



PFAS

WHAT YOU NEED TO KNOW
AND HOW WE CAN HELP

PFAS OVERVIEW

PFAS (per-and polyfluoroalkyl substances) are chemicals used in the production of a wide range of everyday products but are now being identified as environmental contaminants in soil, groundwater, surface water and drinking water. Health concerns are being raised as there is likelihood of bioaccumulation upon exposure, and PFAS have been shown to have potential negative health effects. PFAS management plans are currently being developed, which will affect governmental entities, including US Department of Defense facilities, fire training facilities, airports, and water/wastewater service providers.

Freese and Nichols' team of expert environmental engineers and scientists are available to help guide you through your PFAS management options, including assessment, testing and treatment methods, program management, and participation in industry stakeholder groups.

Preparing for Upcoming Regulations

Many industries are in various stages of handling PFAS challenges even before mandates are issued. It's important to prepare your PFAS plan now to stay ahead of legal, regulatory and management challenges and potentially take advantage of any funding available as well. In October 2021, the Environmental Protection Agency (EPA) released its PFAS Action Plan. Here are some highlights:

REMEDIATION

- Under CERCLA, EPA is proposing to designate some PFAS compounds as hazardous substances.

- EPA is also proposing a requirement for facilities to report certain PFAS releases.
- The proposed rules are expected to be available for public comment in Spring 2022, and final rules are expected in Summer 2023.

DRINKING WATER

- Although the EPA currently maintains recommended levels for PFAS in drinking water, no enforceable Maximum Contaminant Levels (MCLs) have been established.
- Under the Fifth Unregulated Contaminant Monitoring Rule (UCMR 5), water systems serving 3,300 or more people, and 800 representative public water systems serving fewer than 3,300, will be required to test for 29 PFAS compounds in drinking water for a 12-month period between January 2023 through December 2025.
- EPA plans to establish enforceable limits on PFAS in drinking water by Fall of 2022 and finalize that rule by Fall 2023.

WASTEWATER

- Presently, no federal standards exist. EPA will establish new water quality criteria for PFAS, including Aquatic life criteria (Winter 2022) and Human health criteria (Fall 2024).
- EPA will address PFAS discharges through National Pollutant Discharge Elimination System (NPDES) permits by requiring certain dischargers to monitor for PFAS, implement Best Management Practices (BMPs), and eventually develop new guidance recommending PFAS monitoring in NPDES permits.

FREESE AND NICHOLS CAN HELP

Freese and Nichols has helped numerous clients with soil and water remediation in compliance with the Resource Conservation and Recovery Act and has assisted in stabilization, remediation, and treatment of contaminated sites.

CASE STUDIES

Airfield and Airport Investigation Services

Freese and Nichols has developed plans and conducted investigations on possible sources of PFAS compounds and other regulated organic chemicals in airfield soils to determine impacts to complex shallow groundwater systems underlying airport systems. Our investigation services have included installation of environmental soil borings and groundwater monitoring wells on airport property to determine the presence or absence of volatile organic compounds and PFAS in surface soils, identify potential sources of PFAS and organic chemicals such as firefighting foam and buried waste materials, and delineate those possible source areas.

Wastewater Treatment Plant Closure/ Remediation Services

Freese and Nichols has assisted numerous municipal clients with the closure of wastewater treatment plants. The treatment process, in many cases, has resulted in the accumulation of hazardous compounds, including heavy metals and PCBs, in the treatment sludge. In those cases, Freese and Nichols provided remedial investigation and design for the closure of abandoned digesters and sludge lagoons that revealed hazardous compounds. Our team has designed on-site treatment systems to decontaminate aqueous liquid from digesters and a solidification/ stabilization process for hazardous materials disposal. By meeting pre-treatment discharge criteria for the sanitary sewer system, combined with the ability to use local landfills after assisting them in obtaining permits for TSCA-regulated solid sludge disposal, Freese and Nichols has provided significant cost savings for our clients.

THE RIGHT EXPERTS IN-HOUSE

Freese and Nichols has the expertise and experience in our environmental science and treatment technical disciplines to address PFAS contamination and assist you with regulatory compliance, testing, and remediation needs. Our experts can provide initial evaluations, assist in soil and groundwater testing and develop BMPs and treatment solutions that stabilize, reduce, and decontaminate soil and water impacted with PFAS compounds.

Our team is available to help with PFAS each step of the way:

- Site Investigation and Sampling Plans
- Planning and CIP Programs
- Regulatory Compliance
- PFAS Treatment Systems
- Compliance Monitoring
- Waste Disposal Plans
- PFAS Program Management
- Permitting

PFAS EXPERT

VIRAJ deSILVA, PhD, PE, BCEE



With Viraj deSilva's leadership of Freese and Nichols' Treatment Process services, our clients have access to the latest in regulatory and treatment developments for PFAS. Dr. deSilva has more than 29 years of experience on water

and wastewater treatment projects across the U.S. and 12 other countries, including PFAS management and treatment projects in five states working with airports, landfills and other contaminated sites. He has been published in or presented at over 180 industry journals and conferences, authored EPA, WEF, ASCE and AWWA manuals of practice, and is cited in AWWA and EPA publications. Dr. deSilva currently serves on the WEF PFAS Task Force and works closely with the national EPA Council on PFAS and state agencies for development of the new PFAS regulations.

CONTACT

Viraj deSilva

Senior Treatment Process Leader

viraj.desilva@freese.com

813-817-0766

