

EPA Advances on Key PFAS Roadmap Deadlines

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In the last two weeks, the Environmental Protection Agency (“EPA”) has taken two major steps forward on its regulation of the “forever chemicals,” per- and polyfluoroalkyl substances (“PFAS”), to advance implementation of its PFAS Roadmap, released in October 2021. Specifically, EPA (1) established drinking water health advisory limits for four widely-studied PFAS; and (2) issued an order requiring manufacturers of a particular PFAS to conduct studies of that PFAS, or provide specified toxicity data.

The PFAS Roadmap set out a three-pronged approach to their regulation: **First**, research the chemicals and their exposure pathways; **Second**, restrict PFAS output through regulation; and **Third**, require remediation of PFAS contamination. (For an overview of the PFAS Roadmap, see: [EPA Plan Changes PFAS Outlook for Companies, Regulators.](#))

Exposed communities, manufacturers, owners of affected properties, drinking water suppliers and state agencies should all take note of EPA’s progress, as it directly impacts the ongoing efforts to fill the scientific gap, stop exposure pathways, and clean up the large swaths of natural resources—including drinking water—that have suffered PFAS-related impacts.

Set Health Advisory Levels for Certain PFAS

In perhaps the most significant step EPA has taken to regulate PFAS thus far, on June 15, 2022, EPA issued drinking water health advisories for four PFAS. Health advisories are not enforceable limits, but serve to inform state and federal regulators of the concentration at which detrimental health effects will occur, whether for chronic or short-term exposure, and will be used as the basis for EPA’s establishment of enforceable standards. EPA is expected to propose enforceable drinking water standards, known as Maximum Contaminant Levels (“MCLs”) under the federal Safe Drinking Water Act, by the end of 2022, with a final rulemaking expected by the end of 2023.

A 2016 health assessment of PFOS and PFOA, both legacy PFAS, set a health advisory at a combined level of 70 ppt.^[1] The recently revised interim health assessments, based upon a review of toxicity studies, are orders of magnitude lower: **0.004 ppt for PFOA** and **0.02 for PFOS**. These updated health advisories for PFOA and PFOS have lowered significantly based on epidemiological human studies showing that the most sensitive non-cancer effect for PFOA and PFOS was suppressed vaccine response in children. While EPA has indicated that PFOA is likely a human carcinogen and PFOS is a suspected human carcinogen, it is continuing to evaluate cancer risk concentrations, so the published interim levels are not intended to indicate safe levels for cancer risk at this time. Due to their classification as a suspected and likely human carcinogen, however, the drinking water MCL will likely be set at the detection limit of 4 ppt.^[2]

Final health assessments for two next-generation PFAS—Gen X and PFBS—have been set at **10 ppt**

for GenX and 2,000 ppt for PFBS. These assessments were based on mice studies that indicated health effects for GenX, including effects to the liver, kidney, immune system, development, and cancer; and health effects for PFBS, including the thyroid, reproductive system, developing fetus, and kidneys. Cancer risk concentration, while cancer from oral exposure of GenX is suggested, has also not been established for GenX or PFBS.

Issued TSCA Order to Research PFAS

While PFOA, PFOS, GenX and PFBS, have peer-reviewed science on which to base health advisories, EPA is also looking to expand scientific data on less-studied PFAS, and issued an order requiring companies to undertake those studies. On June 6, 2022, EPA issued an order (the “Order”) to four manufacturers^[3] of a particular PFAS chemical—a surfactant used in fire-fighting foam and floor finishes, ordering that they test or provide testing information regarding the chemical. Consistent with EPA’s PFAS Roadmap that laid out a national PFAS testing strategy aimed at developing a greater understanding of PFAS, in furtherance of developing protective regulations, this is the first such order EPA has issued regarding PFAS.

In issuing this Order, EPA relied on its authority under Section 4(a)(2) of the Toxic Control Substances Act (“TSCA”), which is the law that provides EPA the authority to regulate the manufacturing of chemical substances and mixtures. The Order concerns the PFAS 6:2 Fluorotelomer sulfonamide betaine (“6:2 FTAB”) and the named manufacturers include The Chemours Co., DuPont de Nemours, Inc., National Foam, Inc., and Johnson Controls, Inc. The Order specifically directs the recipients to provide testing on (1) the physical-chemical properties of 6:2 FTAB and (2) the health effects associated with inhalation of the chemical.

EPA chose 6:2 FTAB for testing because of the amount manufactured each year and its similarity to other untested PFAS. A large volume of 6:2 FTAB is manufactured each year, thereby potentially exposing a significant number of workers to the chemical. Based on what EPA does know about 6:2 FTAB, the results of the toxicity data it receives may provide a better “understanding of the human health effects of 503 additional PFAS with similar structures”^[4] This Order is just the first in a series of testing orders EPA plans to issue in the coming months. There are twenty-three additional PFAS that EPA identified as needing additional toxicity data and having a known manufacturer it could look to for that data.

Next Up on EPA’s PFAS Roadmap

EPA still has a number of actions coming out this year on PFAS, including:

- Summer 2022**
- Continued meetings being held by the Office of Management and Budget on the proposed rule to designate PFOA and PFOS as hazardous substances under RCRA and CERCLA; and
 - Initiate first national study of PFAS in fish tissue in U.S. lakes.
 - Publish a proposed rule to establish a national primary drinking water regulation for PFOA and PFOS;

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- Publish multi-laboratory validated analytical method for 40 PFAS;
- Complete studies on PFAS discharges in the following industries: electrical and electronic components, textile mills, and landfills; and
- Evaluate mitigation options for PFAS air emissions.

**Winter
2022**

- Finalize new PFAS reporting under TSCA Section 8; and
- Reduce PFAS discharges by including limits in Clean Water Act permits.

The most recent actions—publishing health assessments and ordering further study—are on track with EPA’s plan to regulate thousands of PFAS chemicals. Despite the individual actions taken on particular PFAS, EPA will likely take a categorical approach to regulation moving forward. The announcement this week of health assessments for PFOS and PFOA at just a small fraction of the prior levels is an indicator of drinking water MCLs at detection limits, and continued toxicity testing outcomes indicating significant health effects in humans.

Communities impacted by contaminated water that previously fell below the thresholds needed under various agreements to qualify for bottled water may now be eligible to receive bottled water. Companies involved with manufacturing PFAS chemicals anywhere in their product lines should consider whether to phase out use of the chemicals and evaluate remediation exposure before they are named responsible parties. And states and municipalities dealing with widespread contamination of their natural resources should consider assessing their damages at the currently feasible detection limits, as regulatory levels will be equal to or approaching such limits, and should store samples for further testing as analytical methods improve.

[1] “Legacy PFAS,” also known as “long-chain PFAS,” contain six or more carbons atoms. “Next-generation PFAS,” also known as “short-chain PFAS,” have fewer than six carbons atoms.

[2] The practical quantitation limit (“PQL”) for PFOA is currently 4 ppt. While detection is possible below this level, the PQL provides a high degree of confidence that the analyte is present at that concentration.

[3] TSCA broadly defines “manufacturer” to also include importers of chemicals.

[4] Env’tl Prot. Agency, EPA Issues First Test Order Under National Testing Strategy for PFAS in Commercial Fire Fighting Foam and Other Uses, June 6, 2022.