

PFAS and Risk Assessment: Overview of the State of the Practice

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Background/Objectives: Emerging contaminants have been defined by the USEPA as those chemicals or materials that have a perceived, potential, or real threat to human health or the environment, lack published health standards, and/or new source or pathway information has become available. Emerging contaminant programs were developed nearly a decade ago by the USEPA, the United States Geological Society (USGS) as well as the Department of Defense (DoD). Despite being around for almost 10 years, emerging contaminants, specifically per- and polyfluoroalkyl substances (PFASs), continue to be challenging to evaluate within the standard USEPA risk assessment and management paradigm. With no federally promulgated health criteria available, absent to evolving peer-reviewed toxicological and epidemiological data, and amplified risk perceptions, risk assessments are anything but a straight-forward exercise. This presentation targets the remediation professional and takes a step-wise approach through the risk assessment process from planning and scoping, hazard identification, dose-response assessment, and exposure assessment to risk characterization and risk management.

Approach/Activities: At each step, the variability between traditional environmental contaminants and emerging contaminants such as PFASs are illustrated. Data gaps and research needs are presented and current PFAS risk assessment practices are discussed.

Results/Lessons Learned: Data gaps and research needs are presented and current PFAS risk assessment practices are discussed.