

## **PER - AND POLYFLUOROALKYL SUBSTANCES (PFAS)** CONSULTING & LITIGATION DEFENSE EXPERTS

Per- and Polyfluoroalkyl Substances (PFAS) chemicals are emerging contaminants of concern in the environment. Known to be harmful to human health, they bioaccumulate, are persistent in the environment, and have low advisory levels in drinking water. PFAS groundwater and soil contamination occurs from industrial manufacturing, fire suppression uses associated with firefighting foam (AFFF), and many other industrial uses.

#### FREQUENTLY ASKED QUESTIONS ABOUT PFAS

- > How will new PFAS regulations affect me?
- > Am I potentially impacted by PFAS litigation?
- >~ How much am I currently impacted by PFAS?
- > Am I testing for PFAS now?
- >~ What can I do to help reduce false positive test results?

U.S. EPA announced (March 14, 2023) proposed MCLs for perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS) as individual contaminants at 4.0 parts per trillion (ng/L or ppt); and perfluorohexane sulfonic acid (PFHxS), perfluorononanoic acid (PFNA), perfluorobutane sulfonic acid (PFBS), and hexafluoropropylene oxide dimer acid (HFPO-DA, referred to as GenX Chemicals) as a combination (of the four PFAS) at a Hazard Index of 1.0 (unitless). The U.S. EPA anticipates finalizing the proposed regulalation by the end of 2023. As is the case for most emerging contaminants, the regulatory process for PFAS in the U.S. varies among states and the stages of development. For example, in October 2022, the California State Water Resources Control Board (SWRCB) established standards for PFHxS including the notification level of 3 ng/L and response level of 20 ng/L.

NV5 is constantly monitoring national and state regulations to provide current information to our clients.

These chemicals are ubiquitous and are used in everyday items such as packaging and clothing. The extremely low levels proposed for action make it critical that sample collection and analysis techniques do not cause contamination and therefore false positives.

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Often referred to as "forever chemicals" due to their persistence in the environment, PFAS have been detected in air, water, wastewater, and soil worldwide. Exposure through drinking water is a significant concern as the transport of PFAS in groundwater represents a potential source of contamination to drinking water wells, lakes and rivers. Over the past several years, U.S. EPA and several state agencies including the SWRCB have issued orders to investigate and sample for PFAS to identify sources at bulk fuel storage terminals, refineries, airports, landfills, fire-fighting areas, chrome plating operations, wastewater treatment and other facilities.



#### **NV5 PROFESSIONAL SERVICES**

NV5's team of Project Managers, Geologists, Chemists and Technicians are experienced professionals who know the challenges and regulations associated with PFAS as they relate to businesses, environmental assessments, laboratories and the public. Let NV5's knowledge and experience with the science, regulations and detection limits associated with PFAS guide your pursuit of safety and compliance.



#### **NV5 INNOVATION**

As part of these rapidly changing regulations for protection of human health and the environment, NV5 is actively involved in the development and implementation of innovative approaches to assist our clients in the compliance and management of PFAS liabilities including environmental due diligence, and the site investigation and cleanup of PFAS and other emerging contaminants in groundwater, surface water, soil, and air. Client managers and project stakeholders for all sites ranging from commercial redevelopment to municipal and industrial facilities should be advised of our services to assist in the assessment of these potential PFAS liabilities.



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#### **NV5 LAB TESTING QUALITY ASSURANCE**

As the emphasis on sampling the environment for these compounds increases for litigation purposes, it will be important to involve qualified firms that understand the complexity of adequately assessing their presence. Sampling for PFAS without contaminating the samples requires special skill and training. The laboratory detection limits are in the parts per trillion and the skill needed for testing without falsely contaminating samples is a challenge. The data generated must be unquestionably accurate, as any a false positive may cost a company millions in cleanup of a contaminant that may not actually be present. NV5's chemists are trained in evaluation of laboratories performing PFAS testing. We have certified assessors who audit laboratories for Department of Defense (DOD) sampling and analysis of PFAS. DOD is the leader in setting the sampling and testing standards for PFAS. We routinely assess laboratories for DOD PFAS testing.



- » Sampling design, how, where and when to sample
- » Specifying quality assurance and control to produce defensible data
- Evaluation of laboratories providing the data
- » Evaluation of the data once generated
- Laboratory coordination and analysis



- » Litigation support/expert witness testimony
- » Data quality (defensible data)
- » Laboratory evaluation by certified assessors
- » Program/response consultation
- » PFAS sampling & analysis
- » VOC and PFOA/PFOS contamination
- » Sampling design, planning & training
- » Site/remedial investigations



- » Treatment evaluations & operations
- » Geophysical survey
- Access permit assistance
- » Soil & groundwater sampling
- » Source identification/ investigations
- » Assessment and reporting activities
- » SI & RI reporting
- » QAPP and HASP development

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