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Finalizing PFAS Detection Methods, EPA Moves Closer to Locating and Limiting Further PFAS Releases and Requiring Their Cleanup

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EPA's plans to investigate – and eventually establish limits on and liability for – PFAS in wastewater discharges and biosolids crossed a significant milestone on January 31, 2024, with the completion of two new analytical methods to detect these ubiquitous contaminants. The most significant of the two is Method 1633, which provides a standardized quantitative method for laboratories to detect 40 different PFAS compounds, at very low levels, in wastewater, surface water, groundwater, soil, biosolids, sediment, landfill leachate, and fish tissue. Method 1621 is a low-cost screening method for the presence of fluorine-containing organic compounds, which could lead to use of the more sensitive Method 1633 to further characterize any PFAS in the sample. EPA's public statements provide no timeline for seeking approval of these methods for PFAS monitoring of wastewater discharges as part of 40 C.F.R. Part 136, but a Method Update Rule is likely to be proposed before the end of the year.

EPA has big plans for the PFAS data that these two new methods will generate.

- The ability to assess diverse matrices will facilitate the identification of industrial PFAS sources in POTW influent, the assessment of PFAS impacts to aquatic life, and tracing of PFAS in effluent, biosolids, and stormwater.
- Correlating PFAS discharges with the expansive set of information EPA will be collecting on the importation and manufacturing of PFAS-containing chemicals and products under the PFAS Reporting Rule will help federal and state agencies pinpoint where PFAS might have entered waste streams.
- EPA plans to begin developing technology-based effluent limits for Clean Water Act discharge permits to restrict further PFAS releases into the environment. In 2021, EPA's PFAS Strategic Roadmap disclosed plans to leverage certain NPDES permits that are issued by

EPA to reduce PFAS discharges, beginning with PFAS monitoring requirements using Method 1633. EPA Region 1 subsequently promulgated a general permit for medium-sized wastewater treatment plants in Massachusetts, effective April 1, 2023, that required monitoring and reporting for PFAS using the draft version of Method 1633.
EPA encouraged states to adopt similar monitoring in their own NPDES permits. New York is taking public comments through March 11 on draft guidance to modify SPDES permits under active review "to include a monitoring program for the 40 PFAS compound suite available through EPA's draft Method 1633…."

- Should EPA succeed in finalizing its designation of PFOA, PFOS, and other PFAS as "hazardous substances" under CERCLA, their detection in effluent (without appropriate Clean Water Act "permit shield" protections accompanying an applicable federal or state permit) could subject dischargers to EPA requiring PFAS cleanup, private parties pursuing CERCLA claims, and federal, state, and tribal governments seeking natural resource damages.

Co-developed by EPA and the Department of Defense, the highly sensitive Method 1633 relies on cutting-edge analytical technologies (LC-MS/MS plus isotopically labeled standards) to quantify these 40 PFAS at levels as low as 1 part per trillion (ppt). Although EPA cannot require NPDES permittees to monitor PFAS in wastewater discharges until Method 1633 is incorporated into 40 C.F.R. Part 136, a Method Update Rule is expected to be promulgated quickly. Moreover, because many states had been reluctant to follow EPA's recommendation to include PFAS testing in NPDES and pretreatment permits until Method 1633 was finalized, some states might begin to include PFAS monitoring in NPDES permits.

The second method EPA announced as being final is Method 1621, a less costly and less sensitive screening method for detecting fluorine-containing organic compounds down to 1.5 parts per billion (ppb). Method 1621 is a standardized, non-specific, Adsorbable Organic Fluorine (AOF) method that cannot distinguish one fluorine-containing organic compounds from another. It is capable of detecting thousands of members of the PFAS chemical family at a much lower cost than the 40 PFAS capable of being detected by Method 1633. However, fluorine-containing pharmaceuticals and pesticides, if present in the sample, could overstate the presumed "total PFAS" concentrations. Thus, Method 1621 will be used as an inexpensive screening method for detecting fluorine-containing organic compounds in a sample that could be followed by a more sensitive, PFAS-specific quantitative analytical method (such as Method 1633).

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