

² Note that trigger levels for these compounds are below the PQLs.

³ Rounding of the Hazard Index only occurs at the end of the overall calculation. See the *Per- and Polyfluoroalkyl Substances Hazard Index: A Quick Reference Guide* for more details.

Sources: MCLs are listed in 40 CFR 141.61(c). Trigger levels are listed in 40 CFR 141.902(a)(5). PQLs are listed in 40 CFR 141.903(f)(iv).

Initial Monitoring Requirements (40 CFR 141.901(b), 40 CFR 141.902(a) and 40 CFR 141.902(b)(1))

General Requirements

Laboratories must use the EPA-approved methods (EPA Method 533 or 537.1, version 2.0).*

Each entry point has its own initial monitoring requirements, and systems with multiple entry points may have different schedules based on water source and system size.

For previously acquired data analyzed before June 25, 2024, results reported above the MCLs do not meet initial monitoring requirements and systems must collect new samples; after June 25, 2024, the relevant requirement becomes that laboratories must be capable of producing results at or below the trigger levels.

Systems must report all data received by the laboratory to the primacy agency, regardless of whether it is below a trigger level or PQL.

*On January 16, 2025, the EPA amended Appendix A to Subpart C of Part 141 to add Alternative Testing Methods for Contaminants Listed at 40 CFR 141.901(b)(1) to allow EPA Method 537.1, Version 1.0, as an approved alternative testing method to support initial PFAS monitoring (for monitoring-frequency determinations) until April 26, 2027 [90 FR 4658].

Previously Acquired Data

If multiple years of data are available, the most recent data are to be used for determining compliance monitoring frequency.

Systems must ensure all required quarterly or semi-annual sampling periods are represented, with sample calendar months appropriately spaced. Supplemental data can be collected in one calendar year such that, when coupled with the previous monitoring, it meets the timing requirements of this rule (see General Initial Monitoring Requirements section and description in 40 CFR 141.902(b)(1)(viii)).

Example: For systems collecting four samples, each sample is collected two to four calendar months apart. If a system has data from February and August of 2024, it needs two additional samples to comply with the PFAS Rule initial monitoring requirements. The system could take samples in April-June and October-December of 2025. Alternatively, the system could take samples in April-June and October-December of 2026.

Per- and Polyfluoroalkyl Substances Initial Monitoring: A Quick Reference Guide

Determination of Compliance Monitoring Frequency Based on Initial Monitoring Results (40 CFR 141.902(b)(2))

Based on initial monitoring results, water systems are required to either conduct quarterly or triennial monitoring at the beginning of the compliance monitoring period. To be eligible for a triennial monitoring schedule at the beginning of the compliance monitoring period, a system must demonstrate that concentrations in all initial monitoring samples at each sample location are below the rule trigger levels.

Any one initial monitoring result above or equal to the trigger level requires the system to conduct quarterly monitoring for all regulated PFAS at that sample location when compliance monitoring begins. The comparison to trigger levels applies to each sample, not to average sample results.

Examples of rounding: These examples show how to compare initial monitoring sample results to rule trigger levels to determine compliance monitoring frequency at the beginning of the compliance monitoring period:

- ▶ A PFOA or PFOS sample result of 1.97 ppt rounded to two significant figures equals 2.0 ppt.
 - ▶ 2.0 ppt is equal to the trigger level for PFOA or PFOS (2.0 ppt) – no allowance of reduced (triennial) monitoring for any of the regulated PFAS at this entry point.
- ▶ A Hazard Index sample result of 0.445 rounded to one significant figure equals 0.4.
 - ▶ 0.4 is below the Hazard Index trigger level (0.5) – eligible for reduced triennial monitoring at this entry point if all other regulated PFAS are also below their rule trigger levels, and the primacy agency approves.

For additional information on the PFAS Rule

Please visit the EPA PFAS NPDWR Implementation Web site at <https://www.epa.gov/dwreginfo/pfas-rule-implementation> or contact your primacy agency drinking water representative.

Note: The statutory provisions and the EPA regulations described in this document contain legally binding requirements. This document is not a regulation itself, nor does it change or substitute for those provisions and regulations. The examples included in this document are intended for informational purposes only.