

# Emerging Contaminants Raise Remediation Planning Issues

## Environment & Energy Alert

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With regulators beginning to target emerging contaminants and revising relevant action levels, property owners and other potentially impacted parties would be wise to examine their remediation obligations now. The U.S. Geological Survey has defined emerging contaminants as “any synthetic or naturally occurring chemical or any microorganism that is *not commonly monitored* in the environment but has the potential to enter the environment and cause known or suspected adverse ecological and (or) human health effects” (emphasis added). This Alert focuses on the emerging contaminant 1,4-dioxane and a group of compounds known collectively as PFAS (per- and polyfluoroalkyl substances).

PFAS and 1,4-dioxane were widely used in industrial solvents, aviation deicing compounds, pharmaceuticals, detergents, fire protection foams, water proofing agents, and food packaging. They have been found to be persistent in the environment. The compound 1,4-dioxane was a stabilizer added to the solvent 1,1,1-trichloroethane (TCA) in the 1950s, and it can also be found in soaps and shampoos. PFAS were widely used after the 1950s in well-known products such as Teflon™, Scotch Guard™, Stain Master™ carpets, firefighting foams, foam vapor suppressants, and metal/wire coatings. While these compounds were used for decades, only recently have advances in laboratory techniques made it possible to assess impacts on human health and the environment.

In May 2016, the EPA issued a PFAS Drinking Water Health Advisory that lowered a combined health advisory level from 200 parts per trillion (ppt) set in 2009 to 70 ppt, or 0.07 parts per billion (ppb) for PFOA and PFOS compounds, roughly the equivalent of three drops of water in an Olympic-size swimming pool. To date, however, there has been no real consensus among various state regulatory programs. The Connecticut Department of Energy and Environmental Protection (CTDEEP), for example, has adopted the May 2016 EPA drinking water criterion for PFAS, but has included three additional PFAS compounds in the total aggregate. The CTDEEP has also labeled 1,4-dioxane as an Additional Polluting Substance, set action levels at 3 ppb for groundwater used or potentially used for drinking water, and set action levels at 960 ppb for groundwater discharging to surface water. Some states are lowering their 1-4 dioxane regulatory requirements to 0.3 ppb.

PFAS and 1,4-dioxane present two unique issues. First, achieving the necessary analytical sensitivity to measure a compound at the

parts-per-trillion level requires the use of expensive specialty analytical laboratory methods. These methods would not have been requested as part of “traditional” site characterization studies over the past two decades, since those studies focused on only those contaminants “recognized” at the time. Consequently, state agencies have begun requesting that previously characterized and remediated sites be re-opened to assess whether evidence suggests that these emerging contaminants may be present in the environment. Second, 1,4-dioxane and PFAS are not amenable to traditional remedial approaches, and require the implementation of a combination of both nontraditional and traditional technologies to achieve regulatory compliance. Therefore, if a site was remediated using traditional treatment techniques, these emerging contaminants may still be present, potentially requiring additional and costly remediation.

Since having to assess and remediate these emerging contaminants can represent a significant financial burden for site owners or other responsible entities, potentially impacted parties should start thinking about whether, when, and how to go about addressing this potential risk. If you have a history of using these chemicals, are considering acquiring a property where these chemicals might have been used, or are otherwise addressing sites involving emerging contaminants, it is important to obtain technical and legal advice for managing these issues and their associated risks in a technically sound and cost-effective manner.

### About the Authors

**Jane Warren** is a partner with the Hartford office of McCarter & English, LLP, a full-service law firm of approximately 400 lawyers in offices throughout the mid-Atlantic and New England serving commercial clients ranging from Fortune 100 firms to mid-market and emerging growth companies. Jane helps property owners, developers, and lenders comply with environmental standards, assess and allocate liability with contaminated property, and review environmental remediation plans. She is adept at negotiating and structuring creative settlements of environmental liability issues.

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