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**Insights**

# PFAS AND YOUR BUSINESS: SCREENING FOR RISK

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States across the country have been regulating per- and polyfluoroalkyl substances ("PFAS") over the last few years. Recent actions taken by the United States Environmental Protection Agency ("EPA") underscores that point: (1) the release of ultra-low level interim health advisory limits; and (2) the announcement that EPA intends to proceed with listing PFOA and PFOS as hazardous substances under CERCLA. These two actions, along with others discussed in this alert, are in furtherance of EPA's PFAS Strategic Roadmap (the "Roadmap"), and confirm that the regulatory requirements and risks for PFAS are now a reality at the national level.

Bryan Cave Leighton Paisner ("BCLP") and Burns & McDonnell have co-authored a series of three articles to help businesses translate the general statements in the Roadmap into a practical list of next steps that can be implemented to identify and mitigate PFAS regulatory risk.

## I. A National Plan for PFAS Regulation

On October 18, 2021, EPA unveiled the Roadmap to investigate and regulate PFAS compounds under a variety of federal environmental laws. Although the announcement did not create any news laws or regulations, it provides an overview of the actions that EPA intends to take over the next several years.

According to EPA's Press Release, the Strategic Roadmap for PFAS embraces three guiding principles: (1) to increase investments in PFAS research; (2) to leverage state and local authorities to take action to restrict releases of PFAS chemicals; and (3) to accelerate the remediation of PFAS contamination.

## II. Preliminary Risk Assessment: How to Stay Out of Traffic

If the compliance challenges posed by EPA's sweeping proposal seem daunting, your intuition is correct. However, there is a common strategy that businesses can adopt to plan for these new requirements -- identify and characterize your legacy and ongoing involvement with PFAS.

The following series of questions provides a helpful guide to determining what steps your business should take to evaluate PFAS risk under the proposed EPA actions. It is important to note that these questions are not intended to address state laws and regulations that may pose additional risks.

1. Has your business ever used PFAS compounds as a part of your manufacturing process, or as a component or ingredient in products that you manufacture?
   a. You should consider whether any historic use impacted soil or groundwater that could subject you to additional investigation and remediation liability. Note that this concern applies to properties that you no longer own, especially if your historic operations on the property could have caused releases of PFAS compounds.

   b. You will also need to start preparing the necessary documents to respond to the new TSCA data-gathering rule that is expected to go into effect in early 2023.

   c. If you are currently using PFAS compounds, then you should evaluate whether your wastewater discharges and air emissions include any PFAS compounds, and whether you generate any RCRA waste that contains PFAS.

2. Have you ever owned, or do you currently own, any property that may be impacted by PFAS contamination?
   a. You will need to consider if it originated onsite, or alternatively, if it migrated onto your property from an offsite source.

   b. You should consider evaluating the nature and extent of those impacts, and where warranted, identify the source of historic contamination. For example, if PFAS-containing AFFF was stored onsite, or if there was a fire training area on the property that creates a different risk profile than if there was a single fire incident where AFFF may have been used.

   c. You may want to assess any potential claims that may be brought by government entities or third parties.

   d. As you conduct your investigation, bear in mind that any sampling results, reports, or other information that you generate may present their own risks including reporting requirements, and the potential for things to be subject to discovery in future litigation or enforcement actions.

## III. The Benefits of Testing

As we describe below, there are several regulatory drivers which may warrant testing for PFAS substances. We also present numerous testing strategies that are important to consider when evaluating next steps.

### A. CERCLA "Hazardous Substance" Designation

On August 26, 2022, EPA announced that it is proposing to designate PFOA and PFOS as Hazardous Substances under CERCLA. After the rule has been published in the Federal Register, a public comment period will last for sixty (60) days. EPA anticipates issuing a final rule by later in 2023.

This designation will affect remediation efforts, notification requirements, and due diligence activities. Specifically, this action may impact how businesses conduct Phase I Environmental Site Assessments, EPA's classification of Potentially Responsible Parties ("PRPs"), liability determinations, litigation considerations, and notification and reporting requirements.

For additional information, prefer to the proposed rule and the press release.

**B. RCRA Development**

EPA has announced that it will expand the Resource Conservation and Recovery Act ("RCRA") RCRA Corrective Action Program. As a result, EPA will have the authority to require the investigation and remediation of emerging contaminants, such as PFAS substances, that meet the statutory definition of hazardous waste under RCRA Section 1004(5).

This action under RCRA will have significant impacts on businesses, including increased site investigation and clean-up liability. Under EPA's broadened RCRA Corrective Action Program authority, EPA will be able to order sites that historically used PFAS and/or may have generated PFAS waste, to investigate, and if necessary, to clean-up residual contamination.

**C. Wastewater Discharge Limits and NPDES Permits**

EPA will continue to establish Effluent Limit Guidelines ("ELGs") and/or information gathering programs for wastewater discharges from the following industries:

- Organic Chemicals, Plastics and Synthetic Fibers ("OCPSF") manufacturing;
- Metal finishing;
- Electroplating;
- Electrical and electronic components manufacturing;
- Textile mills;
- Landfills;
- Leather tanning and finishing;
- Plastics molding and forming;
- Paint formulating;
- Pulp, paper, and paperboard manufacturing; and

- Airports.

This is a reaffirmation of the Preliminary Effluent Guidelines Program Plan 15 BCLP discussed in a previous Client Alert.

In addition, EPA has announced that it will include effluent limits for certain PFAS compounds in National Pollutant Discharge Elimination System ("NPDES") permits which are issued directly by EPA (i.e., in states where NPDES permitting authority is not delegated to the state). BCLP addressed this NPDES permit issue in a recent client alert.

When read together, the new ELGs and the broadened scope of the NPDES permitting system underscore the need for facilities that still use PFAS to evaluate their usage, and to determine whether any PFAS compounds are present in their wastewater effluent.

**D. TSCA Data Gathering**

In June 2021, EPA published a proposed data-gathering rule under the Toxic Substances Control Act ("TSCA"), collecting extensive information for any PFAS product manufactured or used since 2011. The data-gathering requirements in the proposed rule involve PFAS uses, production volumes, disposal, exposures, and hazards. BCLP discussed this comprehensive data gathering requirement in a previous Client Alert.

EPA expects to finalize the rule before January 1, 2023, but businesses should start evaluating what relevant records are available. Once again, this emphasizes the importance of understanding your PFAS use, including any historic operations.

**E. Specific Testing Methods**

General information regarding some of the available PFAS testing methods are listed below. Importantly, organizations and their consultants should be thoughtful when determining if and how to collect and analyze samples for PFAS, with the goal of obtaining data that meet evaluation objectives while avoiding the generation of misleading or potentially problematic results.

**1. Selective Analytical Methods**

Selective methods provide quantitative results for specific PFAS such as PFOA, PFOS, certain replacement PFAS chemistry including GenX, and a limited number of precursors. While these methods are commonly used to evaluate the presence of PFAS in drinking water (e.g., EPA Methods 537.1 and 533) and environmental matrices (e.g., Draft EPA Method 1633 and OTM-45), commercial laboratories can only provide results for up to 75 PFAS using selective analytical methods.

These methods usually allow for testing of certain matrices using EPA certified methods, thereby reducing the potential for variability in lab methods affecting data accuracy across samples, but they do not capture many of the PFAS included on EPA's TRI list and/or those considered to be commercially relevant. Therefore, the results of these selective analyses should not be used as a definitive indicator of whether a material or site is "PFAS Free."

**2. Non-Selective Analytical Methods**

Non-selective laboratory methods can be a useful tool to assess "total PFAS" levels. However, it is important to note that these results are qualitative and should often be coupled with selective methods to best interpret the results. Essentially, selective methods will determine the concentrations of specific PFAS compounds, and non-selective methods will determine the concentrations of *all* PFAS compounds (or all fluorinated compounds, PFAS or otherwise). By comparing those two data sets, companies can generate a rough approximation of the amount of unspecified PFAS compounds in the sample. Some popular non-selective PFAS methods include:

**a. Total Oxidizable Precursor Assay ("TOPA")**

TOPA provides a semi-quantitative assessment of precursor mass in a given sample. Precursors are PFAS substances that have potential to degrade to other PFAS compounds such as perfluoroalkyl acids. Many precursors are not identified using selective analytical methods; however, the byproducts of their degradation are included. By oxidizing a sample under controlled laboratory conditions, some or all of the PFAS mass that is not recognized using conventional selective methods is converted to detectable PFAS.

While this method will identify more PFAS than selective methods alone, it will not distinguish between individual precursors or between precursors than may or may not degrade to regulated PFAS under natural conditions. By comparing the oxidized sample result to that of an unoxidized split, the approximate amount of transformed precursor can be estimated. While TOPA can help identify the presence of precursors in the sample, TOPA does not convert all PFAS to detectable byproducts so some portion of the total PFAS mass within the sample may go unidentified using this method.

**b. Total Organic Fluorine ("TOF")**

Analyzing samples for adsorbable organic fluorine ("AOF") or extractable organic fluorine ("EOF") is another approach to approximating the total amount of PFAS in a sample. Because all PFAS substances are organofluorine compounds (include

chains of fluorine atoms bonded to carbon atoms), the concentration of organic fluorine can be used as a proxy for the total PFAS mass of a sample.

One issue with the TOF method is that the mass or molar ratio of organic fluorine to PFAS is not one-to-one and varies based on the types of PFAS substances present within a sample. Stated differently, one molecule of PFOA will contribute eight fluorine atoms to the total fluorine result, whereas one molecule of a longer chain PFAS compound could contribute tens or even over a hundred fluorine atoms to the total fluorine result. This ultimately means that TOF is not a good measure of the type or number of PFAS molecules that are present in the sample.

Another problem with the TOF method is that it included non-PFAS compounds in the results. Organofluorine bonds are present in other fluorinated compounds such chlorofluorocarbons ("CFSs"), pesticides, and pharmaceuticals, therefore these compounds may be detected by EOF/AOF analyses and reflected in the results, so TOF are not a reliable measure of solely total PFAS. However, a non-detect result for total organic fluorine provides a high level of assurance that a sample is free of PFAS.

Screening or analyzing samples for total fluorine ("TF") are relatively inexpensive and non-destructive, so they can be used to screen surfaces, products, and textiles for the potential presence of PFAS. Unlike the AOF and EOF, total fluorine methods also detect inorganic fluorine so the potential to detect compounds that are not associated with PFAS could be significant and must be considered when interpreting results. A non-detect total fluorine result is however a good indication that PFAS are not present within a sample.

### 3. Non-Target PFAS Analysis

LC/MS-quadrupole time of flight ("qTOF") mass spectrometer is a non-targeted analytical instrument that will provide a combination of quantitative results for several hundred PFAS as well as qualitative results for many of the remaining PFAS mass within a sample. The method provides an output of peaks which correspond to particle mass and charge. These peaks are then compared against libraries of peaks – typically generated by the testing labs - that have been previously demonstrated to represent individual PFAS. Peaks that are reflective of PFAS but not included in available libraries are then used to quantify the remaining PFAS mass.

As libraries expand, these outputs may be re-evaluated to associate these undefined qTOF peaks with specific PFAS. Furthermore, the robust datasets generated by non-target methods can be used to support forensic evaluations by associating sample

results with specific PFAS sources. The qTOF methods are not agency-certified and are more costly than traditional selective methods.

## IV. Conclusion

The Strategic Roadmap gives businesses the opportunity to get ahead of pending regulations and risks, begin working toward solutions, and answer questions like the ones outlined above. Presently, PFAS substances are a critical portion of the due diligence process. As discussed above, selecting the right analytical method, and understanding the limitations of that method will allow businesses to accurately screening for PFAS and quantify PFAS in environmental media at a given site. However, appropriate analytical method selection is equally important in preventing the generation of potentially misleading data and flawed interpretations of results.

It also may be necessary to retain an environmental consultant to identify, investigate, characterize, and when necessary, remediate PFAS compounds. You also should consider hiring experienced environmental counsel to help navigate the regulations, and to ensure that the data and information that you generate is privileged.

If you would like additional information regarding the PFAS Strategic Roadmap, or if you would like assistance evaluating PFAS substances in any capacity, please contact Tom Lee and John Kindschuh at BCLP or Brian Hoye and John Hesemann at Burns & McDonnell.

## RELATED CAPABILITIES

- PFAS
- Environment

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