CLEANING HOUSE

The Fight to Rid Our Homes of Toxic Chemicals

LINDSAY DAHL

I also had to face the fact that many aides and members of Congress wouldn't be moved by the social justice underpinnings of the issue. They would only listen to people back in their hometowns—the people they brushed elbows with at fundraisers in Franklin, Virginia Beach, Cleveland, and Spokane. Churchgoing evangelicals. Nurses working in hospitals where their children were born. Blue-collar workers, many of whom viewed the chemical industry the way the ACC portrayed it on the Hill: as a proud employer of America's workforce. But that pro-worker image, as it turned out, was becoming tarnished due to one man's legal battle with the industry. And it would be a game-changer for taking our coalition's goals to the next level.

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THE LAWYER

GETTING TO KNOW JUAN PARRAS AND VI WAGHIYI DEEPened my understanding of how people living near factories and hemispheric sinks were affected by toxic chemicals. But I was also learning more about what was happening inside the four walls of the corporations producing these chemicals—both on their factory floors and in the corner offices of their corporate headquarters—and it wasn't pretty. Chemicals weren't the only thing leaking out. So too was damning information revealing that the industry knew some of its products were harmful and showing the lengths they went to in order to cover it up. These revelations were so shocking that they seemed to have been dreamed up by a Hollywood screenwriter crafting a legal thriller. (In fact, such a thriller would later be written.)

As Andy's right-hand woman, I started to see the larger picture. Andy was one of the few people who negotiated directly with the chemical industry in meetings where the opposing forces would pressure-test each other to understand if compromise was possible or a pipe dream.

Sitting with top dogs from the largest chemical companies, Andy looked Goliath in the eye while they casually talked about the previous night's football game. I was never in these rooms myself, but I could easily visualize the smiles and small talk happening over cups of coffee while people were suffering the effects of toxic chemicals in real time. In fact, the scientific evidence and headlines around toxic chemical exposures—like Teflon—was ramping up. The spotlight had been recently placed on DuPont for its reckless and deadly manufacturing methods and widespread leaching of PFAS—the same chemicals Vi spoke about—into towns in the lower forty-eight.

Turns out, PFAS are everywhere.

PFAS (per- and polyfluoroalkyl substances, the umbrella term for the broad class of chemicals like PFOS, PFOA, GenX, and thousands of others)—nicknamed "forever chemicals" because they stay in our bodies and the environment—are used to make hundreds of products we all use daily: nonstick pans slick, waterproof raincoats, long-lasting lipstick, and thousands of other consumer products, including dental floss, condoms, and stain-resistant couches.

Even the treatments to protect the paint on our cars use PFAS. While the industry brought coveted jobs for workers in West Virginia and Ohio, they "forgot" to tell the workers that the chemicals they were making every day were highly toxic. Nor did they warn the thousands of townspeople who were gulping down the chemicals in their tap water.

It took a wheezy farmer whose cows were dying and an unassuming but dogged lawyer, Robert Bilott, to uncover the lengths DuPont went to in order to hide just how toxic some of its chemicals were. Bilott's yearslong battle with chemical manufacturers taught me what a powerful weapon the court system can be, and it also showed me that you need lawyers and judicial systems in the game if you're going up against behemoth corporations. Bilott's legal work would eventually deliver to our coalition in DC some of the most damning information about the industry's deceit, providing fuel for nearly every lobby meeting we had.

Bilott, surprisingly, started his career working for the oil and chemical companies as a defense attorney. But that all changed in 1998 when he got a phone call from a farmer with a deep Appalachian accent, Earl Tennant, a neighbor of a friend of Bilott's grandmother in West Virginia. The man wanted Bilott to find out why his cows had been dying and told him he suspected it was because of a nearby DuPont chemical plant and landfill. Having visited the farm next to Tennant's lands as a child, Bilott was interested in learning more. The farmer also questioned whether his own worsening lung problems were connected to the chemical plant—whatever his cows were exposed to, he was exposed to it too. Bilott, skeptical by nature but not one to ignore a family request, invited the man to his office in Cincinnati to lay out the evidence. Bilott had worked alongside some of DuPont's lawyers on Superfund cleanups (he'd represented chemical companies, but never DuPont) and believed they played by the book.

The Tennants arrived in Cincinnati to show Bilott their evidence, unloading videotapes and paperwork from their car. Dressed in jeans and a flannel shirt, his hands calloused from a lifetime of farmwork, Tennant was a stark contrast to the suits of the polished corporate law firm. After looking at videos of the dead cows—flies swirling around their eyes, patches of hair missing, and blood oozing out of their eyes and noses—Bilott understood that something was very wrong. The videos also showed a wastewater pipe sending green frothy water straight to Tennant's farm. Bilott took the case on a contingency fee, agreeing to be paid only if he achieved a positive outcome in court. His favor to a family friend would

eventually become the issue that defined his career and earned him the *New York Times* headline, "The Lawyer Who Became DuPont's Worst Nightmare." (Bilott's battle with the chemical giant would also be made into the movie *Dark Waters*, with Mark Ruffalo playing Bilott.)

Bilott shared with me that when he started his investigation, the case seemed straightforward. "I figured I'd be able to resolve the case quickly and on my own." Open-minded as to what the root of the problem was, he began his research by looking at whether any particular chemicals could be the reason for dead livestock. An expert on federal environmental laws, he couldn't find any chemicals that might cause the type of harm experienced by Tennant's cows, especially when looking at those regulated under the Clean Air Act, the Clean Water Act, and our old friend TSCA. Next, Bilott tried directly engaging with DuPont to learn more about its plant and waste disposal practices, given that he'd already worked with some of the company's lawyers while he was representing other clients. But his phone calls, meeting requests, and letters were met with silence.

So in 1999, Bilott filed a lawsuit against DuPont, forcing the company to respond, which it did by sharing documentation that it had already sent a team of six veterinarians (three hand-selected by DuPont and three chosen by the Environmental Protection Agency)—to assess the situation back in 1997, when Tennant had first started complaining. The vets had conducted a site visit on the farm and watched the videos of the cows showing black teeth and rotted internal organs. In the report DuPont eventually issued in early 2000, the company blamed Tennant himself for the deaths, citing poor animal husbandry practices. Neither the vets' investigation nor Bilott's research found evidence of any known chemicals that would be this toxic.

Bilott knew there had to be something everyone was missing, so he kept digging. Reviewing his stack of papers from his initial research, he found that during the summer of 2000 the company had sent a letter to the EPA referencing a chemical he had never heard of, one called PFOA (perfluorooctanoic acid). That was odd. Intent on unraveling the PFOA thread, Bilott did something that lawyers often do when they are being stonewalled in a lawsuit: he filed a motion with the court requiring that DuPont send him any files related to the chemical PFOA. Companies do not enjoy this legal maneuver, for obvious reasons, as it gives the opposing team (and possibly the media and the public) access to potentially incriminating internal documents—memos, emails, reports. So to make it extremely hard for opposing lawyers to find anything noteworthy, companies respond by burying them in an overwhelming amount of paperwork, creating a needle-in-a-haystack situation.

And that's exactly what DuPont did. On a windy day, Bilott arrived at work to find the first installment of dozens of boxes—well over 100,000 pages that would become millions—stacked high in his office.

What Dupont hadn't counted on was that Bilott secretly enjoyed following paper trails and hunting for clues. Meticulously organizing the mass of documents in chronological order, Bilott started at the beginning and read through the evidence page by page. Fueled by endless cups of bad office coffee, he sat cross-legged on his floor, late night after late night, poring over it all. "It just seemed so complicated, and there was a lot of stuff I didn't understand. I was a liberal arts undergrad who went to law school to avoid science."

He began deciphering DuPont's internal lingo, sorting out the alphabet soup of acronyms representing various chemicals and product formulas. Several chemicals kept appearing that neither he nor the chemist he consulted had ever heard of: APFO (ammonium

perfluorooctanoate), C8, PFOS, the mysterious PFOA from the EPA letter, and others. (Later Bilott would find out that solving this large puzzle was made more difficult by DuPont's use of six different names for the chemical in question, all part of a larger class of fluorinated compounds called PFAS.) Given that all PFAS were grandfathered under TSCA, none of these compounds were properly studied or listed as hazardous. Translation: no one was looking for PFAS in any of its iterations.

But DuPont's own internal animal studies showed that many of the PFAS chemicals it used were highly hazardous. Proceeding through the files, Bilott created subfiles of key themes: water quality reports, papers on different analytical methods used to test chemical safety, concerning rat studies showing health effects, and discharge data from the factory's water and air outputs. Clearly, it was a much larger issue than Tennant's cows.

It got worse (or better, if you're a plaintiff's attorney going up against one of the most powerful chemical companies in history). After more late nights of sifting through the piles that now covered every surface of his office, Bilott discovered that DuPont had known since the 1950s about the risks of PFOA's toxicity. 3M, which first sold DuPont PFOA, cited the importance of treating it as a chemical hazard and properly disposing of the powder and any wastewater. DuPont had ignored 3M's advice and dumped hundreds of thousands of pounds of PFOA and its waste sludge directly into the community and other holding ponds. Equally horrific, DuPont had secretly been conducting human studies for decades on its own workers about exposure to PFOA.

Bilott was stunned. It was one thing for a company to use a chemical that hadn't been tested for safety, turning a blind eye to whether it was toxic or not (pretty awful); it was another thing altogether to use it knowing it was harmful (downright evil). Researchers hired by the chemical companies had noted the skin irritation and respiratory issues experienced by workers who were exposed daily as they directly interacted with PFOA. In fact, over the decades DuPont factory workers had developed a name for the nausea, diarrhea, and vomiting associated with working at the company: the "Teflon flu." (Later, leaked documents from DuPont also revealed that in the 1960s the company laced cigarettes with Teflon, made with PFOA, to see how it impacted humans: nearly all of them became sick with flu-like symptoms.)

If you're wondering what else the chemicals were doing to workers' bodies, well, so did DuPont. After surveying pregnant factory workers in 1981, they found that 25 percent of respondents had children with birth defects of the eyes. The company knew that the chemical didn't break down in the body, that it hung around in the blood, that it was dangerous, and that it was likely also persistent in the environment.

And then Bilott happened upon the final puzzle piece: DuPont had knowingly dumped sludge with high levels of PFAS into the landfill near Tennant's farm. The report also showed that since the 1970s DuPont had allowed PFAS from a Teflon plant to leak into the water supply of Lubeck, West Virginia, and Parkersburg and Little Hocking, Ohio, where many factory workers lived. The town of Belpre, Ohio, just across the Ohio River, was also being polluted. The chemical wasn't just poisoning one man's cows—it was poisoning 100,000 people. Bilott was floored.

As weak as TSCA was, it did have one provision that gave Bilott something to hang his lawsuit on, a regulatory hurdle that, had DuPont complied with it, could have prevented at least some of the devastating pollution: all chemical companies were required by law to notify the EPA if they had evidence that any of their chemicals posed a "substantial risk of injury to human health or

the environment." DuPont did have evidence of injury . . . and failed to report it. TSCA's scout's honor policy clearly wasn't cutting it.

Many folks think of our federal agencies, such as the EPA, as overlords that enforce annoying rules designed to make it tough to do business. But the main role these agencies play is one of baseline public protection. The EPA, started under the Republican Nixon administration, is designed to shield the public and the environment from exactly this kind of corporate coverup. It's also supposed to hold polluters accountable.

But the agency can only enforce what the law asks of it. Under a feeble TSCA that gave chemicals like PFOA/PFAS a pass and that relied on the companies to police themselves, the EPA couldn't step in and take action.

With all the evidence in front of him and a broad picture of DuPont's violations—both legal and ethical—Bilott reached out to DuPont and explained that what he had found was damning. DuPont quickly settled Tennant's case in 2001, but Bilott and Tennant were aware that the problem had spread far beyond the Tennants' farm, and they were intent on doing something about it as a matter of public service. PFOA was still in the drinking water of tens of thousands of Tennant's neighbors in the surrounding community—and none had been told.

It took several more years, but Bilott made good on his promise to his clients—the tens of thousands of inhabitants of the polluted towns who'd filed a class action suit against DuPont—ultimately securing a sizable settlement for the class. In 2004, DuPont agreed to pay $70 million and finally to install new PFOA water filter treatment systems in local drinking water supplies (gee thanks?). In 2005, the company had to pay out a $16.5 million settlement to the EPA for violations of TSCA. These were significant victories, ones that made a splash in the media and gave us activists a clear way to discredit the chemical industry and reveal them as the public enemy they were. Despite endless lawyer jokes and critiques, Bilott's case against DuPont shows exactly why the legal system is often the last and only option for people seeking justice.

Bilott was happy with his wins, but not totally satisfied, especially after he realized that PFOA and related PFAS were not just impacting people drinking from local water supplies in Ohio and West Virginia but were likely present in the drinking water and blood of millions of people all over the country, without their consent. The CDC had been testing Americans' bodies for the presence of various PFAS since 1999, and the results showed widespread exposure. Plus, none of the settlements required DuPont to admit wrongdoing or to disclose where the contamination was, nor did they stop the company from making the chemicals. PFAS still weren't designated as a toxic class of chemicals because the research showing that PFAS were linked to human health problems was sparse. (DuPont's own clandestine studies didn't qualify since they weren't public.) Sure, there were many anecdotal accounts of townspeople and workers developing cancers and immune conditions like lupus at high rates. But scientifically sound data was needed to make the leap from chemical to health harm.

So Bilott took a huge gamble: if the people involved in the class action suit agreed to use the settlement money to collect PFOA blood samples, they could create that human study of 70,000 people who'd already been exposed to the chemical, unknowingly, for years. The townspeople signed on, and twelve studies were designed—epidemiological gold—to understand what PFOA were doing to the bodies of those exposed to unsafe levels for a year or

more. What the townspeople primarily wanted wasn't money, but to live without the fear that they and their kids and grandkids and pets were still being poisoned.

The wait for the study results was torturous for the clients and for Bilott, who felt the heavy responsibility of having asked them to delay any medical monitoring or financial damages. During this waiting period, people were getting sick and dying. Tragically, Tennant himself passed away from a heart attack after fighting cancer for a couple of years; his wife died two years later from cancer. Bilott's own physical and mental health started to falter, which he attributed mostly to stress. On his worst days, Bilott reminded himself that the data couldn't be rushed if it was to adhere to the highest scientific standards and deliver evidence to hold DuPont accountable.

While Bilott and his clients were biding their time, lobbyists like me were leveraging his earlier legal wins, which enabled us to make a stronger case than ever for TSCA reform in DC. When Hill staff smugly said, "It's not like companies are dumping hazardous chemicals into rivers anymore," we could reply, "Unfortunately, they are." The fact that TSCA in its present form couldn't have stopped the things DuPont had done to the residents of places like Lubeck and Little Hocking meant that the laws currently on the books weren't nearly strong enough, and that corporations could not be trusted to make their own responsible decisions about the safety and handling of their chemicals.

When I met with high-level congressional staff on the Hill, I could share the damning details revealed by the lawsuits, showing how corporations were allowed to invent new chemicals without having to prove their safety, nor did they have to keep those chemicals from harming their own workers or leaching into water supplies and soil, even though they knew these chemicals were toxic. I could prove to lawmakers that a little-known chemical had killed livestock and had silently made its way into the tap water that people drank, cooked with, and bathed in.

I could also lay out data from the CDC and the ongoing NHANES research to show that these chemicals weren't poisoning just workers in West Virginia and townspeople in Ohio but nearly every American, many of whom had detectable levels of PFAS in their blood. (A study in 2023 showed that 90 percent of pregnant women still had PFOS and PFOA in their blood, despite these chemicals being phased out in 2002 and 2015, respectively, because nearly all of these chemicals persist in our bodies and in the environment.) To drive it all home, we also had Vi at our side to offer firsthand testimony on what the persistence of these chemicals meant for Indigenous communities in the Arctic. They were suffering too, despite being far from the plants that had manufactured the stuff.

On a winter morning in 2011, I was at my desk preparing for one of my many meetings that day when Andy walked in, unusually early. He was normally slow to rise and always read the *New York Times* cover to cover before strolling into the office around 9:30. I knew something was up. He dropped the *Times* on my desk and said, "Here is your early birthday gift." He gave me an intense look and a smile and sat down to watch me take in the news: one of the most significant scientific moments in the history of environmental public health had arrived—the verdict was in.

The science panel had released the first of its "probable link" reports. They had discovered a probable link between PFAS and preeclampsia, a serious complication of pregnancy that can harm the mother and baby. By the end of 2012, the panel also had announced probable links between PFOA and kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, and high cholesterol. (Later

studies would also link PFAS to polycystic ovarian syndrome and a reduction in fertility.) In what was one of the most accurate and comprehensive series of epidemiological studies and analyses ever done on chemicals, the high burden of proof had been met: thousands of people who were exposed to PFAS had suffered as a result of DuPont's malfeasance. I set the newspaper down and looked up at Andy with a knowing stare and experienced a feeling I can only describe as sadness mixed with vindication. "Not a good day to work in DuPont's PR department."

The results of the science panel's various human health studies and "probable link" findings were big news in the scientific and activist communities. As horrifying as the conclusions were, they energized us in a "fuck these guys" kind of way. On a practical level, the study results gave us more ammunition and momentum for TSCA reform. They also fueled conversations I was having around the country as I drummed up grassroots support for our cause in far-flung places like Little Rock, Knoxville, Orlando, Grand Rapids, and Des Moines, where volunteer groups would gather to hear me speak at local coffee shops or at PTA meetings.

We had clocked hundreds of hours on the Hill, checking off the long list of offices on the key House and Senate committees, and I was finally moving away from the junior staff and on up the ranks. Andy and I decided it was time to ramp up the pressure. And there was one particularly powerful (and bipartisan) voting bloc that was drawn to this issue and was unapologetically vocal, a group I knew we had to get in front of the people in power.

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THE MOMS

WATCHING DUPONT'S DECEPTION UNFOLD IN THE NATIONAL news, our team gathered to figure out how to galvanize the people we knew were powerful enough to take things to the next level: moms. As grassroots organizers, we'd studied the history of what works and what doesn't when it comes to building social movements, and that history lesson led us back, time and again, to this powerful constituency. Pissed-off moms have led some of the biggest public health and environmental wins—banning smoking on airplanes, putting alcohol limits on drivers—of the last fifty years. Think Erin Brockovich and cancer clusters, Lois Gibbs and Love Canal, Karen Silkwood and radiation exposure, Delores Huerta and farm workers . . . the list is long.

While we didn't have deep-pocketed donors to help us with political contributions, we could channel the "won't back down" energy and death stares of women fighting for the next generation. Vi was a mom. Thousands of people in Bilott's lawsuits—the plant