OFFICE OF GROUND WATER AND DRINKING WATER

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MEMORANDUM

SUBJECT: PFAS National Primary Drinking Water Regulation Monitoring and Reporting

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TO: Fifth Unregulated Contaminant Monitoring Rule (UCMR 5) Laboratories
UCMR 5 Drinking Water Systems
EPA Regional Laboratory Directors
State Laboratory Certification Officers

The purpose of the memorandum is to provide information on how water systems can utilize flexibilities in the final Per- and Polyfluoroalkyl Substances (PFAS) National Primary Drinking Water Regulation (NPDWR) to use previously collected PFAS drinking water data (e.g., from UCMR 5 or state monitoring programs) to satisfy some or all of the initial monitoring requirements of the rule, as well as how this data can be applied to assess their compliance monitoring frequency under the rule. This memorandum also provides information and guidance for laboratories and water systems on implementing other aspects of the PFAS NPDWR monitoring and reporting requirements.

The final PFAS NPDWR includes individual Maximum Contaminant Level Goals (MCLGs) and Maximum Contaminant Levels (MCLs) for five PFAS: perfluorooctanoic acid (PFOA), perfluorooctane sulfonic acid (PFOS), perfluorononanoic acid (PFNA), hexafluoropropylene oxide dimer acid (HFPO-DA, commonly known as GenX Chemicals), and perfluorohexane sulfonic acid (PFHxS). The final NPDWR also includes a Hazard Index MCLG and MCL for mixture combinations containing two or more of four PFAS (PFHxS, PFNA, HFPO-DA, and perfluorobutane sulfonic acid (PFBS)). Community and non-transient non community water systems must comply with the PFAS NPDWR by the deadlines described in 40 C.F.R. 141.900(b).

Initial Monitoring Requirements

Community water systems and non-transient non-community water systems are required to conduct both initial monitoring and ongoing compliance monitoring of regulated PFAS during normal operating conditions at all entry points to the distribution system according to the requirements in 40 C.F.R. 141.902. These systems must complete initial monitoring by April 26, 2027, and begin ongoing compliance monitoring thereafter.

To comply with initial monitoring requirements groundwater systems serving more than 10,000 customers and all surface water systems must collect four quarterly samples (2 to 4 months apart) over a 12-month period, and groundwater systems serving 10,000 or fewer customers must collect two semi-annual samples (5 to 7 months apart) over a 12-month period by April 26, 2027. Per Section 141.902(b)(1)(vi), primacy agencies can also allow water systems to use previously collected monitoring data to satisfy some or all of these initial monitoring requirements, if (1) the sampling was conducted according to specific data quality assurance criteria as part of the UCMR 5, state-level, or other appropriate monitoring efforts that use EPA methods 533 or 537.1 with no modifications and (2) samples were collected starting on or after January 1, 2019. Further, under 141.902(b)(1)(viii), water systems using previously acquired data with fewer than the number of required initial monitoring samples (i.e., 2 or 4) or samples that do not meet the sample collection timing requirements (i.e., 2 to 4 or 5 to 7 months apart) may take additional samples in a different calendar year to supplement the existing data; samples must be taken such that all the required number of initial monitoring samples and sample collection timing requirements are satisfied according to the source water type and system size in the initial monitoring requirements described at the beginning of this paragraph. For example, large groundwater systems utilizing their UCMR 5 data from their two UCMR 5 sampling events would be required to collect two additional samples (according to the rule's timing requirements) to satisfy the NPDWR's initial monitoring requirements for four quarterly samples every 2 to 4 months apart. Moreover, if UCMR 5 samples were collected at a sample location in February and August, then in a different calendar year the water system would be required to collect one sample in April, May, or June and another sample in October, November, or December at that sample location. If a water system experiences sampling errors (e.g., detection of PFAS in the field reagent blank) the water system should seek to resample as soon as possible during the required sample collection timeframe (i.e., 2 to 4 or 5 to 7 months apart).

Compliance Monitoring Frequency Determination

The results of initial monitoring will be used by the primacy agency to determine the ongoing compliance monitoring frequency per 40 C.F.R. 141.902(b)(2)(i). To be eligible for reduced ongoing triennial compliance monitoring at an entry point, all regulated-PFAS initial monitoring sample results must be below all rule trigger levels. The trigger levels in the final PFAS NPDWR are equal to one-half of the regulated PFAS MCLs, and the Practical Quantitation Levels (PQLs) are based on the UCMR 5 minimum reporting levels (MRLs):

Contaminant	**MCL (ppt or ng/L)**	**Trigger Level (1/2 of MCL) (ppt or ng/L)**	**PQL (based on UCMR 5 MRL) (ppt or ng/L)**
PFOA	4.0	2.0	4.0
PFOS	4.0	2.0	4.0
HFPO-DA	10	5	5.0

PFHxS	10	5	3.0
PFNA	10	5	4.0
PFBS	N/A	N/A	3.0
Hazard Index (mixtures of PFHxS, PFNA, HFPO-DA, and PFBS)	1 (unitless)	0.5 (unitless)	N/A

Laboratory Requirements and Analytical Methods

Under the final rule, 40 C.F.R. 141.901(b)(1), all regulated PFAS analyses must be conducted using approved analytical methods (EPA Methods 533 or 537.1). Additionally, per 141.902(b)(2), for samples that are collected after June 24, 2024, all analyses must be performed by laboratories that have been "certified" by the EPA or the primacy agency. For initial monitoring purposes, the EPA has deemed its UCMR 5 Laboratory Approval program, as well as state laboratory certification programs and state NELAP accreditation programs that use TNI standard, equivalent for purposes of meeting this requirement. This equivalency determination, with respect to the UCMR 5 Laboratory Approval Program, is based upon laboratories meeting strict UCMR 5 Laboratory Approval Program requirements that are comparable to state laboratory certification and accreditation programs. Primacy agencies likewise have the discretion to accept sample results from laboratories that were part of a state-led drinking water PFAS sampling program that assessed laboratories for conformance with Method 533 or 537.1.

UCMR 5 Monitoring Data

Laboratories analyzing UCMR 5 samples only report data at or above UCMR 5 MRLs to the EPA. For small systems serving 10,000 or fewer customers, the EPA is currently working with the EPA-contracted laboratories (i.e., those analyzing UCMR 5 samples for these small systems) to reprocess the UCMR 5 small-system data and produce updated lower-level results that could support compliance monitoring frequency determinations. The EPA will provide these results to the small water system (with a copy to the primacy agency) for the system to determine if they wish for their primacy agency to consider these results as all or part of their initial monitoring.

Large systems serving more than 10,000 people arrange for their UCMR laboratory analysis and have direct relationships with the laboratories. If large systems intend to use their UCMR 5 monitoring data to seek approval from their primacy agency for reduced triennial compliance monitoring, the system should contact their contracted UCMR 5 laboratory and request that the laboratory reprocess the data (i.e., reexamine data housed in the laboratory's information-management system) from the analysis of the UCMR 5 sample and produce updated, lower-level results for consideration by the primacy agency. The large system and laboratory should determine whether the analytical data reprocessing will be subject to an additional fee. The agency is strongly encouraging laboratories to accommodate large system requests for producing reprocessed data.

PFAS Monitoring Data Reporting

Per Section 141.902(a)(7), for initial and compliance monitoring required under the rule, systems must report all results *provided by a laboratory* to the primacy agency and these results must be used specifically for the purpose of determining compliance monitoring frequency; this includes values below the PQLs. The EPA recommends that laboratories use 1/3 of the PQL for each of the regulated PFAS as a minimum threshold when providing results to the system to reduce the possibility of background PFAS contamination impacts on measured sample results. The rule requires use of EPA

Methods 533 and 537.1 both of which have QC requirements for field and laboratory reagent blank sample results to be less than 1/3 of the laboratory's MRLs (which must be at or below the regulatory PQLs) to ensure that background contamination is not mistaken for PFAS legitimately present in the field sample (see 89 FR 32606). Thus, EPA is recommending that laboratories use 1/3 of the PQL as the lower bound of its reporting to systems to ensure that that the reported value accurately reflect the presence of PFAS in the water sample. The EPA is making this recommendation to allow for more consistent laboratory reporting of regulated PFAS monitoring data and assessment of the results by drinking water primacy agencies and water systems. Those laboratories that follow the agency's recommendation should treat results below 1/3 of the PQLs as "not detected" (ND) and would not report a numeric value.

When reporting values below PQLs laboratories must be able to qualitatively detect, not necessarily quantify, the regulated PFAS analytes. Furthermore, for UCMR 5 laboratories and other laboratories that cannot meet the method data quality objectives (DQOs[1]) for the reprocessed UCMR 5 results or monitoring results under the rule (i.e., if laboratory quantitation that meets the DQOs is not possible for results below the PQLs), the lower-level data (i.e., data between the PQL and 1/3 of the PQL) should still be reported as a numeric values but notated (using a data "flag") as "qualitative." The EPA notes that these qualitative data are not used to demonstrate compliance with MCLs (laboratories must be able to produce quantitative data, meeting DQOs, at or above the PQLs to demonstrate compliance with the MCLs) but, as noted in the preamble to the final rule, while these lower level data may not have the same precision and accuracy as higher-level measurements (i.e., PQLs), they can be determined and used to ensure that water systems are monitoring at an appropriate frequency based on contamination risk.

Additional resources are listed below:

- Final PFAS National Primary Drinking Water Regulation Rulemaking Federal Register Notice: https://www.federalregister.gov/documents/2024/04/26/2024-07773/pfas-national-primary-drinking-water-regulation
- EPA Final PFAS National Primary Drinking Water Regulation Website: https://www.epa.gov/sdwa/and-polyfluoroalkyl-substances-pfas
- Final PFAS National Primary Drinking Water Regulation Monitoring and Reporting Factsheet: https://www.epa.gov/system/files/documents/2024-04/pfas-npdwr_fact-sheet_monitoring_4.8.24_0.pdf
- UCMR 5 Resources: https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule

[1] For data to be reliably reported below the UCMR 5 MRLs for PFAS, the laboratory should have generated initial method quality control data, in the form of calibration points at the lower levels and should have completed an Initial Demonstration of Capability (IDC) demonstrating successful performance at the lower levels, as described in Method 533 (Section 9.1) and Method 537.1 (Section 9.2). Furthermore, ongoing batch QC must be performed at the lower concentrations. Batch QC includes lower concentrations of initial continuing calibration checks (CCC) as described in Method 533 (Section 9.2.2 and 10.4) and Method 537.1 (Section 9.3.2 and 10.3), and a Laboratory Reagent Blank and Field Reagent Blank that passes the criteria of nothing observed above 1/3 the concentration of the lower reporting levels, as described in Method 533 (Sections 9.2.1 and 9.2.8) and Method 537.1 (Sections 9.3.1 and 9.3.8).

Any questions about the information provided above may be addressed to PFASNPDWR@epa.gov.

cc. EPA Regional Water Division Directors
Association of State Drinking Water Administrators
Drinking Water Primacy Agencies
American Water Works Association
National Rural Water Association
Association of Metropolitan Water Authorities
Rural Community Assistance Partnership
National Association of Water Companies
Association of Public Health Laboratories
American Council of Independent Laboratories