

# “Silent Spring” and the Life Cycle of Emerging Contaminants

## Publications

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On the 60<sup>th</sup> anniversary of the publication of Rachel Carlson’s groundbreaking book “*Silent Spring*”, the world continues to struggle to manage the human health and environmental risks associated with newly discovered emerging contaminants. *Silent Spring* focused on the challenges associated with managing the risks associated with pesticides (and more specifically DDT), and even today, many of the largest personal injury verdicts are associated with alleged exposure to pesticides.

Over the many years since *Silent Spring*, numerous contaminants have moved through the emerging contaminant life cycle, including asbestos, dioxins, PCBs, MTBE, BPA, 1,4-dioxane, and most recently, per- and polyfluoroalkyl substances (PFAS) (although PFAS seems stuck in the middle of the life cycle).

The life cycle journey of emerging contaminants has been influenced significantly by our improved ability to understand the potential impacts of these emerging contaminants on human health and the environment. As new contaminants are identified, resources are devoted to better understanding the potential environmental and health risks associated with these contaminants and regulations generally evolve to mitigate identified risks. In response to increased regulatory pressure, industry’s use of chemicals evolves and the risks are mitigated. Of course, industry’s use of these chemicals also evolves and is influenced by lawsuits when the regulations and/or the enforcement of the regulations lags.

In addition to improved understanding of the risks posed by some of these emerging contaminants, the fact that we are able to measure smaller and smaller quantities of these contaminants also impacts the life-cycle journey of these emerging contaminants. When I started practicing environmental law in the dark ages, contaminants in soil and groundwater were measured in parts per thousand. As science evolved to detect lower and lower levels, regulatory levels moved from parts per million to parts per billion, and then parts per trillion, and PCBs are now regulated in parts per quadrillion. As detection levels drop, the number of new emerging contaminants will increase and the life-cycle journey for each of these contaminants begins.

A lot can be said for the progress that has been made since the summer of 1962. Although some will argue it should still be faster, the time from discovery of the contaminant to identification of risks and regulation of these identified risks has greatly improved since the 1960s. This is due in part to the fact society has a much lower tolerance for risks posed by emerging contaminants and is much quicker to demand a response from the regulators now than was the case in the 1960s when environmental laws in the United States were in their infancy. A reformed TSCA is better situated to address both environmental and health and safety impacts of chemicals (both newly manufactured chemicals and new chemical uses). U.S. EPA, working in collaboration with manufacturers, implemented a global stewardship program to eliminate the manufacture and import of long-chain PFAS compounds. In October 2021, U.S. EPA announced its PFAS Strategic Roadmap intended to implement a whole-of-agency approach to addressing PFAS.

As our understanding of risks evolves and our detection levels drop, it is inevitable that we will continue to identify new emerging contaminants that need to be regulated. However, I think Rachel Carlson would be proud of the progress we have made and continue to make to ensure that the world is a safer place for everyone.

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