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IMPACTS OF EPA'S PFAS ACTION PLAN

EPA has released its first-ever comprehensive nationwide Per- and Polyfluoroalkyl Substances (PFAS) Action Plan. The plan is the result of a cross-agency effort and is focused predominantly on protecting the nation's drinking water. The PFAS Action Plan includes numerous aspects that may have both immediate and long-term effects on regulated parties. Such impacts include additional regulations on known and new substances; more enforcement of monitoring, treatment, and remediation requirements; and potential for raised public awareness and action, as well as litigation.

Drinking-Water MCLs

In 2016, EPA established non-enforceable and non-regulatory health advisories for two PFAS (PFOA and PFOS[1]) to provide technical information to operators of drinking-water systems and public health officials who must determine appropriate actions to protect public users of their drinking water. The recommended health advisory level is to stay below 70 parts per trillion (ppt) for combined PFOA and PFAS in drinking water.

Under the PFAS Action Plan, EPA will develop and promulgate MCLs for PFOA and PFOS under the Safe Drinking Water Act. By the end of this year, EPA will propose a regulatory determination, which is the next step in the Act-defined process toward an MCL. It has been years since the Agency established a new MCL and they are taking a careful approach. EPA guidance for establishing an MCL states, "MCLs are enforceable standards and are to be set as close to the maximum contaminant level goals (MCLGs) (Health Goals) as is feasible and are based upon treatment technologies, costs (affordability) and other feasibility factors, such as availability of analytical methods, treatment technology and costs for achieving various levels of removal." State regulators and non-government organizations have been calling for rapid promulgation of MCLs, and some states are setting their own rather than wait for federal standards.

Potential Impact: Unlike a health advisory, an MCL is an enforceable national standard that must be achieved in drinking water. This will present challenges to suppliers of drinking water, including additional costs for monitoring and treating water to comply with MCLs. The MCLs will also constitute Relevant and Applicable Standards (ARARS) for remediation of groundwater, and the presence of both state and federal standards will create additional complexity. These standards are being set for PFOA and PFOS, because they are considered by EPA to be the prevalent contributors to health risk, and they have the most available toxicity information. However, there are thousands of PFAS in the

[1] Perfluorooctanoic acid and perfluorooctanesulfonic acid.

environment, and it seems likely that additional MCLs will be established as others are better understood. In fact, EPA is developing analytical methods and toxicity values for additional PFAS as part of the Plan (see below). Expect more EPA standards and regulations.

Clean-Up and Enforcement Actions

EPA has begun the process of listing PFOA and PFOS as "hazardous substances" under CERCLA. EPA also plans to issue interim groundwater cleanup recommendations for sites contaminated by PFOA and PFOS.

Potential Impact: Listing PFOA and PFOS as CERCLA hazardous substances will give EPA the ability to require responsible parties to carry out and/or pay for response actions. Groundwater cleanup under such actions will not have to await MCLs as applicable standards; existing health advisories and interim cleanup recommendations can be applied. Expect more enforcement action and remediation.

Regulation and Reporting

Beginning in 2019, EPA plans to seek information from industry to identify industrial sources that may warrant potential regulation through national Effluent Limitation Guidelines (ELGs) under the Clean Water Act. EPA plans to include PFAS in nationwide drinking-water monitoring under the next Unregulated Contaminant Monitoring Program (UCMP). EPA is also considering requiring industry to report PFAS in their Toxic Release Inventory (TRI).

Potential Impact: Industry will be asked for information on PFAS discharges. If ELGs are determined to be applicable, they require that a technology-based, minimum level of control be applied to any NPDES permit for direct PFAS discharge to waters or be directly applicable for indirect PFAS dischargers. Among other purposes, TRI and UCMP data will be used to identify potential sources of PFAS discharge to the environment. The current uncertainty about PFAS fate and transport will complicate connecting environmental levels to potential sources and connecting releases to potential exposures. Expect discharge limits and the potential to be identified as a source of exposure.

Toxicology and Analytical Research

EPA has established toxicity factors (oral reference doses) for two PFAS (PFOA and PFOS) and draft values for GenX chemicals and PFBS.[2] Under the PFAS Action Plan, EPA is developing additional PFAS toxicity values for compounds known as PFBA, PFHxA, PFHxS, PFNA, and PFDA. There are currently laboratory analytical methods for about 20 of the thousands of PFAS. EPA plans to develop new analytical methods so that more PFAS chemicals can be detected in drinking water, soil, and groundwater.

[2] Perfluorobutane sulfonic acid

Potential Impact: The availability of toxicity factors and analytical methods for more PFAS can be expected to result in added sampling and analysis requirements, expanded risk assessments, and regulatory standards for more PFAS. EPA is challenged by the large number of PFAS potentially present in products and the environment, as well as the potential for precursor chemicals to be transformed to PFAS. Some approach to regulating groups of PFAS compounds is likely, perhaps including toxicity factors by group and/or a toxicity equivalency factor approach.

Risk Communication

The PFAS Action Plan includes developing a PFAS risk communication toolbox that includes materials to be used by states, tribes, and local partners to communicate effectively with the public.

Potential Impact: There are large uncertainties in many areas of PFAS risk, yet the public will learn that PFAS have been detected globally in the environment, people, and animals. The perception of risk in the face of these uncertainties will be a challenge to the PFAS communication toolbox and will likely produce growing public concern. Coupled with EPA plans to include PFAS data in TRI reporting, nationwide drinking-water reporting, NPDES discharge data, and other transparent monitoring programs, a growing potential for public action and litigation should be anticipated.

ToxStrategies has both the technical resources and deep experience in risk assessment to assist clients in navigating the scientific environment and growing regulatory labyrinth associated with PFAS. For assistance with PFAS issues, please contact us at info@toxstrategies.com or at **866.764.5840**