ASSISTANT SECRETARY OF DEFENSE
3400 DEFENSE PENTAGON
WASHINGTON, DC 20301-3400

ENERGY, INSTALLATIONS,
AND ENVIRONMENT

December 4, 2024

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, ENERGY AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY (ENERGY, INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (ENERGY, INSTALLATIONS, AND ENVIRONMENT)
DIRECTOR, NATIONAL GUARD BUREAU (JOINT STAFF, J8)
DIRECTOR, DEFENSE LOGISTICS AGENCY (INSTALLATION MANAGEMENT)

SUBJECT: Policy for Per- and Polyfluoroalkyl Substances Monitoring and Treatment in DoD-Owned Drinking Water Systems in the United States

In order to meet the requirements of *DoD Instruction 4715.06, Environmental Compliance in the United States* and to ensure consistency across the Department of Defense, this memorandum provides a policy for monitoring and treatment of per- and polyfluoroalkyl substances (PFAS) in DoD-owned drinking water systems, to include non-regulated potable water systems, in the United States (U.S.) and cancels the Assistant Secretary of Defense for Energy, Installations, and Environment memorandum, *Memorandum for Sampling of Per- and Polyfluoroalkyl Substances in DoD-Owned Drinking Water Systems*, July 11, 2023.

On April 26, 2024, the Environmental Protection Agency (EPA) published a National Primary Drinking Water Regulation (NPDWR) final rule[1] on drinking water standards for six PFAS[2] under the Safe Drinking Water Act (SDWA). Under the NPDWR, regulated public water systems (PWS) are required to complete initial monitoring by April 26, 2027. Beginning April 26, 2027, regulated PWSs will conduct ongoing compliance monitoring in accordance with the frequency dictated by the rule and as determined by the initial compliance monitoring results. Regulated PWSs must demonstrate compliance with the Maximum Contaminant Levels (MCL) by April 26, 2029.

Both DoD-owned water systems in the U.S. regulated under the NPDWR, and those not regulated under the NPDWR, but which provide drinking water for potential consumption, will

[1] "PFAS National Primary Drinking Water Regulation (Final Rule)." Federal Register 89:82 (April 26, 2024) p. 32532-32757. Available from: https://www.federalregister.gov/documents/2024/04/26/2024-07773/pfas-national-primary-drinking-water-regulation?utm_campaign=subscription+mailing+list&utm_medium=email&utm_source=federalregister.gov

[2] The six PFAS regulated under the EPA NPDWR include Perfluorooctanoic acid (PFOA), Perfluorooctane sulfonic acid (PFOS), Perfluorohexane sulfonate (PFHxS), Hexafluoropropylene Oxide Dimer Acid (HFPO-DA also known as GenX chemicals), Perfluorononanoic acid (PFNA), and Perfluorobutane sulfonate (PFBS). The rule includes individual MCLs for five PFAS (PFOA, PFOS, PFNA, PFHxS, and HFPO-DA). The rule includes a limit for mixture of two or more of the following: PFHxS, PFNA, HFPO-DA, and PFBS, as determined by calculating a Hazard Index (HI).

comply with the requirements as described in Attachment 1 of this memorandum. In addition to monitoring for the six PFAS regulated by the NPDWR, DoD-owned systems covered by this policy shall monitor for all analytes detected using EPA Method 533 at the frequency prescribed by Attachment 1 of this memorandum. DoD-owned systems providing only non-potable water and consecutive systems that receive finished water from a permitted source are not subject to the requirements detailed in this policy. Where state or local drinking water regulations for PFAS have been fully promulgated and are more protective than the NPDWR or the policy provided in this memorandum, the more protective requirements will apply.

Protecting the health of our personnel, their families, and the communities in which we serve is a priority for the Department. DoD is committed to complying with requirements of the NPDWR and the continued provision of quality drinking water to those that work and live on DoD installations.

The point of contact for this matter is Mr. Brent Williams, at 703-571-2434 or brent.d.williams.civ@mail.mil.

Sincerely,

OWENS.BRENDAN.M.1030451844

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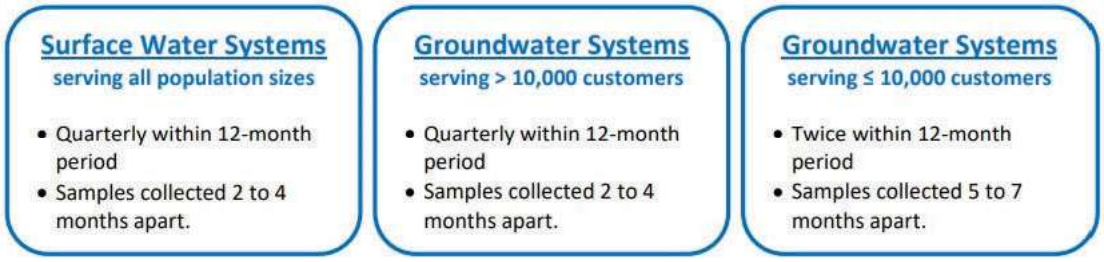
Brendan M. Owens

Attachments:
As stated

Initial Monitoring:

No later than April 26, 2027, DoD Components will review existing data and, as necessary, collect additional samples of finished drinking water from all DoD-owned drinking water systems to complete initial monitoring in accordance with the frequencies specified in the NPDWR. In addition to the monitoring required for the six regulated PFAS by the NPDWR, DoD-owned potable water systems will monitor for all analytes detected using EPA Method 533.

In accordance with the NPDWR, community water systems (CWSs) and non-transient non-community water systems (NTNCWSs) must complete initial monitoring at all entry points to the distribution system (EPTDS) on either a semiannual (two times/year) or quarterly basis during a 12-month period based on system size and source water.



In addition, regardless of water system classification, DoD-owned drinking water systems which are not subject to the NPDWR, but which are subject to this policy, will perform initial monitoring equivalent to the requirements for groundwater systems serving ≤ 10,000 customers (i.e., twice during a 12-month period)[3]. DoD-owned systems that provide only non-potable water and consecutive systems that receive finished water from a permitted source are not required to conduct initial monitoring.

An EPTDS is where any source or treated water enters the system of pipes or other fixtures used to provide drinking water after treatment, if any, but prior to delivery to the first person(s) served by the public water system. If more than one water source feeds an EPTDS, all samples obtained from that location must be representative of typical flow. Systems may have multiple EPTDS.

Compliance Monitoring:

Beginning April 26, 2027, regulated PWSs and DoD-owned drinking water systems which are not subject to the NPDWR, but which are subject to this policy, are required to begin ongoing compliance monitoring at all EPTDS. The required frequency of monitoring for each EPTDS is determined by comparing the initial monitoring results and ongoing compliance monitoring results for all regulated PFAS, including the Hazard Index (HI), to NPDWR trigger levels[4] and

[3] This policy's application of elements of the PFAS NPDWR to non-regulated DoD-owned drinking water systems does not constitute or create a regulatory compliance requirement under the NPDWR.
[4] The trigger levels used for establishing appropriate monitoring frequency are set at half the MCLs for regulated PFAS and half the Hazard Index (HI) MCL for mixtures of PFHxS, HFPO-DA (GenX chemicals), PFNA, and/or PFBS.

associated MCLs. Monitoring frequency for each EPTDS may vary across a facility. Regulated drinking water systems will conduct compliance monitoring according to the frequency specified by the NPDWR or state primacy agencies based on the results of the completed initial monitoring.

Compliance with the MCLs is determined by calculating the Running Annual Average (RAA) of four quarters of samples. Single results above an MCL are not considered a health-based exceedance for reporting or compliance. Installations must continue with quarterly monitoring for four quarters to calculate the RAA prior to declaring an exceedance, unless a result of zero for the remaining quarters would still result in the RAA exceeding the MCL.

In addition to the monitoring required for the six regulated PFAS by the NPDWR, DoD-owned drinking water systems will monitor for all analytes detected using EPA Method 533 at the same frequency. The frequency of monitoring is the same for all regulated PFAS but may vary across EPTDS within the same drinking water system as described in the NPDWR. DoD-owned systems that provide only non-potable water and consecutive systems that receive finished water from a permitted source are not required to conduct ongoing compliance monitoring.

Calculations:

Running Annual Average (RAA):

For each EPTDS, compliance with the MCLs is determined by comparison of the MCL value to an RAA of four quarterly samples.

- The RAA is calculated by taking the average of the four most recent individual quarterly samples. Systems sampling at a frequency less than quarterly are not required to calculate an RAA value.

- EPA identified Practical Quantitation Limits[5] (PQL) for each PFAS regulated by the NPDWR as described in Table 1. An individual sample value below the EPA PQL is treated as zero in the calculation.

- The calculation must use all available digits of precision provided in the analytical report, but the final result should be rounded to the number of significant digits corresponding with each MCL to determine compliance as described in Table 1.

- An individual sample result above the MCL does not indicate non-compliance with the MCL if, based on a minimum of four samples, the RAA is below the MCL; however, if fewer than four samples will cause the RAA to exceed the MCL regardless of subsequent sample values (e.g., a PFOA sample of more than 16 ppt), the system is non-compliant with the MCL immediately, even if fewer than four samples have been obtained.

[5] Laboratories may provide PQL (or Limit of Quantitation (LOQ)) values for individual samples in each analytical report; however, when performing calculations, installations should use the PQL values provided by EPA in the NPDWR, not the PQL (or LOQ) values provided by the laboratory.

RAA Calculation Example:

If a system has quarterly HFPO-DA monitoring results of 3.2, 6.1, 5.5, and 2.7 ng/L, the RAA calculation is:

$$RAA_{HFPO-DA} = \frac{0 + 6.1 + 5.5 + 0}{4} = 3\ {}^{ng}/_{L}$$

PFAS	MCL	Significant Digits	PQL
PFOA	4.0 ppt	2	4.0 ppt
PFOS	4.0 ppt	2	4.0 ppt
PFHxS	10 ppt	1	3.0 ppt
HFPO-DA (GenX)	10 ppt	1	5.0 ppt
PFNA	10 ppt	1	4.0 ppt
PFBS	n/a		3.0 ppt
Mixture of two or more: PFHxS, PFNA, HFPO-DA, and PFBS	HI of 1 (unitless)	1	n/a

Table 1. PFAS NPDWR PQL Values and MCL Significant Digits

Hazard Index (HI):

EPA set an HI MCL to control additive health effects for mixtures of two or more PFAS, including PFHxS, PFNA, HFPO-DA, and PFBS:

- For each EPTDS, the HI is calculated by dividing the detected concentration of each PFAS (in ng/L or ppt) by the Health Based Water Concentration (HBWC)[6] of the respective PFAS and summing the results.

$$HI = \frac{PFHxS\ {}^{ng}/_{L}}{10\ {}^{ng}/_{L}} + \frac{PFNA\ {}^{ng}/_{L}}{10\ {}^{ng}/_{L}} + \frac{HFPO-DA\ {}^{ng}/_{L}}{10\ {}^{ng}/_{L}} + \frac{PFBS\ {}^{ng}/_{L}}{2000\ {}^{ng}/_{L}}$$

- An individual result less than the EPA PQL for a given PFAS is treated as zero in the calculation.

- HI calculations for each quarter should be completed before calculating the RAA. HI calculations for the individual quarterly samples should not be rounded prior to

[6] HBWCs for each PFAS are as follows: PFHxS (10 ng/L), HFPO-DA (10 ng/L), PFNA (10 ng/L), and PFBS (2000 ng/L).

calculating the RAA. After completing the RAA calculation, the final result should be rounded to one significant digit.

- If a PFAS "mixture" was detected (i.e., two or more of PFHxS, PFNA, HFPO-DA, or PFBS are detected in a sample above the PQL) in one or more quarters, HI values should be calculated for each quarterly sampling event, even where one or none of the mixture components were detected. If the resulting RAA is greater than 1, the EPTDS is out of compliance with the HI MCL.

- If a PFAS "mixture" was not detected during any quarterly sampling event (i.e., only one or none of the regulated PFAS were detected above the PQL), calculation of the RAA is not required and the EPTDS is not out of compliance with the HI MCL, even if the result of any quarterly HI calculation is greater than 1.

- EPA recommends quarterly calculation of the HI even when only one component of the mixture is detected so that those values are available should they be required for use in the RAA calculation. Individual quarterly HI values cannot be used to determine compliance with the HI MCL as the compliance determination is relative to the HI RAA.

- When conducting ongoing compliance monitoring, the HI should be calculated for each sampling event. If the monitoring frequency of an EPTDS is less than quarterly, the HI must be compared to the trigger level to determine if increased monitoring is required.

HI Calculation Example:

If the results for a quarterly sampling event of a system are 2.1 ng/L for PFHxS, 4.1 for PFNA, 3.4 for HFPO-DA, and 20.0 for PFBS, the HI calculation is:

$$HI = \frac{0\ ^{ng}/_{L}}{10\ ^{ng}/_{L}} + \frac{4.1\ ^{ng}/_{L}}{10\ ^{ng}/_{L}} + \frac{0\ ^{ng}/_{L}}{10\ ^{ng}/_{L}} + \frac{20.0\ ^{ng}/_{L}}{2000\ ^{ng}/_{L}} = 0.42$$

MCL Compliance:

In accordance with the NPDWR, regulated PWSs must comply with all MCLs no later than April 26, 2029. In addition, DoD-owned drinking water systems which are not subject to the NPDWR, but which are subject to this policy, must establish and maintain levels of PFAS in drinking water that are at or below the associated MCLs no later than April 26, 2029. Actions that an individual installation may take should be dictated by the results of the initial and ongoing compliance monitoring and water system characteristics.

Systems may install treatment or implement a non-treatment option (e.g., an alternative water source) to comply with the MCLs. EPA identified granular activated carbon, anion

exchange, reverse osmosis, and nanofiltration as Best Available Technologies (BAT); however, systems are not required to use specific technologies for treatment.

Treatment residuals must be managed in accordance with DoD guidance, "Interim Guidance on Destruction or Disposal of Materials Containing Per- and Polyfluoroalkyl Substances in the United States" issued on July 11, 2023, and any subsequent DoD guidance on management and disposal of materials containing PFAS.

Analytical Laboratories:

The DoD Components will analyze PFAS in drinking water using a laboratory that meets, at a minimum, the requirements of the NPDWR; however, a DoD Environmental Laboratory Accreditation Program (ELAP)[7] accredited laboratory that also meets the requirements of the NPDWR is preferred and should be utilized where available. DoD Components will conduct sampling and analysis of finished drinking water for PFAS using EPA Method 533. This will ensure consistency across DoD in how PFAS samples are collected and analyzed for DoD-owned drinking water systems. While EPA Method 533 is the required analytical method for ongoing data collection, installations may use previously collected data analyzed using EPA Method 537.1 to satisfy the initial monitoring requirements if the sampling frequency complies with the NPDWR requirements.

Notification:

At a minimum, as of the date of this policy, DoD Components will post analytical results of all regulated PFAS detected above the NPDWR trigger levels on the installation's public webpage within 30 days of receipt of final results.

For drinking water systems regulated under the NPDWR:

In accordance with the NPDWR, beginning April 26, 2027:

- Ongoing compliance monitoring results must be included in Consumer Confidence Reports (CCRs) (i.e., Annual Water Quality Report) when one or more of the regulated PFAS are detected at or above the trigger levels or the HI is calculated at a value above the trigger level. Reports that contain data on the HI must include EPA's HI definition. Mandatory health effects language identified in the NPDWR is not required to be included in these reports prior to the April 26, 2029, MCL compliance deadline.

- All regulated PWSs must make Tier 3 public notifications (PN) for monitoring and testing violations. In accordance with the Tier 3 PN requirements, PNs will be made no later than one year after the system learns of the violation, and systems are required to repeat the notice annually for as long as the violation persists.

[7] Laboratories capable of meeting the DoD ELAP requirements applicable to these methods can be found at www.denix.osd.mil/edqw/accreditation/accreditedlabs.

In accordance with the NPDWR, beginning April 26, 2029:

- Ongoing compliance monitoring results must be included in CCRs when one or more of the regulated PFAS are detected at or above the trigger levels or the HI is calculated at a value above the trigger level. Mandatory health effects language identified in the NPDWR is required if there are MCL violations but is not required if there are no MCL violations.

- All regulated PWSs must make Tier 2 PNs for MCL violations. In accordance with the Tier 2 PN requirements, PNs will be made as soon as practicable, but no later than 30 days after the system learns of the violation. Reports that contain data on the Hazard Index (HI) must include EPA's HI definition. Mandatory health effects language identified in the NPDWR must be included in the PN. The notices will alert consumers of the violation if there is a risk to public health.

- In addition to notifications required by the NPDWR, DoD Components will notify the Office of the Deputy Assistant Secretary of Defense for Environmental Management and Restoration (ODASD(EMR)) environmental compliance program manager of exceedances of the PFAS NPDWR MCL as soon as practicable, but no later than 30 days after the system learns of the exceedance.

For drinking water systems not regulated under the NPDWR, but which are addressed by this policy:

In accordance with the requirements of this policy, beginning April 26, 2029, for DoD-owned drinking water systems which are not subject to the NPDWR, DoD Components will notify the ODASD(EMR) environmental compliance program manager of exceedances of the MCL as applied by virtue of this policy as soon as practicable, but no later than 30 days after the system learns of the exceedance.[8]

Reporting:

Initial and Ongoing Compliance Monitoring:

- To effectively track and report PFAS data, monitoring results for PFAS in finished drinking water collected from DoD-owned drinking water systems will be reported to ODASD(EMR) using the OSD template. Results will be submitted to ODASD(EMR) within 30 days of receipt of final testing results in accordance with the instructions provided in the template. DoD will make results available on defense.gov/pfas.

[8] DoD-owned systems which are not regulated under the NPDWR are not required to report deviations from the requirements of this policy to the regulatory agency.

DEPARTMENT OF THE AIR FORCE
HEADQUARTERS UNITED STATES AIR FORCE
WASHINGTON DC

30 August 2023

MEMORANDUM FOR ALL MAJCOM/SGPB

FROM: AFMRA/SG3PB
7700 Arlington Boulevard
Falls Church, VA 22042

SUBJECT: Implementation Guidance, Sampling of Per-and Polyfluoroalkyl Substances (PFAS) in DoD-Owned Drinking Water Systems

1. This guidance implements Secretary of the Air Force direction and applies to all AF owned drinking water systems (regulated and unregulated) where the AF is the drinking water purveyor in and outside of the United States. These installations shall establish a routine monitoring program to conduct PFAS sampling and analysis in accordance with the attached Secretary of the Air Force memorandum (Attachment 1) and Assistant Secretary of Defense memorandum (Attachment 2). Where final governing standards, state or local regulations for PFAS are more stringent than this guidance, the more stringent standards shall apply.

2. Requirements.

a. By 31 December 2023, conduct initial round of water sampling from all AF-owned drinking water systems (regulated and unregulated) and analyze for all PFAS analytes using Environmental Protection Agency (EPA) method 533 and perfluorotetradecanoic acid (PFTeDA), perfluorotridecanoic acid (PFTrDA), N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA), and N-ethylperfluorooctanesulfonamidoacetic (NEtFOSAA) analytes using EPA method 537.1, and implement a routine surveillance plan based on the below criteria. Systems with EPA methods 533 and 537.1 results more current than 1 January 2022, are exempt from the initial round of water sampling. The EPA Unregulated Contaminant Monitoring Rule Five sampling, if accomplished in calendar year 2023, meets this initial round of water sampling.

b. Routine Surveillance Plan.

i. Systems with results indicating all PFAS analytes are below the minimum reporting limit (MRL) will sample at least once every two years. Both EPA methods 533 and 537.1 will be used when sampling on a two-year cycle.

ii. Systems with results indicating PFAS analytes above the MRL will sample semi-annually until results are below the MRL for two consecutive sampling events. Then sampling may proceed as described in paragraph (i) above. EPA method 533 is required for semi-annual sampling. If PFTeDA, PFTrDA, NMeFOSAA, or NEtFOSAA are detected above the MRL, EPA method 537.1 will also be required.

c. Confirm safe drinking water surveillance funds are available to meet these surveillance requirements with your Resource Management Officer. The safe drinking water surveillance funds are titled Environmental Compliance, Safe Drinking Water Surveillance (PEC 807756, Bag 7), located in Facilities Panel.

d. Utilize only approved DoD Environmental Laboratory Accreditation Program accredited laboratory or an EPA or state-accredited laboratory when DoD laboratories are unavailable.

e. If system water source is composed of a mixture of multiple drinking water wells, coordinate with Civil Engineer (CE) partners to document water supply percentage of each well at the time of PFAS sample collection. This data will inform possible mitigation measures if PFAS is detected above the MRL.

f. If any PFAS results are above the MRL, team with CE partners and the rest of the Drinking Water Working Group to evaluate health and future compliance risks, evaluate possible mitigation measures and begin mitigation planning. [1] If Perfluorooctanoic acid (PFOA), Perfluorooctane sulfonic acid (PFOS), or PFOS+PFOA results in finished drinking water exceed 70 parts per trillion (ppt), immediately inform CE partners, share all relevant sample results, and support CE partners with implementing immediate mitigation actions.

g. Track and record all PFAS drinking water results and location data (building number and geospatial coordinates) in DOEHRS. DOEHRS will be used to meet the routine OSD reporting requirements.

h. Post sampling results of detected PFAS (>MRL) on the installation's public webpage within 30 days of receipt of final validated results. If a Consumer Confidence Report is published for the system, include detected PFAS (>MRL) results.

3. MAJCOMs communicate any sampling shortfalls to AFMRA/SG3PB NLT 31 October 2023.

4. If you have specific questions regarding this guidance, my POC is Mr. Scott McDonald at 703-681-7626, shannon.s.mcdonald.civ@health.mil. If you have laboratory or sample analysis questions, please contact the ESOH Service center at 1-888-232-ESOH (3764), ESOH.Service.Center@us.af.mil.

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Date: 2023.08.30 09:17:29 -04'00'

CHARLES B. TOTH, Lt Col, USAF, BSC
Chief, Bioenvironmental Engineering
Air Force Medical Readiness Agency

Attachments:
1. Sampling of Per-and Polyfluoroalkyl Substances in DoD-Owned Drinking Water Systems, 28 Aug 23
2. Memorandum for Sampling of Per- and Polyfluoroalkyl Substances in DoD-Owned Drinking Water Systems, 11 Jul 23

[1] Per DoD, AF Water Purveyors will compare sample results to the proposed National Primary Drinking Water Regulation for PFAS and use this information to develop plans to mitigate compliance with the final regulation. CE partners are lead on mitigation planning.

DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

OFFICE OF THE ASSISTANT SECRETARY

August 28, 2023

MEMORANDUM FOR AF/A4
AF/SG

FROM: SAF/IE
1665 Air Force Pentagon
Washington, DC 20330-1665

SUBJECT: Sampling of Per-and Polyfluoroalkyl Substances in DoD-Owned Drinking Water Systems

This letter supersedes the Assistant Secretary of the Air Force (Energy, Installations, and Environment) (SAF/IE) memorandum dated 17 March 2020, "*Per-and Polyfluoralkyl Substances (PFAS) Sampling of DoD Drinking Water Systems*." AF/SG and AF/A4 will issue updated implementation guidance for all AF-owned drinking water systems where the AF is the water purveyor in and outside the United States in accordance with the attached memorandum and aligned with the following:

a. AF systems where the most recent samples were taken prior to 1 January 2022, will conduct sampling and analysis of finished drinking water for PFAS using Environmental Protection Agency (EPA) Method 533 and perfluorotetradecanoic acid (PFTeDA), perfluorotridecanoic acid (PFTrDA), N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA), and N-ethylperfluorooctanesulfonamidoacetic (NEtFOSAA) analytes using EPA method 537.1 by 31 December 2023.

b. For systems where the most recent sampling was performed after 1 January 2022, periodic PFAS sampling and analysis will be conducted based on the following:

   i.) Systems with results indicating PFAS analytes are below the Minimum Reporting Level (MRL) will sample at least once every two years. (Both EPA Methods 533 and 537.1 will be used when reporting on a two-year cycle.)

   ii.) Systems with results showing any of the PFAS analytes above the MRL will sample semi-annually until results are below the MRL for two consecutive sampling events. Then sampling may proceed as described in above paragraph. (Only EPA Method 533 will be required for semi-annual sampling.)

c. Submit PFAS Samples for drinking water analysis to an approve DoD Environmental Laboratory Accreditation Program (ELAP)[3] accredited laboratory or an EPA or state-accredited laboratory when DoD laboratories are unavailable.

d. Track and report all PFAS finished drinking water data in the Defense Occupational and Environmental Health System—Industrial Hygiene, Environmental Health module.

e. Post sampling results of detected PFAS on the installation's public webpage within 30 days of receipt of final validated results, and if a Consumer Confidence Report is published for the system, will include the results in the CCR.

At a minimum, all installations with AF systems exceeding the U.S. EPA's 2016 lifetime health advisory of 70 parts per trillion (ppt) of PFOA, PFOS, or PFOS + PFOA in finished drinking water will provide alternative drinking water and take actions to lower its concentrations to below 70 ppt. If there is an applicable, promulgated state or local PFAS regulation, AF drinking water systems must comply.

AF Water Purveyors will compare sample results to the proposed National Primary Drinking Water Regulation for PFAS. This data will be used to develop plans to mitigate noncompliance risk. Mitigation plans should consider future funding and planning, infrastructure, operations, and other applicable requirements.

Point of contact for this matter is Col (S) Claudia Eid (claudia.eid@us.af.mil), Office of the Deputy Assistant Secretary of the Air Force for Environment, Safety, and Infrastructure (SAF/IEE).

Nancy J. Balkus
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Date: 2023.08.28 10:39:15 -04'00'

NANCY J. BALKUS, P.E., SES
Deputy Assistant Secretary
(Environment, Safety and Infrastructure)

Attachment:
ASD Memorandum for Sampling Per-and Polyfluoroalkyl Substances in DoD-Owned Drinking Water Systems (11 July 2023)

cc:
NGB/CR
AFIMSC/CC
AFCEC/CI
AFCEC/CZ
AFCEC/CX
NGB/SG
NGB/A4
AFRC/SG
AFRC/A4

ASSISTANT SECRETARY OF DEFENSE
3400 DEFENSE PENTAGON
WASHINGTON, DC 20301-3400

ENERGY, INSTALLATIONS,
AND ENVIRONMENT

7/11/23

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (INSTALLATIONS, ENERGY AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY (ENERGY, INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (INSTALLATIONS, ENVIRONMENT AND ENERGY)
DIRECTOR, NATIONAL GUARD BUREAU (JOINT STAFF, J8)
DIRECTOR, DEFENSE LOGISTICS AGENCY (INSTALLATION MANAGEMENT)

SUBJECT: Memorandum for Sampling of Per- and Polyfluoroalkyl Substances in DoD-Owned Drinking Water Systems

This memorandum updates requirements for Per- and Polyfluoroalkyl Substances (PFAS) sampling frequency and analysis of drinking water and provides guidance in reevaluating PFAS analytical results in response to improved testing methodologies and in preparation for future regulatory requirements. This memorandum applies to DoD-owned drinking water systems worldwide including non-regulated systems and cancels the Assistant Secretary of Defense for Sustainability (ASD(S)) memorandum, *Per- and Polyfluoroalkyl Substances Sampling of Department of Defense Drinking Water Systems*, March 2, 2020. Where state or local regulations for PFAS have been fully promulgated and are more stringent than the guidance provided in this memorandum, the more stringent regulations will apply.

In anticipation of Environmental Protection Agency (EPA) establishing drinking water standards for certain PFAS and to ensure that the Department makes decisions based on drinking water samples that have been collected and analyzed using the most current methods, the DoD Components will review existing data and collect additional samples of finished drinking water from DoD-owned drinking water systems in accordance with this memorandum. The DoD Components will use this information to develop plans for implementation of the EPA's National Primary Drinking Water Regulation, once final. These plans should consider future funding, infrastructure, and other applicable requirements.

For facilities where the most recent samples were taken prior to January 1, 2022, the DoD Components will conduct sampling and analysis of finished drinking water for PFAS using both EPA Methods 533 and 537.1 by December 31, 2023. When using both methods to analyze for PFAS, DoD Components will use EPA Method 537.1 to analyze for and report perfluorotetradecanoic acid (PFTeDA[1]), perfluorotridecanoic acid (PFTrDA), N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA), and N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA) only and will use EPA Method 533 to

[1]The U.S Environmental Protection Agency (EPA) abbreviation for perfluorotetradecanoic acid (CAS 376-06-7) is PFTA and DoD data systems use PFTeDA.

analyze for and report all analytes included in the EPA Method 533 analyte list. This will ensure consistency across DoD in how PFAS samples are collected and analyzed for DoD-owned drinking water systems.

For facilities where the most recent sampling was performed after January 1, 2022, the DoD Components will conduct periodic sampling and analysis for PFAS based on the following schedule:

a. Systems with results indicating PFAS analytes are below the Minimum Reporting Level (MRL) will sample at least once every two years. Both EPA Methods 533 and 537.1 will be used when reporting on a two-year cycle.

b. Systems with results showing any of the PFAS analytes above the MRL will sample semi-annually until results are below the MRL for two consecutive sampling events. Then sampling may proceed as described in paragraph (a) above. Only EPA Method 533 will be required for semi-annual sampling of PFAS, unless the exceedance involves one of the four analytes in Method 537.1.[2]

DoD Components will not be required to sample systems that have been removed from service after providing notification, by memorandum, from the DoD Component Deputy Assistant Secretary to the Deputy Assistant Secretary of Defense for Environment and Energy Resilience, documenting that the system is no longer in service and that appropriate steps have been taken to ensure no one is drinking the water from the system.

The DoD Components will analyze PFAS in drinking water using a DoD Environmental Laboratory Accreditation Program (ELAP)[3] accredited laboratory, when available. If a DoD ELAP accredited laboratory is unavailable, the DoD Components may use an EPA or state-accredited laboratory.[4]

If DoD owned systems detect levels of PFOA, PFOS, or PFOS + PFOA in finished drinking water exceeding 70 parts per trillion, DoD Components will provide alternative drinking water and take actions to lower PFOS/PFOA concentrations to below 70 ppt.

To effectively track and report PFAS data, final testing results for PFAS in finished drinking water collected from DoD-owned drinking water systems will be reported to the Office of the Deputy Assistant Secretary of Defense for Environment and Energy Resilience (ODASD(E&ER)) using the attached template. Results will be submitted to ODASD(E&ER)

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[2] Both test methods are required for semi-annual sampling if any of the analytes that exceed the MRL are one of the four sampled using Method 537.1.

[3] Laboratories capable of meeting the DoD ELAP requirements applicable to these methods can be found at www.denix.osd.mil/edqw/accreditation/accreditedlabs.

[4] Analytical services provided by outside the United States laboratories are required to be accredited to ISO 17025 by a signatory to the ILAC Mutual Recognition Arrangement (MRA) with Methods 533 and 537.1 on their scopes of accreditation. Laboratories must participate in the EPA proficiency testing studies performed as part of the UCMR 5 laboratory approval process.

within 30 days of receipt of final validated results. DoD will make results available on defense.gov/pfas. In addition, DoD Components will continue to provide PFAS drinking water sampling results in the Defense Occupational and Environmental Health Readiness System (DOEHRS) through Fiscal Year 2024.

DoD Components will post sampling results of detected PFAS on the installation's public webpage within 30 days of receipt of final validated results, and if a Consumer Confidence Report is published for the system, the DoD Components will include the results in the CCR.

The point of contact for this matter is Ms. Alexandria Long, at 703-571-9061 or alexandria.d.long.civ@mail.mil.

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Brendan M. Owens