March 24, 2022 **ARTICLES**

Reducing PFAS Liability and Risk for Fixed Class B Firefighting Systems

Like the nickname that has stuck with PFAS, "forever chemicals," it would appear that the PFAS problem is here to stay.

By Edward (Ned) B. Witte, Jennifer Baker, and Ryan Moore

Share:

Known PFAS contamination may pose an environmental or human health risk if not adequately addressed.
Pexels | Chokniti Khongchum

Per- and polyfluoroalkyl substances (PFAS) are a top environmental priority for the Biden administration and for many state environmental regulatory agencies. Close to 2,000 legal proceedings against manufacturers of PFAS products have been consolidated in a multidistrict litigation (MDL) docket that continues to expand. Many people have become familiar with PFAS because they have been featured in popular books, movies, and the media. Like the nickname that has stuck with PFAS, "forever chemicals," it would appear that the PFAS problem is here to stay.

One way that PFAS can be released into the environment is especially concerning—the intentional discharge of PFAS-containing firefighting foam. Historically, most of the regulatory attention to PFAS firefighting foam discharge has involved airports and military bases, where aqueous film-forming foam (AFFF) products are regularly used and, in fact, legally required to be used by the Federal Aviation Administration and the Department of Defense. What may take on more focus in the coming months,

however, is the prevalent use of PFAS-containing firefighting foam at industrial facilities across the country, in the apparatus commonly known as a fixed Class B firefighting system.

Risks

Environmental risk is the product of a hazard and the degree of exposure to that hazard. If either the hazard or the exposure component is missing, there is no risk. A demonstration of this relationship is an ordinance restricting drilling and installation of potable wells. Many PFAS plumes are sitting beneath towns or neighborhoods with such ordinances. However, if the community is supplied by a public water service out of reach of the PFAS contaminant plume, then there is no exposure risk. Although the hazard (PFAS in groundwater) is still present, the zeroing-out of exposure through institutional controls (i.e., the ordinance) nullifies the risk.

Known PFAS contamination may pose an environmental or human health risk if not adequately addressed. The impacted areas at these facilities are often associated with shallow groundwater or perched water zones near discharge source locations or sewer collection basins where Class B firefighting system testing was conducted. For instance, if a facility discharged AFFF to the ground and the groundwater table is shallow, it is almost certain that PFAS contamination is present in the groundwater at concentrations above the state-specific action levels or the U.S. Environmental Protection Agency (U.S. EPA) health advisory level near these point-source locations.

Class B Firefighting Systems: Background

As defined by the National Fire Protection Association (NFPA), a Class B fire is a "fire in flammable liquids, combustible liquids, petroleum greases, tars, oils, oil-based paints, solvents, lacquers, alcohols, and flammable gases." NFPA 11, § 3.3.8.2. Class B firefighting systems can be mobile, like a fire truck, or "fixed." A "fixed" Class B firefighting system is "a complete installation in which foam is piped from a central foam station, discharging through fixed delivery outlets to the hazard to be protected." *Id.* § 3.3.17.2.

The primary and most obvious reason that industrial facilities install and maintain Class B firefighting systems is to address a potential risk of a fire containing flammable liquids. However, a second reason that industrial facilities install and maintain Class B firefighting systems is to qualify for fire insurance on preferred terms.

NFPA standards are organized in a series of codes, standards, recommended practices, and guides, which are periodically updated. The standard known as NFPA 11, comprehensively updated in 2021, pertains to "Standards for Low-, Medium- and High-Expansion Foam." Chapter 12 ("Maintenance") of NFPA 11 requires that a performance evaluation of the foam, including a flow test of the system proportioner, be conducted as part of annual inspection and testing. NFPA 11, §§ 12.1.1, 12.1.4. This performance evaluation includes

discharging foam from a system, commonly for at least 30 seconds and occasionally for up to several minutes. *Id.* annex D. A flow test as short as 30 seconds may result in the production of 1,500 to 3,000 gallons of foam. While practices have evolved, and the NFPA standards currently encourage protocols to simultaneously collect the foam that is generated (e.g., in frac tanks), this was not always, and still may not be, the case for all industrial facilities. Often, the tested PFAS-containing foam was discharged directly to the ground surface, or, if the test occurred indoors, the discharged foam was directed outside to realize its fate in the environment.

Annex E of NFPA 11, titled "Foam Environmental Issues," serves as a good window for viewing the conflicting agendas of acute fire safety and chronic environmental protection concerns. In Annex E, language such as "[the] uncontrolled release of foam solutions to the environment should be avoided" is juxtaposed with "[t]he foam committee believes that the fire safety advantages of using foam are greater than the risks of potential environmental problems." Or compare language such as "[t]he primary concerns [with discharging Class B foams into the environment] are toxicity, biodegradability, persistence, *treatability in wastewater treatment plants*" resting alongside "alternative disposal options [for foam deployed in a testing event should be considered, such as] [*d*]*ischarge to a wastewater treatment plant with or without pretreatment*" (emphasis added).

Annex E, the authors note, "is not part of the requirements of the NFPA standard" but is included "for informational purposes only." It is fair to ask what one might do with this information, especially when it is written that, "[g]iven the absence of any past requirements to provide containment, *many existing facilities simply allow the foam water solution to* flow out of the building and evaporate into the atmosphere or *percolate into the ground*" (emphasis added).

However, the common and historically accepted practice of letting PFAS-containing foam percolate into the ground is presently or may become a violation of applicable law, with restrictions spreading like wildfire in the United States. For example, Wisconsin law identifies liabilities that could result at industrial facilities conducting these historically accepted Class B firefighting system testing practices using PFAS-laden foams.

Current Regulation of Class B Firefighting Systems and PFAS

During the period of roughly five to 10 years in which PFAS have moved from being an unknown concern to becoming a central focus for environmental regulators and potentially responsible parties, most of the attention and regulation has developed at the state level; however, recently, the federal government has taken additional regulatory steps in this area.

Federal government regulation is concentrated in the PFAS Strategic Roadmap. In February 2019, the U.S. EPA released its PFAS Action Plan, which seemingly articulated the federal government's commitment to development of rules and standards to address the growing concern that PFAS presented. However, until recently, very little additional federal action has occurred. The exceptions include (1) the U.S. EPA's publication of its PFAS Strategic Roadmap (Roadmap) in October 2021, which includes proposals to address PFAS through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) hazardous substance listing and development of enforceable groundwater maximum contaminant levels (MCLs), among other goals; and (2) the National Defense Authorization Act for Fiscal Year 2022, signed by the president on December 27, 2021, which directs the Department of Defense to test for PFAS at military sites.

The U.S. EPA took an initial step under the Roadmap when on January 10, 2022, it submitted to the White House Office of Management and Budget (OMB) the U.S. EPA's plan to designate two PFAS, PFOA and PFOS, as "hazardous substances" under CERCLA. The OMB must provide any objections to the U.S. EPA's proposal within 90 days, or by approximately April 11, 2022. If there are no objections, the U.S. EPA will publish the proposed designation in the *Federal Register* for public comment, with an anticipated final designation by 2023.

Other Roadmap activities relevant to Class B firefighting systems include the following:

- **Ongoing:** Develop and validate methods to detect and measure PFAS in the environment, advance the science to assess human health and environmental risks from PFAS, and evaluate and develop technologies for reducing PFAS in the environment.
- **Expected Spring 2022:** Establish a PFAS voluntary stewardship program.
- **Expected Fall 2022:** Establish a national primary drinking water regulation for PFOA and PFOS, and develop the technical foundation to address PFAS air emissions.
- **Expected Winter 2022:** Finalize new PFAS reporting under the Toxic Substances Control Act.
- **Expected Fall 2023:** Update guidance on destroying and disposing of certain PFAS and PFAS-containing materials.

States such as Wisconsin develop their own PFAS regulations. To fill the void and delay by the federal government, state environmental agencies and legislatures have acted to develop laws and regulations to address PFAS.

As one example, like many other states, Wisconsin has taken steps to regulate PFAS as hazardous substances and to impose restrictions on testing, operations, and maintenance activities related to Class B firefighting foams. Importantly, the Wisconsin Department of Natural Resources (WDNR) interprets PFAS as hazardous substances under the Wisconsin "spills" law, codified at Wisconsin Statutes section 292.11. WDNR has interpreted, and the regulated community has generally accepted, during the nearly 40-year application of this law, that the scope of section 292.11 extends not just to accidental or sudden releases, like PFAS firefighting foam released in an emergency or testing event, but also to latent historical releases that may be discovered, for example, in a Phase II site investigation of groundwater.

Moreover, as is the case in other states, the Wisconsin legislature has enacted legislation to control the discharges of AFFF, including from Class B systems. Specifically, the law prohibits the use of a Class B firefighting foam that contains "intentionally added PFAS," except in two scenarios: (1) in the case of a fire emergency (i.e., a real fire) or (2) for testing purposes when a "testing facility has implemented appropriate *containment, treatment and disposal or storage measures to prevent discharges of the foam to the environment*" (emphasis added). The following year, Wisconsin promulgated an emergency administrative rule providing further direction regarding "appropriate measures" in creating Wisconsin Administrative Code chapter 159.

Additionally, Wisconsin law requires that a person who uses or discharges a firefighting foam under either of these two exemptions must immediately notify the WDNR of the use or discharge of such

PFAS-containing foam and any discharge of the foam to the environment. If there is a discharge of PFAS into the environment, it will also trigger a spill notification obligation under Wisconsin Statutes section 292.11. Moreover, section 292.11 imposes a self-implementing obligation on the responsible party (i.e., the party that "caused" or that "possesses or controls" the hazardous substance that has been discharged) to restore the environment to the extent practicable and minimize harmful effects. This is accomplished by immediately investigating the extent of the discharge to the environment and, if necessary, implementing remedial activities in accordance with Wisconsin administrative code pertaining to remedial actions. Wis. Admin. Code chs. 700–99.

There is an apparent and potentially significant conflict between NFPA standards, like NFPA 11, and state regulations. Any industrial facility that either uses a Class B firefighting system with PFAS-containing foam to extinguish a fire or, unaware of the prohibition of a law like Wisconsin Statutes section 299.48, tests a Class B firefighting system with PFAS-containing foam and is unable to prevent the foam from entering the environment will cause, possess, and control a reportable release of PFAS. The responsible party may thereafter be obligated to undertake a PFAS-specific investigation on its property.

Facilities with PFAS-based firefighting may have annually tested their Class B firefighting systems in good faith to anticipate and prevent a Class B fire or to qualify for fire insurance. However, this likely would have coincidentally resulted in discharges of the PFAS-containing foam to the environment. According to NFPA Standard 11, Annex E, as recently as five years ago, the NFPA acknowledged a practice of letting discharged foam from a test "percolate into the ground." Therefore, any investigation indirectly triggered by the terms of Wisconsin Statutes section 299.48(3m) and directly applicable to Wisconsin Statutes section 292.11 would conflate the extent of PFAS impacts with prior annual testing events. Consequently, legacy releases of PFAS represent a latent liability for such industries.

Best Practices for Industrial Operators of Fixed Class B Firefighting Systems

Be proactive in addressing the potential for PFAS contamination at your facility. As we have observed in the rapidly evolving PFAS regulatory landscape and as chemicals we use today are better understood to be potential or actual hazards to human health or the environment, what may be acceptable and legal today could suddenly become illegal tomorrow. If it is suspected that an industrial facility faces potential liability due to historical AFFF discharge(s) to the environment, it is best to be proactive and not ignore the matter. If and when appropriate, a positive first step is to gather information, including through an internal investigation or through an environmental compliance audit, potentially structured under attorney-client privilege.

Information that could be developed through such an investigation could include the following:

- identifying the location, duration, and frequency of AFFF discharges as well as PFAS storage, use, and disposal practices;
- understanding the training practices employed and how the discharged foam was handled;
- understanding local and regional groundwater use for drinking water purposes;
- understanding local PFAS contamination sources;

- identifying available insurance—including occurrence-based policies that may provide coverage for activities causing PFAS releases prior to the advent of pollution exclusion insurance provisions—and locating copies of such policies;
- knowing applicable state, and possibly coming federal, regulations applicable to the facility and the action levels for individual PFAS compounds; and
- being aware of all potential environmental receptors near the facility.

Retaining an environmental legal counsel expert in PFAS matters is advised before undertaking any subsurface investigation activities to assess PFAS contamination or before a property transaction requiring an environmental site assessment (i.e., Phase I or Phase II environmental site assessment). On a related note, any business or real property transaction should include environmental due diligence to evaluate the presence of a Class B firefighting system at the target company or on the real estate to be acquired.

Consider a possible firefighting system upgrade (if you haven't upgraded already). Given the dynamic PFAS regulatory environment discussed above, now is the time to consider upgrading or replacing a legacy Class B firefighting system, even if its usage is not yet restricted in your area. Upgrading the Class B system with one that uses fluorine-free foam (F3) technology is ideal. Unfortunately, due to the potential for residual PFAS to remain in the legacy Class B system, as well as the chemical differences between F3 and AFFF affecting performance, it is likely that much of the existing infrastructure, and possibly the apparatus itself, will need replacement.

When upgrading, be aware of fire-extinguishing performance differences. Legacy Class B foams (AFFF containing PFAS) extinguish fires through the formation of both (1) a surfactant film on the fuel surface and (2) a foam blanket that encapsulates the flammable vapors. By contrast, F3 functionality is limited to the foam blanket mechanism only. In practice, this means that relative to AFFF, more F3 material, more time for extinguishment, or both will likely be needed to extinguish a Class B fire.

Considering these and other variables, an industrial operator should consult with the Class B system manufacturer or a qualified fire-suppression engineer to review system upgrade options.

Manage PFAS-containing AFFF as hazardous substances. If replacing an entire Class B firefighting system is not practical currently, then appropriate containment, storage, and disposal of PFAS-laden foams must be ensured. Certain PFAS contained in legacy AFFF foams are due to become U.S. EPA "hazardous substances" and are actively being managed as such by many states. Therefore, AFFF should also be treated as hazardous when providing for containment, treatment, and disposal. Some states, such as Indiana, Massachusetts, and Michigan, have instituted programs to pay for the collection and disposal of PFAS AFFF, taking it off the hands of parties with Class B systems and municipal firefighting groups.

It is always best practice when dealing with stored chemicals to maintain good inventory records, knowing the quantities of AFFF maintained at the facility, its whereabouts, and how it is stored. AFFF foam concentrates should be secondarily contained and included in facility spill prevention, control, and countermeasure (SPCC) plans. If, for whatever reason, AFFF continues to be used for fire prevention and testing purposes, the industrial facility should be equipped with a plan to contain the

foam and eliminate any discharge to the environment. The facility operator(s) should be aware of the reporting obligations for the presiding state or district in the event of AFFF environmental release.

If PFAS contamination is confirmed at a facility, quickly reduce the exposure risk. Once in groundwater, PFAS contaminants pose an environmental threat, and it is up to chance whether they pose a human health risk. At this stage, the critical questions for determining the level of risk are as follows:

- What is the distance from the Class B firefighting system testing location to the property line?
- Where are the sewer catch basins located, and where do they lead?
- Are there potential down-gradient receptors (i.e., potable wells or a stream), and, if so, how far away are they?
- Which PFAS are detected, where, and at what concentrations?
- At what rate are the PFAS moving in water?

The specific answers to these questions dictate the level of risk and, consequently, whether any remedial action needs to be undertaken.

Be prepared for potential litigation. PFAS and AFFF manufacturers are defending themselves against thousands of lawsuits related to AFFF across the country. These lawsuits assert a variety of causes of actions against the manufacturers, including both common-law causes of action and statutory causes of action. The claims include allegations of both bodily injury and property damage.

Plaintiffs to date have included the following types of entities:

- Residents near military bases, airports, and PFAS manufacturing facilities whose wells have been impacted by PFAS
- Military and civilian firefighters exposed during work activities
- Municipalities that are located near or down-gradient from facilities utilizing PFAS
- Public water suppliers
- Farmers
- States and state regulators

While the majority of the defendants have been the manufacturers and distributors of PFAS or PFAS-containing products, it is possible that the litigation may expand to include end users such as facilities utilizing Class B firefighting systems. Retaining an environmental legal counsel expert in PFAS matters is advised in the event that such a lawsuit is filed. In addition, the laws in each state may vary, and therefore consulting with an attorney or local counsel regarding the laws particular to the jurisdiction is recommended.

Edward (Ned) B. Witte is an attorney shareholder at Godfrey & Kahn S.C. in Milwaukee, Wisconsin. Jennifer Baker is an attorney at Barnes & Thornburg LLP in Indianapolis, Indiana. Ryan Moore is a senior technical manager and PFAS program manager at Regenesis in San Clemente, California.

ENTITY:

LITIGATION

TOPIC:

ENVIRONMENT, LITIGATION & TRIALS

The material in all ABA publications is copyrighted and may be reprinted by permission only. Request reprint permission here.

Copyright © 2022, American Bar Association. All rights reserved. This information or any portion thereof may not be copied or disseminated in any form or by any means or downloaded or stored in an electronic database or retrieval system without the express written consent of the American Bar Association. The views expressed in this article are those of the author(s) and do not necessarily reflect the positions or policies of the American Bar Association, the Litigation Section, this committee, or the employer(s) of the author(s).

American Bar Association |
/content/aba-cms-dotorg/en/groups/litigation/committees/environmental-energy/articles/2022/spring2022-reducing-pfas-liability-risk-fixed-class-b-firefighting-systems