Despite 3M's phase-out, problem of cleaning up PFAS remains

December 30 2022, by Chloe Johnson, Star Tribune

Credit: Pixabay/CC0 Public Domain

3M announced in mid-December that it's phasing out a family of harmful chemicals, but they're not going away.

The "forever chemicals," known collectively as per- and polyfluorinated substances or PFAS, are used in everything from carpeting to nonstick pans to dental floss. The chains of carbon-fluorine bonds are excellent at

repelling stains, grease and water, and even snuffing out dangerous fuel fires. But they also don't break down in the environment, and they linger in people's bodies for years.

Research has linked the chemicals to developmental and immune problems, fertility issues and some cancers.

Maplewood-based 3M, which is facing a cascade of lawsuits over the PFAS it helped pioneer in the last century, said it would stop making and using them by 2025, including at its plant in Cottage Grove.

In the view of Rainer Lohmann, director of the University of Rhode Island's STEEP lab and an authority on PFAS contamination: "The nightmare hasn't really stopped."

Researchers and environmental advocates said the persistence and global scope of the pollution from the chemicals will pose a cleanup challenge for years to come. They also worried new manufacturers could step in to fill a gap left by 3M, and they said the company should contribute to environmental cleanup.

"While it is great that they are moving away from these chemicals finally, after pressure, after liability, after pressure from government regulators … they certainly should not be left off the hook for accountability," said Melanie Benesh, vice president for government affairs with the Environmental Working Group, an advocacy organization.

3M has already been engaged in cleanup efforts in connection with legal cases and environmental enforcement. It paid the state of Minnesota $850 million to settle a lawsuit over natural resource damages in 2018, and before that it had to excavate contaminated material from several dumps used by its chemical plant in the east metro. The company also

entered into a consent agreement with the Environmental Protection Agency this November to test and treat drinking water in a 10-mile area around its chemical plant in Cordova, Illinois.

It also faces continuing scrutiny around its Cottage Grove plant, where there's an open investigation into its water discharges by the EPA and Minnesota Pollution Control Agency. 3M first revealed the investigation to investors in 2020.

MPCA spokeswoman Andrea Cournoyer declined to comment on the inquiry.

In an email, she wrote that the agency "welcomes" 3M's plan to stop production and that it "will continue to hold 3M and other entities accountable for their PFAS pollution, as appropriate."

Sean Lynch, a spokesman for 3M, also declined to comment on the investigation.

He wrote in an email that the company "will continue to fulfill its commitments to water stewardship, as well as remediation of PFOA and PFOS at certain locations where we manufactured or disposed of these materials."

New technologies are being tested to clean up PFAS—including a machine designed to concentrate the chemicals in foam on top of water, which the MPCA is using in the east metro.

But there are still few known ways to destroy the chemicals, and they're so routinely found that researchers often refer to a "background level" that's present in the blood of most people.

"Any place we do find it, we basically know it was put there by someone

or some process we created," said Matt Simcik, a professor of environmental chemistry at the University of Minnesota who has studied PFAS contamination for decades.

3M is still coping with the legacy of two of the oldest and best-studied formulations of the chemicals, PFOS and PFOA. The company announced in 2000 that it would phase them out. But other companies, such as DuPont, didn't until much later. The chemicals are routinely found around the planet today. One recent study revealed such high levels in rainwater that they exceeded limits set for drinking water by the EPA.

"PFOS was very much a 3M product, and we're still worrying about it 20 years after they phased it out," Lohmann said.

The contamination problem is a more complex one than other prominent contaminants, such as PCBs, Simcik said. The hazardous organic chemicals were used widely in electronics, finishes and plastics until their manufacture was banned in the United States in 1979. They tend to stick to particles, so over time some of the PCBs left in the environment in places like the Great Lakes have settled into soils and been covered, Simcik said.

"That big chunk is still down there and buried, so it's not a problem," he said.

That's not the case with PFAS, which move readily through water and keep coming into contact with people and animals.

And then there's the question of what could replace the chemicals. Simcik and Lohmann both worried about what the properties of new chemicals could be.

3M has not divulged how it will replace the chemicals that provide $1.3 billion in annual sales.

Asked whether the company would do health or safety testing on PFAS replacements, Lynch wrote that "3M is committing to innovate toward a world less dependent upon PFAS. 3M's products are safe for their intended uses."

The other main manufacturer in the United States is Chemours, a spin-off of DuPont, which has used several formulations of PFAS in its line of Teflon products.

Asked whether the company was considering stepping away from PFAS, spokeswoman Cassie Olszewski wrote in an email, "Chemours is committed to fluorine chemistry and its power to enable world-changing technologies that help solve some of the world's most challenging problems."

2022 StarTribune.

Distributed by Tribune Content Agency, LLC.