RESOURCES:

EPA Basic Information on PFAS

State Water Resources Control Board - PFAS Drinking Water Data

State Water Resources Control Board PFAS Webpage

Assembly Bill 756

Senate Bill 1044

QUESTIONS:

Email PRISM Risk Control
or call
916.850.7300

Risk Management for PFAS

by Sarah Bruno, ARM

With lawsuits worth millions of dollars and the insurance industry excluding PFAS related coverage it seems this acronym is ever-present (pun-intended) in the world of risk management. As regulatory agencies learn more about this group of chemicals and how exposure can have adverse human health effects, they are taking steps to set both state and national regulatory standards to help limit exposure.

What are PFAS?

Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that includes perfluorooctanoic acid (PFOA), perfluorooctyl sulfonate (PFOS), GenX, and many others. There are approximately 9,000 varieties of PFAS. PFAS are known as "forever" chemicals because they never completely degrade and accumulate over time in people and animals.

The unique properties of PFAS impart oil, water, stain, and soil repellency, chemical and thermal stability, and friction reduction to a range of products.

PFAS have been linked to a range of serious health problems such as cancer, liver disease, kidney disease, reproductive/developmental problems such as birth defects and more.

According to the EPA, PFAS can be found in:

- Food packaged in PFAS-containing materials, processed with equipment that used PFAS, or grown in PFAS-contaminated soil or water.
- Products - including stain- and water-repellent fabrics/carpets (e.g., Scotchguard), nonstick products (e.g., Teflon), polishes, waxes, paints, cleaning products, and fire-fighting foams.
- Workplaces - 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 plant, firefighter training facility).
- Living organisms - including fish, animals and humans, where PFAS have the ability to build up and persist over time.

Drinking Water

Exposure through drinking water has become an increasing concern due to the tendency of PFAS to accumulate in groundwater. There are currently no regulatory standards for these chemicals in drinking water, but regulatory agencies are taking steps toward regulation setting.

Aqueous Film Forming Foams (AFFF)

Aqueous Film Forming Foams (AFFF) that contain PFAS are typically used to extinguish highly flammable or combustible liquid fires, such as fires involving gas tankers and oil refineries (also known as Class B fires). PFAS are the active ingredient in fluorinated surfactants used in AFFF products. AFFF with PFAS are particularly effective at putting out large industrial or structural fires and overturned vehicles on fire.

In September of 2020, Governor Newsom signed Senate Bill 1044. This legislation bans the use of Class B firefighting foam containing PFAS in California. The legislation includes a phased in approach for the ban, but public entities including local fire departments must discontinue use before January 2022.

In the meantime, agencies should seek to find suitable Class B firefighting foam alternatives, limit the use of AFFF that contains PFAS to responses to emergency events, and discontinue its use for testing and training. Furthermore, it is a best practice for agencies to treat any release of AFFF that contains PFAS as a chemical spill, and respond with containment accordingly. Reach out to the product manufacturer for information about how to dispose of un-used AFFF containing PFAS.

Potential Secondary Exposures

As more is learned about PFAS and how humans are exposed to it, regulations limiting the amount of PFAS found in drinking water are forthcoming. Public entities should also be aware the State Water Resources Control Board has issued specific orders for PFAS testing at the following locations (often public property) as they are potential routes of PFAS into the drinking water supply:

- Landfills
  Municipal solid waste facilities that accept materials containing PFAS.
- Wastewater Treatment Plants
  Facilities may receive PFAS in their influent wastewater flow and then potentially distribute these wastes out of the facility in the effluent wastewater, biosolids, and reverse osmosis concentrate.
- Airports
  Where PFAS have been used to extinguish fires or where firefighter training commonly occurred (see AFFF above).

For any additional questions regarding this topic or related regulatory requirements, contact the PRISM Risk Control Department.