

FAST NEWS ON PFAS NEWSLETTER

In the fast-paced news cycle of PFAS, discerning priorities can be a challenge. Weston's PFAS newsletter takes you out of the minutia and into the big picture. We have assembled key regulatory highlights, expert input, and state-of-the-science facts, and distilled them to the essentials of what you need to know, why it matters, and how it could impact you. Make this quick quarterly newsletter your starting point to understanding the latest information on PFAS.

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DOD RESPONSE TO FEDERAL NATIONAL PRIMARY DRINKING WATER REGULATIONS

In a memorandum dated September 3, 2024, the Assistant Secretary of Defense officially addressed the DoD's first step in integrating the enforceable federal Maximum Contaminant Levels (MCLs) established by the National Primary Drinking Water Regulations for specific PFAS (DOD ASD (EI&E), 2024) into DoD's ongoing PFAS cleanup program. For details on the promulgation process and previous actions, refer to past editions of the Newsletter on our website (www.westonsolutions.com/news-category/papers-and-publications). Additionally, the memorandum addresses the DoD's approach to evaluating background levels of PFAS on a site-by-site basis. It considers off-installation drinking water supplies (public and private) as well as on-installation long-term remedial actions.

The DoD completes cleanup actions in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Under CERCLA, MCLs and other federal and state cleanup requirements can be incorporated into the cleanup process as applicable or relevant and appropriate requirements (ARAR) where groundwater is used for drinking water (US EPA, 1990) (US EPA, 1988). The DoD notes that MCLs can be used as a risk-based trigger level for interim actions (i.e., removal actions) "... but exceeding an MCL does not itself trigger a removal action" (DOD ASD (EI&E), 2024).

CERCLA also requires the development of risk-based cleanup levels during a remedial investigation. The risk-based levels are developed on a site-by-site basis in coordination with EPA and state regulators and consider background levels. Of note, the memorandum does not address the DoD's approach to incorporating EPA's latest Regional Screening Levels (RSLs) (US EPA, 2024(a)). As of this writing, the DoD continues to default to the November 2023 RSLs (DOD ASD (EI&E), 2023).

- **What You Need to Know:** The DoD is initiating a phased approach to integrating the MCLs into their PFAS investigations and removal actions. To address DoD-related PFAS contamination in private and public drinking water supplies, DoD is focusing on removal actions at the 55 installations that were previously prioritized and sites where PFAS are detected at concentrations at or above the three times the MCL (i.e., PFOA = 12 parts per trillion [ppt]; PFOS = 12ppt; PFHxS = 30ppt; GenX = 30ppt; PFNA = 30ppt; HI=3[unitless]).

The phases are as follows:

1. Initial removal actions at the 55 installations where DoD has previously taken action to address private (non-municipal) drinking water wells impacted by PFAS at the highest known concentrations from DoD activities.
2. The DoD will identify and take action where PFAS are above three times the MCLs at additional locations not included in phase 1.
3. After initiating removal actions where PFAS concentrations are above three times the MCLs, the DoD will initiate remedial action to address drinking water supplies (private and public) with concentrations below three times the MCLs.

Further, DoD's order of preference for eliminating risk from PFAS at private drinking water wells is:

1. Provide connection to a public water system.
2. Install a whole-house treatment system.
3. Provide point-of-use treatment system.
4. Provide bottled water.

Finally, DoD also intends (when authorized) to assist public water systems impacted by PFAS from DoD activities with concentrations above the MCLs. These water systems have until April 2029 to come into compliance with MCLs. The guidelines include several helpful tables that describe relevant chemical properties, observational concentrations of PFAS in indoor air, the pros and cons of different methods, and extraction and analytical methods.

For long-term remedial actions, DoD will take actions to address PFAS cleanup to get below the MCLs as the final cleanup levels or work with regulators to determine the final cleanup levels for a site. Background levels may be above or below MCLs. In cases where site-specific background levels are determined to be below MCLs, the MCLs will be considered the final cleanup levels. If, however, site-specific background levels are determined to be above the MCLs, DoD and federal and state regulators will work together to determine the appropriate final cleanup levels for that site.

► **Impact:** Critically, the issuance of this memorandum provides long-awaited guidance for incorporating MCLs into PFAS-related work at DoD sites. As is acknowledged in the memorandum, significant resources and effort will be required to address drinking water impacts on and off installations. DoD is approaching the task pragmatically by prioritizing the response in a risk-based manner.

Under the CERCLA process, DoD has completed PFAS-focused assessments at 710 of 717 installations and determined that 578 installations require further investigation. However, these interim actions and the investigations completed under CERCLA were triggered by exceedances of the Health Advisory level of 70ppt (PFOA and PFOS individually or combined). Remedial investigations (RIs) have been initiated at more than 350 of the 578 installations with plans to begin RIs at an additional 150 installations over the next 2 fiscal years (i.e., FY25 and FY26). As noted above, interim actions have already been taken at 55 installations to address impacted drinking water wells. Many sites will require rework to ensure the guidance is applied at every installation.

DEVELOPMENT AND DEMONSTRATION OF FIRST FIELD-READY PFAS-DETECTION TECHNOLOGY

EPA's Science to Achieve Results (STAR) program awarded a \$1.5 million grant to Clarkson University for their project titled "Multimodal Nanosensor for Field Detection and Degradation of PFAS Contamination in Groundwater and Wastewater (SENSE-PFAS)" (US EPA, 2024(b)). The investigators are proposing an integrated nanoelectrochemistry (nanoEC) quantum Raman nanosensor with silver nanoparticle hybrid platforms to create a redox active interface to detect PFAS and that can be integrated with graphene-iron catalysts to degrade PFAS.

► **What you need to know:** The applicants were required to address two research areas including (1) development and demonstration of a nanosensor that can detect and monitor PFAS specifically in groundwater and surface water that may serve as drinking water sources and (2) development and demonstration of nanosensor technology with functionalized catalysts that degrade PFAS through a mineralization process and does not create harmful byproducts as it destroys the carbon-fluorine bond.

The researchers are proposing a tool that combines looking at ionic currents with another tool (quantum Raman spectroscopy) that identifies the vibrational modes of molecules. This has previously been cited as a method that "would generate a platform with high-throughput readout for single-molecule investigations" (Xu X., 2023). While other researchers have observed that quantum Raman spectroscopy allows for improved imaging of molecular bonds, improvement in concentration sensitivity, and the observation of biological structures that would not otherwise be visible (Casacio, 2021).

Interestingly, the grant requires that researchers include all PFAS included in the EPA's Fifth Unregulated Contaminant Monitoring Rule and that the result of the research be a field-ready sensor rather than a proof-of-concept. The grant period of performance runs through July 31, 2027, meaning that a prototype will not be ready until 2027 and it could be years beyond 2027 for the sensor to be commercialized and widely available.

► **Impact:** The development of a tool with sensitivity and selectivity to accurately monitor changes of PFAS in the field will be invaluable from the site investigation phase through monitoring an active remediation system. To date, most field sensors have been designed to measure total PFAS at concentrations in the tens of parts per trillion. Success in this project could revolutionize environmental investigations and remediations, including for all kinds of treatment plant operators.

THE CHEVRON DOCTRINE

The Chevron Doctrine is the result of a 1984 Supreme Court case, *Chevron vs. Natural Resources Defense Council* (*Chevron U.S.A. v. Natural Res. Def. Council*, 1984). Simply put, the Chevron Doctrine would require a court to default to the regulatory agency's interpretation of a law if the question at the center of a legal case had not been directly answered by Congress. Since 1984, the Chevron Doctrine has been cited in federal court proceedings more than 18,000 times. However, in June 2024, the Supreme Court effectively struck down the Chevron Doctrine stating that the doctrine was counter to the Administrative Procedure Act that requires courts to make their own interpretation of laws and not defer to the agency's interpretation (Supreme Court of the United States, 2024) (Howe, 2024).

On July 1, 2024, the Supreme Court determined that the statute of limitations to challenge an agency's actions does not start until a plaintiff is injured by an agency action (Gold R., 2024).

► **What you need to know:** Courts will now be required to make their own independent interpretation of laws and conclude if “the law means what the agency says” (Supreme Court of the United States, 2024). This does not preclude the court’s ability to still consider agency opinions and interpretations. Further, Justice Roberts indicated the Court’s decision regarding the Chevron Doctrine does not automatically overturn previous cases that invoked the Chevron Doctrine.

The statute of limitations ruling means that an entity’s ability to challenge an agency’s rule starts when that rule first “injures” the entity, not when the final rule is promulgated. The entity would have 6 years to file suit from the date of injury.

► **Impact:** The impact of this decision will be long-lasting and will play out in the court system with not only new cases, but also potentially previously settled cases that cited the Chevron Doctrine. It impacts environmental cases as well as a myriad of other areas including health care, transportation, energy, real estate, consumer protection, and education. The exact nature of the impact and how it may affect regulations pertaining to PFAS specifically remain to be seen. The Supreme Court’s decision has already been cited by petitioners challenging EPA’s designation of PFOA and PFOS as hazardous substances under CERCLA.

IMPORTANT UPDATE: TSCA REPORTING CHANGE AND CORRECTION

In January 2024, we published Fast News on PFAS Volume 2 Issue 1 that included EPA’s final rule under the Toxic Substances Control Act (TSCA) that requires reporting by all manufacturers and importers of PFAS and PFAS-containing materials (Weston Solutions, Inc., 2024). On September 5, 2024, EPA published a change and technical correction to the TSCA reporting and record keeping. EPA noted the cause for the change as being a combination of increased effort and decreased funding to complete the development of an electronic reporting system. As a result, the reporting period has shifted. The period now begins July 11, 2025, instead of November 12, 2024. The EPA also corrected an error in the original Register publication where they specify “published study reports” under the requirement to submit Organization for the Economic Cooperation and Development’s (OECD) Harmonised Templates (OHTs) to the correct requirement of submitting OHTs for “unpublished study reports.” EPA intended to require OHTs only for unpublished study reports (US EPA, 2024(c)).



WESTON PRACTITIONER SPOTLIGHT

MATT KENNEY
PROJECT SCIENTIST
4.5 YEARS WITH WESTON

Matt has 10.5 years of experience as an environmental scientist and 5 years’ experience in PFAS investigation and remediation. He has been the field lead for multiple large PFAS projects in New England, most notably the Nantucket Memorial Airport PFAS Investigation. Through his work on Nantucket, Matt has had to coordinate drinking water sampling and bottled water deliveries to over 60 residences on the island. Matt has also coordinated and managed most of the Nantucket field events.

“The most rewarding part of my career is when I can directly assist the public. Assistance can come in a variety of methods such as sampling their drinking water, installing a treatment system, and/or providing interpretation of analytical results. My objective is to be a trustworthy representative of Weston and our clients to the public.”

LET’S MEET UP!



**RemTEC & Emerging
Contaminants Summit**



WEFTEC 2024



ITRC PFAS Team



**2024 Federal
Small Business Conference**



**DoD Energy and
Environment Innovation Symposium**

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