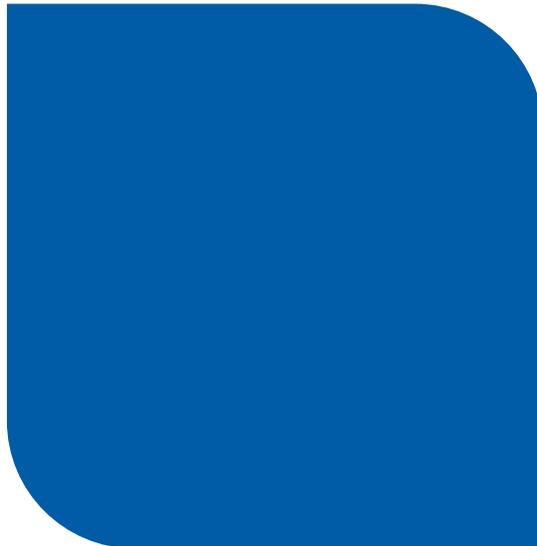


PFAS, Due Diligence and Real Estate Development

The Latest Environmental Concern and How It May Affect the Process



By: David L. Sawicki, PG, CPG



Introduction

The term “forever chemicals” refers to a group of chemicals that are called “PFAS” or Per and Polyflouroalkyl Substances. PFAS have been the subject of many recent studies which show that they are more wide-spread than ever before.¹ Recently, federal and state agencies have proposed or enacted legislation that sets action levels in both groundwater and drinking water for these chemicals.² This includes newly revised practice standards for Phase I Environmental Site Assessments (ESAs) by the American Society for Testing and Materials (ASTM)³ which has included the evaluation for the presence of these chemicals as a “Business Environmental Risk” (BER). As a result, environmental risk evaluation and property valuation during property redevelopment is now even more complicated due to the constantly changing regulatory status of PFAS.



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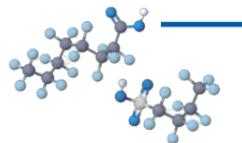
Executive Summary

PFAS are utilized in a variety of products since their discovery in the 1930s by a DuPont chemist as the main ingredient in Teflon.⁴ Since then, an increasing amount of materials, including consumer products, now contain it. PFAS is now so prevalent that it is found in the blood of most residents of the United States.⁵ As we increasingly understand the health effects posed by these chemicals, additional states are taking action to protect their citizens.



Actions taken by states have included: requiring warning labels on products, designating PFAS as either a hazardous waste or substance, and establishing action levels in groundwater and soil.²

In addition to state actions, the federal government initiated several activities to begin to restrict the use of PFAS including listing two of the approximately 7,000 chemicals as hazardous substances under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as “SUPERFUND”.⁶ In 2020, the United States Environmental Protection Agency (U.S. EPA) expanded the Toxic Substance Control Act (TSCA) to restrict the manufacture, use, and import of hundreds of short and long-chain PFAS.⁶



In response to this growing concern over PFAS in the environment, the ASTM included PFAs in its recently updated standard for Phase I ESAs as a “BER”.³ By including this issue as BER, environmental consultants are now able to identify properties that may have used, stored, or have potentially have been impacted with PFAS as concerns for potential property owners or investors. Considering the number of states that have either numerical standards or activities toward regulating PFAS on some level, developers must be careful when evaluating properties where PFAS may have been used.⁷

PFAS

Definition, Origins and Uses

PFAS refers to a group of an estimated 5,000 to 10,000 chemicals that have unique physical characteristics such as the ability to resist heat, oil, stains, grease, and water allowing them to be used in a variety of products. Some of the more commonly known chemicals in this family are perfluorooctane sulfonic acid (PFOS) and perfluorooctanoic acid (PFOA). These two chemicals were identified by US EPA for being listed as hazardous substances under CERCLA. PFOS is the main ingredient in Scotchguard™ made by the 3M Company.

PFOA or C8 is used in the process of making Teflon, which is the brand name of polytetrafluoroethylene (PTFE). Teflon was produced by a chemist from DuPont (now known as Chemours) in 1938 by chance. Since then, thousands of chemicals have been developed and utilized in a multitude of products.



Current Regulatory Status

As of June 2022, only a handful of states have enacted legislation protecting or limiting consumers from PFAS-containing products.⁹ 13 states have enacted or have proposed legislation for ‘food PFAS’ in food packaging.¹⁰ Some states, like California are taking the lead on PFAS legislation. For example, the California State Water Resources Control Board has updated the regulated community and the public on its investigation into public agencies involved in drinking water and wastewater treatment for potential PFAS sources and its intention to require PFAs monitoring in its permits.¹¹



With respect to drinking water action levels, states vary significantly in their approach to regulating PFAS. According to the Environmental Council of States (ECOS), nine states have no state drinking water guidelines.¹² Eight states have established drinking water standards and 10 have established a standard for groundwater. In all, 25 states have established guidelines for at least one environmental medium.¹² Illinois has currently proposed PFAS action levels in groundwater and currently has advisory levels established for a number of PFAS chemicals.¹³

The federal government has yet to establish any formal guidelines for PFAS in drinking water but does have PFOA and PFOS Drinking Water Health Advisories in effect.¹⁴ The USEPA has restrictions in place under TSCA where it has restricted the use, manufacture, and import of long-chain PFAS.² 172 PFAs were added to the Toxics Release Inventory (TRI) Program in 2020 requiring companies to report the annual release of these chemicals into the environment.² The Food and Drug Agency (FDA) has banned three PFAS for use in food packaging materials.

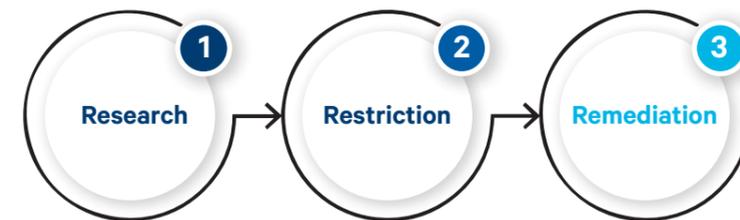


Future Regulatory Status



At least 15 states have pending legislation to limit PFAS in consumer products.⁹ Many of these states also have pending legislation for establishing a maximum contaminant level (MCL) in drinking water or an action level in ground water for PFAS.¹² Eight states have proposed legislation to limit, or ban entirely, PFAS in food packaging.¹⁰ The number of states that want to legislate the use of PFAS will likely increase as more and more studies show the extent of PFAS not only in our environment, but within our bodies.¹⁵ In fact, detectable levels of PFAS have been identified in the drinking water from 33 states.

In October of 2021, the USEPA released the PFAS Strategic Roadmap: EPA’s Commitments to Action 2021-2024.¹⁶ This document provides the proposed legislative plan to limit or control the use of PFAS. This plan includes a three-pronged approach including research, restriction, and remediation.



The agency’s plan calls for increasing research into the health effects, ecological effects, and remedies for the disposal or reduction of PFAS. A “comprehensive approach to proactively prevent PFAS from entering air, land, and water.....” is part of the future plans for the agency. Lastly, the agency intends to “broaden and accelerate the cleanup of PFAS contamination...” as part of their strategy.

range from



non-stick coatings



stain and water resistant products



fire-fighting foam

to architectural resins and protective coatings.⁷

These products even include food packaging products in the fast-food industry such as pizza boxes and take out containers.⁸ Recently, manufacturers have started to phase out or reduce the use of PFAS in many of the products.



Updated ASTM Phase I ESA Standard

The ASTM's Standard Practice for Environmental Site Assessments: **Phase I Environmental Site Assessment Process**, E1527-21 is widely viewed and referenced as "the" guidance when evaluating commercial/industrial property during an acquisition or refinancing. It is also part of the USEPA's All Appropriate Inquiry (AAI) Rule for using the "Innocent Landowner Defense" under the CERCLA.¹⁷ The standard was originally published in 1997, but was recently updated in November of 2021. Prior to that, it had not been updated since 2013. The standard details an approach and methodology to evaluate the potential environmental liability associated with a specific property as part of an acquisition.

The recently updated standard provides some much needed clarification. For example, the update now provides definition to some terms that have had environmental professionals guessing. This includes the term "likely" as in the likely presence of a hazardous substance. Other definitions were also clarified such as the terms CREC, or controlled recognized environmental condition, HREC, or historical recognized environmental condition, and REC, recognized environmental condition.



Other items that were clarified included the shelf-life of the report and the responsibilities of the user. One important clarification on emerging contaminants offers some clarity to this important topic as many states have already adopted legislation regarding classification of one or more PFAS as hazardous substances. Recently the USEPA announced that it would be designating certain PFAS chemicals as CERCLA hazardous substances would therefore be included in the scope of the Phase I ESA.

It is important that the current regulatory status of PFAS legislation is known when conducting a Phase I ESA. If a site happens to be located in a state that has yet to enact legislation, the evaluation of PFAS can still be added to the scope, but for portfolios that include multiple states, how the assessment of potential PFAS usage or releases is reported is complicated by the individual state and whether or not it is actually regulated by that state.

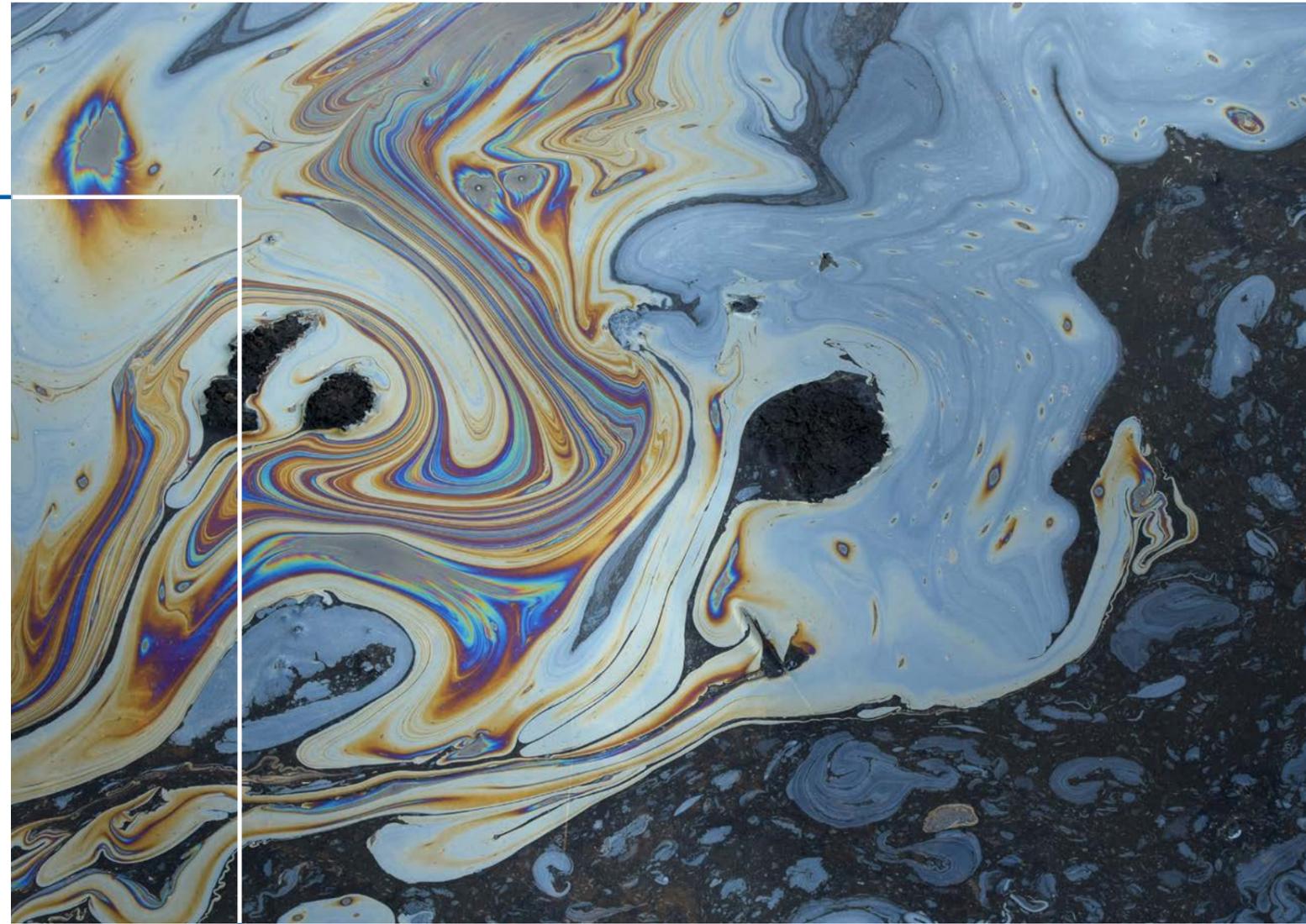


Development of Potentially PFAS-Impacted Sites

The current regulatory situation is very volatile, and more states are developing legislation in response to the public concern for their health and that of the environment. As they say, timing is everything. If one were to conduct a Phase I ESA, including PFAS as a “non-scope” item, and the environmental consultant identifies a possible use of PFAS, it would be interpreted as a BER. If the property was assessed six months later, and during that time, the USEPA or the state lists one or more PFAS as a hazardous substance, the same condition could be interpreted as a REC by the same environmental consultant. If you were developing the site, this could have an impact on financing, potential tenants, or even development costs. This adds to the liability and risk of performing Phase I ESAs on sites where PFAS compounds may have been used. The environmental consultant may need to develop policies to deal with PFAS-related risks for all Phase I ESAs they perform.

Currently, if you live in a state that has not yet enacted PFAS legislation, if your consultant identifies the presence of PFAS, it might not be considered to be “contaminated” by that state agency and therefore closure would not be required. But if that same site is located in a state that has established action levels, regulatory closure could then be required.

Lenders have an even more complicated position. Recent announcements by the USEPA to adopt the updated ASTM standard in the AAI rule may give them some level of security, but evaluating environmental liability on properties that they lend money has just become more complicated. Some states have adopted legislation, but the USEPA has yet to address any formal Drinking Water standard for PFAS, while many states already have. The ever-changing regulatory landscape for PFAS has created an environmental “quagmire” that expects to continue until formal legislation by the USEPA is established.



Summary

PFAS has become a “hot topic” for environmental groups and legislators and other stakeholders, lenders and property owners. Increased scrutiny has funded more research indicating the overwhelming case that PFAS are indeed the “forever chemicals”. Scientists have identified traces of these chemicals in the blood of almost every person, animal and waterway on our planet - yet, it is still relatively “unregulated”. With pending legislation in more than one-third of the states, PFAS is quickly becoming the hot topic for our industry, and creating uncertainty for properties that are being acquired or being assessed for valuation. The recently updated ASTM standard has provided some well-needed standardization, but given the wide range of legislative positions, it is likely to remain an important topic for discussion among environmental consultants, regulators, developers, lenders and attorneys for some time.



Milhouse is prepared to assist our clients in the assessment of properties as part of our due diligence process and we monitor the current regulatory status of PFAS and other potential environmental concerns that could have a bearing on development of property.

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