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Environmental Law

The newsletter of the Illinois State Bar Association's Section on Environmental Law

In America, we make things—that is what we do: How PFAS became the acronym du jour

BY WILLIAM J. ANAYA

We make things in America—that is what we do.

Since the Industrial Revolution, we have learned to make large quantities of finished products that work very well in a variety of consumer, commercial and industrial settings. And, for the first one hundred years of industrialization, the process of making things involved the generation of large volumes of waste. The estimates of early production concluded that for every 100 pounds of finished goods, we used 150 pounds of raw material. The unused 50 pounds of raw material was waste -- and that waste was simply discarded, emitted, discharged, buried or abandoned without any consideration of the consequences. For example, early refineries concentrated on producing middle distillates—kerosene—for consumer use. The lighter end gasoline refined from crude oil was considered dangerous and useless as a consumer good, and was discarded as waste. In the mid-twentieth century, scientists and activists raised concerns about the large volume of waste generated and casually discarded over the years—concerns related to human health and the health or our air, water and soil and to those plants and animals using air, water and soil for survival.

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How to become a food lawyer: A smörgåsbord of tips from a seasoned practitioner

BY MICHAEL R. REESE

"Appetite, an universal wolf."—William Shakespeare, *Troilus and Cressida,* Act I, Scene III

Food law in the United States is a vast and fascinating area that has grown tremendously in the last decade. Just in the past ten years, the number of class actions filed involving food has increased almost 100 percent; rules and regulations have multiplied at both the state and federal levels; and entire departments of scholarship dedicated to the subject have opened at leading academic institutions such as Harvard University, and the University of California, Los Angeles (UCLA).

Not surprisingly, many legal practitioners—be they attorneys working at large, multinational firms or solo or small boutique shops—have come across food-related work. The purpose of this article is to offer some guidance on starting a practice in food law and to provide some

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What we refer to as environmental law was born of those concerns.

First, with the Clean Air Act ("CAA") and the Clean Water Act ("CWA"), we addressed industrial processes and the impact of each on our air and water by regulating relevant industrial activities. In the process, we established national minimum air and water quality standards and limits on emissions and discharges. We also established clean drinking water standards in the Safe Drinking Water Act ("SDWA"). Then, with the Resource Conservation and Recovery Act ("RCRA"), we turned our attention to the waste generation processes employed in industry and regulated waste "from the cradle to the grave." We were even so thorough to recognize the need to anticipate new processes and new materials. With the Toxic Substances Control Act ("TSCA"), we established a process for identifying new substances and new industrial processes that may have an adverse impact on human health and the environment. The TSCA administrative process involved the participation of industrial interests and the government in an exercise designed to balance the interests of industrial participants and concerns over human health and the environment.

All of the foregoing form a regulatory process that involves application and disclosure, permit negotiations and permit issuance associated with construction and operation, monitoring and, of course, enforcement. The regulatory process, however critical, did not address all of the concerns related to wastes generated in the industrial processes.

Next, faced with disasters at Love Canal in New York, Times Beach in Missouri and the oil tanker accident in Prince William Sound, Alaska, we established liability standards in the Comprehensive Environmental Response, Compensation and Liability Act and the Oil Pollution Act designed to address waste that found its way into the soil and groundwater, and to encourage prompt cleanups paid for by the persons or entities responsible for the release or threated release of relevant hazardous substances.

This combination of regulatory and liability programs, with cooperative federalism, is what we refer to as Environmental Law in the United States.

We did much more than simply pay lip service to the concerns and interests of the parties, and we established a national agency (and gave it cabinet level status) to study, implement, monitor and manage waste. That national agency, the United States Environmental Protection Agency ("US EPA") agreed to share the responsibility of environmental protection with the states, but only so long as an individual state agreed to implement the minimum standards described as the national policy. Some states accepted the responsibility and acted stridently within national model and took bold action in the interest of their citizens. Other states, like Illinois, agreed to implement national policy so long as the national government agreed to share the revenue provided by Congress.

While some criticize our model of environmental protection as unnecessarily onerous, rife with politics, or only modestly effective, the fact is the model has continued to work more or less as designed.

What Is New in Environmental Law—PFAS and Related Chemicals

Recently, new concerns have been raised with products that have been remarkably popular and effectiv—specifically, per- and polyfluoroalkyl substances ("PFAS"). PFAS are synthetic chemicals commonly known as PFOA, PHOS and GenX. These chemicals have been manufactured and used in a variety of industries since the 1940's. PFOS and PFOA are chemicals valued, like Polychlorinated

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Biphenyls ("PCBs"), for their persistence in manufacturing and production applications. Those chemicals resist heat, and repel water and stains. While that persistence is valuable in manufacturing and use, those same physical properties raise concerns because those same resistant chemicals have been discovered in drinking water and in the air we breathe. The body does not metabolize these chemicals, and they tend to accumulate in the blood and liver, and are considered the source of adverse health effects.

PFAS have been discovered in food packaged in PFAS-containing materials, and other commercial products—such as stain and water repellants, non-stick cookware, pizza boxes, polishes, waxes, paints, cleaning products and fire-fighting foam. Fire-fighting foam is a major source of PFAS at military bases and airports where training in fire-fighting techniques has occurred. PFAS are also a concern in the workplace—chrome platters, electronics manufacturers and oil recovery facilities to name a few. Drinking water is susceptible to PFOA contamination, especially if the source of water is close to landfills, manufacturing operations, waste water treatment facilities or fire-fighting training facilities. PFOAs also reportedly accumulate in living organisms – humans, fish and other animals.

In Illinois, PFAS has been discovered in Champaign County, at the former Chanute Air Force Base, and in McClean and Knox Counties. In Stephenson County, PFOA and PFOS have been reported present.

Some PFAS chemicals have been phased out in the United States, but those chemicals are currently produced in other countries and imported to the United States in carpet, leather and clothing, as well as in textiles, paper and packaging, and coatings, rubber and plastics.

Exposure to PFAS and PFOS in animals has been reportedly linked to tumors, adverse reproductive and developmental effects, as well as liver and kidney and immunological damage. According to US EPA, human exposure to PFOA and PFOS may also cause high cholesterol, low infant birth weight, adverse effects on the human immune system, cancer (related to PFOA) and thyroid hormone disruption (related to PFOS).

One report, based on data generated pursuant to US EPA's Unregulated Contaminant Monitoring Rule Program, disclosed that an estimated six million people have been exposed to PFAS in drinking water in excess of US EPA's Lifetime Health Advisory limit of 70 nanograms per liter ("ng/L") – approximately, 70 parts per trillion ("ppt").

For those who perform and rely on due diligence associated with transactions, the likely presence or release of PFAS has not generally been reported in Phase I Environmental Site Assessment Reports. Historically, PFAS have not been considered hazardous. According to the standard employed in preforming Phase I Environmental Site Assessments, the objective is to report on the presence or likely presence of a release of a hazardous substance likely to create statutory environmental cleanup liability. Arguably, then, PFAS qualified as a hazardous substance under that standard, but under current scrutiny, the potential presence of PFAS should be included in a Phase I Environmental Site Assessment. Recognized Environmental Conditions may include proximity to military bases and airports, landfills, sludge operations, and manufactures using PFAS technology or industrial facilities that contain waste ponds, pits or lagoons.

For those who wish to remove PFAS, the problem with these resilient chemicals is complex. To destroy them, the object is to separate the fluorine from the carbon. Destruction technology is very rudimentary, and thus far, the most common method of removing PFAS from drinking water involves the use of carbon filters. Carbon filters, however, do not destroy the PFAS, but just collect them and concentrated them in the filter media. The problem then is disposal of the spent Carbon filter. Landfilling spent filters simply moves the pollution around – a common historical problem associated with waste. At this point, the only other method appears to be destruction with heat – but then again, unless the residual PFAS are collected, that waste ends up emitted into the air shed.

It goes without saying that more research is needed.

Regulatory and Liability Statutes

Resource Conservation and Recovery Act ("RCRA"), Clean Water Act ("CWA"), and Clean Air Act ("CAA")

PFAS are not regulated under the Resource Conservation and Recovery Act, the Clean Water Act or the Clean Air Act, and there does not appear to be any current intention to do so.

- Toxic Substance Control Act ("TSCA")

Pursuant to its authority under Section 5 of TSCA, US EPA has issued a Significant New Use Rule ("SNUR"), restricting the importation and use of PFAS, and permitting their use in only limited industries. In addition, industries are required to report any new use of PFOA chemicals incorporated in carpets.

- Safe Drinking Water Act ("SWDA")

While US EPA has established a Lifetime Health Advisory Limit of 70 ppt for PFAS in 2016, the Agency has not established a Maximum Contaminant Level ("MCL") for PFAS under the Safe Drinking Water Act. In 2012, the Agency published a "Third Unregulated Contaminant Monitoring Rule ("UCMR3") that included PFOS, PFOA and other PFAS and included monitoring. In the event that US EPA concludes that an imminent and substantial danger may exist due to the presence of PFAS present in, or likely to enter, a public water supply, Congress provided at Section 1431 of the SDWA that, unless the state acts, the Agency may issue an Emergency Administrative Order ("EAO") to protect public and private water supplies contaminated with PFAS. US EPA has issued EAO's in limited instances.

- Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA")

Interestingly, PFAS are not a listed CERCLA "hazardous substance," but certainly qualify as a "hazardous substance" under the statute's reference to "pollutants or contaminants" creating cleanup liability. That is, while PFAS are

currently unregulated under CERCLA's response provisions and community right to know obligations, PFAS can form the basis of a claim under the liability regimen established under the statute. Indeed, investigations associated with CERCLA projects now include investigations related to PFAS.

There are no federal cleanup standards attributable to PFAS, *per se,* but the program does provide for analysis of "applicable or relevant and appropriate requirements" ("ARARs"). In that instance, the "lead agency" identifies potential ARARs, and "to-be-considered" ("TBC's") values supported by the state. Or, risk-based cleanup objectives may be calculated, and applied if necessary and if protective of the environment. Various states have adopted cleanup guidance or standards applicable to PFAS.

In 2018, the Agency for Toxic Substances and Disease Registry ("ATSDR") had prepared a report that was initially blocked for publication by the current Administration. Nonetheless, US EPA Administrator Pruitt announced various "planned actions" involving PFAS. According to Administrator Pruitt, the Agency would establish a maximum contaminant level for PFOS and PFOA "in earnest." In addition, the Agency would classify PFOA and PFOS as "hazardous substances" under CERLCA. In addition, the Agency agreed to develop "toxicity values" for GenX and PFBS, and assist states in preparing a "national PFAS management plan."

Eventually, the ATSDR report was published, recommending a much more stringent standard for acceptable PFAS than the Health Advisory Limit of 70 ppt. The Health Advisory Limit has not been modified, however. Shortly thereafter, Congress passed a military spending bill mandating that the Department of Defense study PFAS at military bases.

Finally, in February 2019, US EPA announced its PFAS Management Plan. Therein, the Agency indicated it would: (i) propose a drinking water standard for PFOA and PFOS; (ii) initiate the regulatory process to list PFOS and PFOA as CERCLA hazardous substances; (iii) develop remediation objectives associated with PFOS and PFOA in groundwater; (iv) develop draft toxicity assessments for PFAS; (v) review new PFAS's under the TSCA rules and decide if new uses present an unreasonable risk; (vi) assist in developing resources to improve testing, monitoring treatment and remediation of PFAS; and (vii) support state and local authorities in addressing continuing PFAS releases.

US EPA's PFAS Management Plan will take years to implement and study, but the Plan is recognition of the need to address PFAS nationally.

State Regulation

Various states are actively studying PFAS contamination, but none has yet established a monitoring program of public water supplies. Texas has established a risk-based inhalation exposure limit under its Risk Reduction Program.

There are proposed rules related to labeling in California under its Developmental Toxicants program, and the proposal is to mandate labeling for manufacturers, distributors, and retailers and to prohibit discharges of PFAS in drinking water resources.

Washington requires reporting of PFOS in children's products. New York and Vermont have included select forms of PFAS for regulation as hazardous substances. Vermont regulates PFOA and PFOS as hazardous waste in liquids at a concentration of greater than 20 ppt -- with exemptions for consumer products, remediation waste, sludge from waste water facilities otherwise regulated. New York regulates certain PFOA found in fire-fighting foam, and requires storage and registration.

Some states, not including Illinois, have developed standards and guidance for PFAS in drinking water and groundwater. Most states have adopted US EPA's Lifetime Health Advisory for PFAS as guidance. Vermont, Minnesota and New Jersey have adopted health-based standards, and Michigan regulates certain PFAS in surface water bodies, and Minnesota has established discharge limits to specific water bodies. New Jersey adopted Interim Groundwater Quality Standards and has recommended proposed Maximum Contaminant Limits for certain PFAS

In California, the laboratory detection limit is both an effluent limitation and cleanup standard. Other states have published guidance on cleanup standards associated with groundwater and soil.

Reference

This is a fast-moving area of regulation and liability. For additional information, contact the author or visit Interstate Technology Regulatory Council web site, wwwitrcweb.org and the US EPA web site.■

For further information, you can contact Bill at 312- 345-5002, Greensfelder, Hemker & Gale P.C., 200 West Madison Street, Suite 3300, Chicago, Illinois 60606 or wanaya@greensfelder.com.

1. Largely due to environmental laws and regulations, that ratio has been dramatically reduced. We generate significantly less waste now than we did originally.
2. PFOA—perfluorooctanoic acid; and PFOS – perfluorooctane sufate. PFOA and PFOS are two of the original "long chain "PFAS – i.e., those containing eight carbons
3. GenX is a trade name, and describes a process used to make high performance fluoropolymers, without PFOA – i.e., without perfluorooctanoic acid, and commonly described as "short chain" PFAS. The United States Environmental Protection Agency reports that GenX compounds have been discovered in surface, ground and rain water, as well as drinking water and air emissions.