

Authored by:



Chuck Mulligan
Managing Director
Partner Engineering and Science, Inc.



Jeanine Grachuk
Principal
Beveridge & Diamond, P.C.

Teflon & Scotchgard - Food and Stains Won't Stick But Liability Does.

PFAS: What you need to know.

Recent Legal Cases

In February 2018, Minnesota based 3M Corporation, maker of Scotchgard, agreed to pay \$850 million to settle an 8 year legal battle with the state of Minnesota over per- and polyfluoroalkyl substances (PFAS) in the state's drinking water. One year earlier DuPont and Chemours agreed to pay more than \$670 million to settle thousands of lawsuits brought by residents of Ohio and West Virginia claiming the companies contaminated drinking water with perfluorooctanoic acid (PFOA), a chemical used in Teflon and other non-stick coatings. The cases do not end there; residents of Southampton, New York are suing 3M over PFAS groundwater contamination from firefighting foams used at a nearby airport. This is one of 10 lawsuits that have been filed concerning firefighting foams known as aqueous film-forming foam, or AFFF, according to a Bloomberg survey.

What are PFAS?

PFAS are a group of man-made chemicals that includes PFOA, perfluorooctane sulfonate acid (PFOS), and many other chemicals. PFOA and PFOS have been the most extensively produced and studied of these chemicals. PFOA and PFOS are made up of "chains" of eight carbon atoms that are attached to fluorine and other atoms. Manufacture and use of PFAS in a variety of industries around the globe, including in the United States began in the 1940's. The production of PFOA and PFOS is now banned in the U.S., however both chemicals are persistent in the environment and in the human body.

Where are PFAS found?

PFAS are present in a wide range of consumer products such as cookware, pizza boxes, stain and water repellents, and firefighting foam. PFAS can also be found in:

- Food packaged in PFAS-containing materials, processed with equipment that used PFAS, or grown in PFAS-contaminated soil or water.
- The workplace, including production facilities or industries (e.g., chrome plating, electronics manufacturing or oil recovery) that use PFAS.
- Drinking water, typically localized and associated with a specific facility (e.g., manufacturer, landfill, wastewater treatment, firefighter training facility).

What are the PFAS Health Risks?

There is considerable uncertainty as to the health risks to humans from exposure to PFAS, and the U.S. Centers for Disease Control and Prevention has indicated that, while there is evidence that exposure to PFAS can lead to adverse health outcomes in humans, more research is needed to assess the human health effects of exposure to PFAS. As noted below, the U.S. Environmental Protection Agency (EPA) has issued a health advisory for exposure to PFOA and PFOS based on its assessment that PFOA and PFOS can cause reproductive and developmental, liver and kidney, and immunological effects in laboratory animals. EPA also relied on epidemiological studies. The most consistent findings of the epidemiological studies were increased cholesterol levels among exposed populations, with more limited and less clear findings related to:

- Low infant birth weights,
- Effects on the immune system,
- Cancer (for PFOA), and
- Thyroid hormone disruption (for PFOS).

PFAS and the regulatory environment

Given the ubiquity of the use of PFAS and the rising awareness of their health effects, it is no surprise that they are being discovered in more and more locations. According to the Social Science Environmental Health Research Institute at Northeastern University PFAS pollution has been documented at 94 sites in 22 states. The sites include industrial plants, landfills, civilian and military air fields and fire training sites. According to

(continued from page 25)

the Environmental Working Group's (EWG) analysis of EPA data on the sampling of drinking water at large public water systems from 2013-2016, 194 systems serving 16 million people have been impacted by PFAS.

Currently EPA has no enforceable standards for PFOA or PFOS, but they have set a non-enforceable healthy advisory of 70 parts per trillion (ppt). Some states are taking action on their own. In 2016 Vermont adopted a 20 ppt limit for PFOS and PFAS for both groundwater and drinking water. Michigan has set the limit at 70 ppt in groundwater used as a drinking water source. Absent federal action more states are likely to push forward with their own standards.

Additionally, many states have created task forces or begun investigations to determine where PFAS impacts are or may likely exist. For example, New York is working to develop a system to evaluate and prioritize remediation projects for the sites impacting drinking water sources. As a part of this process, the state is conducting drinking water sampling in areas where groundwater may have been impacted to verify drinking water quality. Further it has been reported that the state is requesting that owners of remediation sites, even those that have received closure, submit workplans to test groundwater for this "emerging contaminant".

PFAS and the Lender

Given the evolving nature of the state and federal regulations around PFAS what is a lender to do?

First and foremost, proper due diligence is necessary to determine if a property may have been a the location for manufacture or use of PFAS or PFAS-containing materials, and thus potentially be a source of PFAS in regional groundwater. As noted in the cases involving 3M, Dupont and Chemours, costs associated with the potential liability can be significant. Industrial operations, airfields, and fire training facilities are all higher risk uses that warrant additional research and possibly subsurface investigation.

Secondly if the property is provided with potable water via an on-site well, potential PFAS sources in the vicinity should be evaluated and sampling and analysis of the drinking water should be considered. Fortunately, as discussed above, many states are compiling data on known and likely PFAS sources and impacted sites. The EPA has developed a website with links to materials developed by various states under their PFAS programs. This can be found at www.epa.gov/pfas/pfas-information. Perhaps the one piece of good news is that PFAS are not volatile so the risk of a vapor intrusion issue due to their presence does not exist.

Lastly be mindful that states may re-investigate remediated sites or add PFAS sampling to sites actively undergoing investigation.

The story of PFAS is unsettling because it reminds us how little we know, and how that can hurt us. Just ten years ago, very few of us working in the environmental field had

heard of PFAS other than through various products that made our lives better or easier, such as Gore-Tex and Teflon. Now, it is the driver for assessment and remediation of sites across the country and the subject of 9-figure settlements. The best protection against this and other new and emerging contaminants is to ensure that the environmental professionals who are engaged in due diligence efforts on your behalf are both qualified and informed as our understanding of these chemicals changes. ■

