

## Emerging contaminants

In a rapidly changing regulatory environment, we rethink what's possible to develop next-generation solutions to quickly and efficiently eliminate risks and liabilities.





# Holistic chemical management solutions

**Complex chemical structures, unknown impacts to human health and the environment, evolving regulations...But no matter how great the challenge, we are breaking barriers to unearth a new path toward a cleaner, more responsible future and developing next-generation solutions to manage, mitigate, and eliminate the impacts of emerging contaminants.**

Imagine using chemicals for years in your daily operations as part of a fundamental process then finding out they are harmful and will be discontinued or diligently obtaining regulatory closure then having to further investigate emerging contaminants. These are very real scenarios for many businesses that are now tasked with trying to manage, mitigate, or eliminate emerging contaminants from their operations.

Across multiple markets and geographies, we are the partner of choice to deliver:

- Policy development (including risk management strategies)
- Vulnerability and risk assessments
- Preliminary assessments and site investigation
- Groundwater and air dispersion modeling
- Forensic chemistry assessments
- Private/public water evaluations
- Remedial investigations
- Feasibility studies
- Water treatment system design
- System installation
- Community outreach and client advocacy

## **Proactive approach**

We start by evaluating your operations to develop an understanding of current and historical chemical use upon and in advance of new regulation. Our close working relationships with leading academic researchers, analytical laboratories and more than two dozen governing regulatory bodies help us drive toward the most economical and time-saving response. We have a strong understanding of the scientific challenges as well as the regulatory trends surrounding emerging contaminants and use this knowledge to quickly and efficiently eliminate risks and liabilities.

We consider the entire life cycle, from raw material inputs through the supply chain to production and disposal so that we can evaluate volume of use, mobility, toxicity, and ultimate environmental, social, and business impacts. As the risk paradigm shifts, we are refining our process to consider unconventional methodology, such as an outside-in approach, to more quickly manage, mitigate, and eliminate risks and liabilities associated with these impacts.

Our recent advances in science include:

- Supporting customers with the development of risk profile dossiers, risk management evaluations, screening profiles, and exemptions for per- and polyfluoroalkyl substances (PFAS) and PFAS-containing products (e.g. AFFF, carpet, textiles) under the Stockholm Convention.
- Evaluating microplastics in products, including an environmental and human health risk assessment and developing Risk Management Option Analysis to support the decision on the appropriate regulatory measure to control these risks.
- Developing conceptual models to evaluate fate and transport mechanisms of complex PFAS sources using groundwater, air dispersion and integrated stormwater management.
- Generating a regional conceptual drinking water supply plan with a hydraulic and groundwater model to evaluate safe drinking water solutions for 150,000+ residents across 14 communities impacted with PFAS contaminated water.
- Developing a risk-based decision framework that can inform emergency petroleum-based firefighting foam use and management of PFAS-based aqueous film forming foams (AFFFs) and fluorine-free firefighting foams.





## Pioneering environmental solutions

Ever-changing emerging contaminant regulatory and legislative activities are impacting industries legacy portfolios and current operations. Our scientists don't wait for the next innovation, they develop a new generation of techniques and strategies to respond and remediate with the most advanced technologies.

- Developed a sustainable and cost-effective regenerable ion-exchange treatment to remove PFAS from groundwater, in the first-of-its-kind pump and treat system in the US.
- Developed a sustainable regenerable ion-exchange groundwater treatment system to address 1,4-dioxane and comingled chlorinated solvents to efficiently treat contaminants to non-detectable concentrations.
- Developed an on-site mobile treatment system to treat more than 400,000 gallons of spent firewater contaminated with PFAS to manage, mitigate, and eliminate environmental liabilities associated with release.

PFAS consulting  
experience across:

10

EPA regions

35+

state agencies

70%

US states

3

Continents



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