

## SOMETHING IN THE WATER

ROBERT BILOTT ON CORPORATE GREED AND CHEMICAL CONTAMINATION

TRACY FRISCH

Robert Bilott is an unlikely environmental hero. As a lawyer in the 1990s he worked extensively on behalf of chemical companies. Then, in 1998, a West Virginia cattle farmer named Wilbur Earl Tennant contacted Bilott looking for legal representation. Tennant's cattle were inexplicably dying and bearing deformed and stillborn calves, and the farmer suspected that industrial chemicals leaking from a DuPont landfill were to blame. DuPont operated the world's largest Teflon factory in Parkersburg, West Virginia, just seven miles from Tennant's farm. Though Tennant's request fell outside of Bilott's normal work, the lawyer agreed to look into it, mostly because the farmer knew his grandmother.

As a child growing up in a military family, Bilott had spent many holidays and summer vacations visiting his grandmother in West Virginia. In college he majored in political science and urban studies at New College of Florida. After graduation he considered going to grad school to study urban planning, but his father persuaded him to attend law school instead. He obtained his law degree from The Ohio State University in 1990 and subsequently landed a position at the corporate environmental law firm Taft Stettinius & Hollister LLP in Cincinnati, where he became a partner and still practices.

Bilott thought the Tennant case would be easy: just get the landfill permit, figure out the identity of the toxic chemical, and let the U.S. Environmental Protection Agency (EPA) do the rest. He did not anticipate that the culprit would turn out to be a group of hazardous chemicals for which the EPA had no regulations. Unknown to most Americans, yet found in hundreds of consumer products, PFAS compounds were being used to make resistant coatings on products such as Teflon and Scotchgard, as well as firefighting foam. PFAS stands for "per- and polyfluoroalkyl substances." The compounds are what are commonly referred to as "forever chemicals," meaning they don't break down in the environment or in the human body, and they have contaminated the drinking water of about 110 million people in the U.S.

Though it put him at odds with his law firm and threatened his career, Bilott brought lawsuits against DuPont and called wide attention to these carcinogenic compounds. He settled his first case with the chemical giant in 2001 and went on to negotiate a unique settlement of a class-action suit on behalf of tens of thousands of people exposed to PFAS compounds through drinking water in the Ohio River watershed. Bilott's investigation and litigation inspired the 2019 Hollywood legal thriller Dark Waters and are the subject of the 2018 documentary The Devil We Know. He recounts his story in his memoir, Exposure: Poisoned Water, Corporate Greed, and One Lawyer's Twenty-Year Battle against DuPont.

Without Bilott's groundbreaking work, we might still be in the dark about the dangers and prevalence of PFAS chemicals, which have been in use since 1947 and have spread throughout the environment. Though the EPA forced DuPont and other companies to phase out production of the specific chemical that had poisoned Tennant's cattle, thousands of other PFAS compounds remain unregulated. Bilott continues to use his expertise on these chemicals to inform the public about the dangers. He has received the international Right Livelihood Award (also known as the Alternative Nobel Prize) for his work on PFAS contamination.

I first encountered Bilott in 2017 at a small conference on PFAS held at Northeastern University in Boston, where he gave an account of the litigation against DuPont and the huge epidemiology study and medical-monitoring project that had resulted from it. Despite my many years of involvement in the environmental movement, this case was a revelation to me. I was able to have a wide-ranging Zoom conversation with Bilott from our respective offices last year.

**Frisch:** How did you figure out that a chemical released by DuPont was killing cattle?

**Bilott:** Cattle farmer Earl Tennant first contacted me more than twenty years ago, in October 1998. He called me at my office and started talking about his cows dying. I was about to tell him I couldn't help him when he mentioned that he had received my name from my grandmother. So I paused and paid closer attention.

He explained that he was raising animals outside of Parkersburg, West Virginia, a town I knew well. It was where my mom had grown up. My dad was in the Air Force, and we moved around a lot, but we always came back to Parkersburg for holidays and birthdays. Mr. Tennant said he had been trying for a couple of years to find a lawyer to help him figure out why his cows were getting sick and wasting away. They were developing tumors. Their teeth were turning black. Calves were stillborn or born with cloudy or deformed eyes. And it wasn't just the cows. He saw this happening with the wildlife in the area, the deer and the fish, and he was concerned that it could be affecting him and his wife and children as well, because he would have difficulty breathing when vapor clouds from a nearby landfill would come over his property.

The landfill was owned by the DuPont chemical company. Tennant could see white, foaming water coming out of the landfill, through a discharge pipe, and right into a creek that ran through his property and that the cows and the wildlife drank from. For quite some time he had been trying to get answers from DuPont about what was in that

water, but he wasn't getting anywhere. He had called the state environmental protection agency and the federal EPA. He had tried local lawyers, but they weren't willing to dig into it, because DuPont was one of the town's biggest employers.

So he was looking for somebody outside of the community who could help him, and he knew my grandmother had been bragging about my being an environmental lawyer in Cincinnati. This was definitely not the kind of case I was taking at the time. I had spent eight years or so helping corporate clients get permits to run landfills just like this DuPont one. But I told him I'd see if there was something we could do.

At the time I thought this would be fairly straightforward: We could pull the landfill permits, which would identify all the regulated chemicals being monitored at the site. There was

probably something exceeding the permit limits. But when I looked, I really didn't see anything on those permits that could be the cause.

We ended up filing a lawsuit against DuPont, whose attorneys called and told us there was already an investigation underway with the federal EPA, which was specifically looking at the cattle. No need to get into a bunch of expensive discovery, they said, because they would probably have an answer from the EPA soon.

When the EPA's report came back, it suggested that the farmer just didn't know how to raise his cattle. That's when I started to get suspicious. This farmer did know how to raise cattle, and there was obviously something in that water that was causing it to foam. Since we weren't seeing anything in the permit information, I asked DuPont for all files relating to that landfill — in particular, what they were making at the plant down the river that was generating the waste. That's when they began to fight us. We had to get a court order to make them turn over the documents — hundreds of thousands of pages.

I was surprised to learn that the landfill contained a massive quantity of a highly toxic chemical that didn't break down in the environment, accumulated in the bodies of people and animals, and was possibly carcinogenic. Yet this chemical was completely unregulated. State and federal agencies knew nothing about it. This was going on outside of the regulatory system that I thought I understood.

**Frisch:** That's extremely important. What is the name of the chemical?

Bilott: DuPont called it C8, because of the chemical



ROBERT BILOTT

structure. Its scientific name is perfluorooctanoic acid, or PFOA for short.

Frisch: What was DuPont's factory on the Ohio River in Parkersburg making?

**Bilott:** One of its main products was Teflon.

**Frisch:** And what's the relationship between PFOA and Teflon?

Bilott: PFOA was used in the production of Teflon. It was not an ingredient in Teflon. DuPont had originally purchased PFOA from the multinational conglomerate 3M, which had shipped it to West Virginia. Later DuPont had started making PFOA itself.

DuPont had been using PFOA since around 1951. It was used in a lot of consumer products, like water-proof clothing, stain-resistant carpeting, and fast-food wrappers and packaging.

Besides PFOA, 3M manufactured another closely related chemical called PFOS, which stands for perfluorooctane sulfonate. It was used in firefighting foam. As a class, these fluorine-related carbon compounds are called PFAS chemicals.

**Frisch:** You learned that DuPont knew about the effects of PFOA, because its toxicology department had studied it for decades. What did the company know, exactly?

**Bilott:** You have to keep in mind that the federal EPA wasn't established until 1970, and the first laws regulating new toxic chemicals coming onto the market weren't passed until 1976. Here you had a chemical that had been developed right after World War II, long before EPA toxicology tests were even in existence. DuPont had a massive laboratory in Delaware called Haskell Labs, where its scientists helped develop the field of toxicology.

These scientists, recognizing the unique chemical structure of PFOA, recommended doing toxicity testing in the early 1960s. They found multiple adverse effects on different organ systems in various animal species: rats, rabbits, guinea pigs, beagles, and later monkeys. Eventually, in the 1980s, they found that the chemical could cause cancer in rats. A second study confirmed this in the early 1990s.

So DuPont's top scientists had produced a wealth of internal toxicology data, but the company didn't give that information to the EPA. Instead DuPont continued releasing PFOA into the air, into the water, and into the soil outside its manufacturing plants, exposing workers and people in the community.

Frisch: Had PFOA been studied by the government or any independent scientist at the time that you began

representing Earl Tennant?

**Bilott:** The only data I was seeing had been generated by either 3M or DuPont. To my knowledge there wasn't anyone outside those corporate circles who was even aware the chemical existed.

**Frisch:** Are companies legally required to share this information with consumers and the government?

**Bilott:** When the Toxic Substances Control Act was passed in 1976, the EPA basically left it up to companies to reveal if any of the tens of thousands of chemicals already in use posed a substantial risk to human health or the environment. If a company like DuPont had such information due to its own research, it had an obligation to tell the agency.

**Frisch:** Were there any penalties for failure to do so? Because it appears that DuPont simply flouted the law.

**Bilott:** In 2001 I began sending documents to the EPA to show what DuPont knew about the potentially toxic effects of PFOA and the fact that it was in the drinking water of thousands of people. The EPA began a priority review of the chemical, and in 2004 it actually sued DuPont, claiming that the company had withheld information from the agency about the risks.

DuPont ended up settling and paying what at the time was supposedly the largest civil administrative penalty in the history of the EPA: about \$16.5 million. A couple of years later 3M also paid a civil-penalty settlement for claims that it had withheld information about certain PFAS compounds from the EPA.

**Frisch:** Was DuPont's penalty sufficient to deter that kind of wrongdoing in the future?

**Bilott:** A lot of folks feel the size of the penalties that are assessed actually encourages companies *not* to disclose toxicity data to the EPA. Even if the companies end up getting caught and having to pay a penalty, it is minuscule in comparison to the amount of profit that can be made by not disclosing the information.

**Frisch:** Through the discovery process and the depositions your team did as part of your lawsuits against DuPont, did you find out about any other unethical practices?

**Bilott:** There was a pattern of similar instances: DuPont's scientists would find additional evidence of the chemical's toxicity, and they would recommend switching to a different chemical or warning the community. Over and over the business executives would decide not only to continue using the material but to *increase* emissions into the environment.

For example, I found a memo about a 1984 meeting in Wilmington, Delaware, where DuPont executives reviewed information about the toxicity of PFOA. Sales of Teflon were increasing, and with that came the prospect that emissions might increase. They discussed whether to switch to an alternative chemical and ultimately decided not to. And emissions did, in fact, increase as expected.

We laid out that information to juries in multiple trials, and two came back with punitive-damage verdicts. They believed the company had acted with conscious disregard of the risk, and had continued to do so for years, until litigation forced it to finally stop.

Frisch: Wasn't DuPont a leader in a "sustainable-business" organization?

**Bilott:** Right. In the 1980s the chemical industry developed a program called Responsible Care. DuPont helped set up the program in order to counter the negative publicity generated by the disaster in Bhopal, India. [A Union Carbide factory accidentally released forty-five tons of methyl isocyanate gas into the air, killing between fifteen and twenty thousand people and injuring more than a half million. — Ed.] It just so happened that information about PFOA having potentially carcinogenic effects was coming to DuPont's attention around the same time.

**Frisch:** You've demonstrated how the legal system can be used to hold a corporation accountable for environmental crimes. Is this approach within the reach of most communities?

Bilott: I'll be the first to tell you, even as a lawyer, that no community should have to go through what we did: spending all of these years, having to bring tens of thousands of people together to give blood and participate in massive health studies, just to be able to counter companies' claims that there was insufficient evidence the chemicals posed a risk.

Look at what it took to actually meet the burden of proof in this case in West Virginia. And PFOA is just one of hundreds — if not thousands — of man-made PFAS compounds that have gotten into our environment, our drinking water, our soil, and our blood. Yet we are still hearing the same argument from these companies: that the exposed people can't prove these chemicals are so toxic, because they don't have enough evidence.

I sent my letter to the EPA back in 2001, and to this day we still lack enforceable federal drinking-water limits for PFOA or PFOS. States are moving forward on their own. And people are still having to resort to lawsuits to try to force these companies to take responsibility for the contamination they've caused. We're fortunate that we at least have legal recourse in the United States, but we shouldn't have to resort to it. Right now the only way folks have gotten clean water and compensation for their cancers has been by going to court.

**Frisch:** It sounds like corporations use the legal system to their advantage to avoid responsibility.

**Bilott:** A lot of folks don't realize who has the burden of proof in a case like this. If you're exposed to a chemical in your drinking water that may cause cancer or other problems, *you're* the one who has to prove in court that the chemical is harmful. The company can sit back and say, "Your evidence isn't good enough. Your study isn't big enough. Your expert isn't credible," or whatever other argument it wants to make. And it's very difficult to bring these

claims to court in the first place.

That's why, through our class-action settlement for the affected communities in West Virginia and Ohio, we asked to have an independent science panel resolve the basic legal question of whether PFOA can cause disease in humans and at what levels. And scientists have thoroughly answered this question, such that the company can no longer dispute it as to these people and litigate it forever. It was one of the few times that has ever happened in a court settlement.

Frisch: Could DuPont still argue that, because people have been exposed to so many other toxic substances, the health damage can't be pinned on PFOA?

**Bilott:** The scientists charged with addressing the PFOA issue also addressed whether other factors could be contributing. They were able to set up some of the most comprehensive human-health studies ever done to address those exact questions.

But we've got a rather unique problem with these PFAS chemicals: It's very difficult to find a clean control group — a human population with no prior exposure — because PFAS chemicals are in all of our bodies. Having such massive, widespread exposure really complicates the issue.

**Frisch:** Let's talk about attempts to limit class-action lawsuits and thus make it harder for people to sue corporations for damages.

Bilott: A number of groups have tried to place additional legal hurdles to prevent cases from proceeding as class actions. The Class Action Fairness Act has made it more difficult to bring such cases in state courts. Many of them are now required to be brought in federal courts, where some say there are more hurdles in place for those trying to bring these types of claims. If anything, our West Virginia case highlights the importance of class actions. The individual value of a claim may not be very high, so if a person had to pursue the claim alone, the cost of the litigation would be more than they would ever recover, and they wouldn't pursue it. Allowing people to group claims together makes it economically viable.

**Frisch:** Did you ever worry that it would be risky to push for an epidemiological study of PFOA? Or was there such a preponderance of evidence this chemical was harmful that you didn't see a downside?

**Bilott:** Frankly we weren't sure how it would play out. We couldn't find any precedent where something like this had been done. But, looking at the documents and the data that we already had from the company itself, the science seemed pretty clear. We expected the study to confirm what we had already seen in the company's files. It was not a given, however.

We had to make sure we were selecting completely independent scientists to do this work, scientists who would not somehow be influenced by one side or the other and whose work would withstand the type of scrutiny it would likely be subjected to. It was stressful for everyone involved.

The science panel ended up confirming probable links between exposure to PFOA in drinking water and six diseases: testicular cancer, kidney cancer, ulcerative colitis, thyroid disease, preeclampsia, and high cholesterol.

It took a lot longer than anybody expected — years — but the result was incredible. The science panel ended up confirming probable links between exposure to pfoa in drinking water and six diseases: testicular cancer, kidney cancer, ulcerative colitis, thyroid disease, preeclampsia, and high cholesterol. The science was done in such an outstanding way that scientific organizations all over the world, including the EPA, have been relying on it. I think everyone involved would probably say it was worth the risk.

DuPont wasn't using PFOA just to make Teflon in West Virginia. The chemical was used at other manufacturing sites as well. And 3M had made it in Minnesota. Some of the waste from West Virginia was being sent to landfills in New Jersey and to other locations across the country. So after people started reading about the settlement in West Virginia, sure enough, sampling started at some of those other places.

The State of Minnesota found PFOA around the plant that made it there. The State of New Jersey started testing for PFOA in the water outside of the DuPont Chambers Works plant there. The same happened in Alabama. And so on.

**Frisch:** What actions has the EPA taken to date to control PFAS chemicals?

**Bilott:** After the study first came out, the EPA finally put PFOA and PFOS on the list of unregulated contaminants



that must be sampled for in larger public drinking-water supplies — typically those that serve more than ten thousand people. That was in 2013.

In January 2016 *The New York Times Magazine* published our story and mentioned that these chemicals were being found in public water supplies across the country. People began demanding that the EPA determine a safe level. A few months later the EPA came out with its first long-term drinking-water guideline for PFOA and PFOS.

But before the EPA could start the process of actually regulating these chemicals, it first needed to determine whether this was a national problem, or one that should be left to the states. That process was slowly grinding away until 2020, when the EPA finally announced that the contamination was widespread enough for the federal agency to act. It's going to move forward with setting a national drinking-water standard, which may take several more years.

I don't know if we've even had a single new drinkingwater standard set in the last twenty years, because of how difficult the process has become. That's why federal legislation is being proposed that would just designate these chemicals as regulated and hazardous under the law, rather than waiting for the regulatory process to play out. And that's why states are setting standards themselves, as opposed to waiting for the federal EPA.

**Frisch:** What makes federal and state environmental-protection agencies so incapable of protecting the environment and human health?

**Bilott:** I think it's incredibly complicated. The EPA has thousands of employees. There are long-term career people there trying their best to do what needs to be done. And then you've got political appointees with decision-making power who come and go with each change of administration. It's also seriously underfunded, with insufficient staff to process all the information coming in about different chemicals.

**Frisch:** There is a growing global movement to recognize the rights of nature, with citizens bringing lawsuits on behalf of bodies of water. What implications might this have for toxic-chemical threats?

Bilott: I'm aware of those concepts being discussed, but I'm not intimately familiar with the laws or litigation about them. I think the basic idea is that there should be a human right to clean water, or that we should have a right to keep our blood free of man-made pollutants. If those rights were recognized, it could provide an additional basis for people to seek relief in court. Currently there are those in the U.S. who say you don't have a right to completely clean water, because the government can give people and companies

the right, through permits, to pollute it.

**Frisch:** Another approach is the precautionary principle, which puts the burden of proof on the chemical manufacturer, rather than on the injured party. The chemical is considered potentially harmful until it's proven safe, rather than the other way around.

Bilott: The precautionary principle has been more widely embraced in Europe. It suggests that you don't have to wait until the hazards are absolutely proven before you do something. An issue came up in our litigation where the other side argued that we shouldn't be allowed even to use the words *precautionary principle* in front of a jury, because it suggests a different legal burden than is required in the U.S., where, they argued, the injured person must prove harm.

**Frisch:** All PFAS chemicals contain the element fluorine. Is the mere presence of fluorine in a product or manufacturing process something that should make us concerned?

Bilott: I have heard a number of scientists say that the presence of that element is a bit of a red flag. These particular chemicals, with their combination of carbon and fluorine, are basically organic fluorine compounds, which almost never occur in nature, so our bodies don't know how to deal with them. We don't eliminate them from our system very well, and they end up in the blood. It is a very troubling situation. PFAS compounds may have some great uses in the manufacturing world, but living beings have a real problem dealing with them.

Frisch: Seventy years after they were introduced, PFAS chemicals are now in the blood of virtually every American — indeed, most of the human population worldwide. How have these chemicals gotten dispersed so widely?

**Bilott:** Unfortunately they tend to move pretty efficiently through the environment. If they emerge from a smokestack, for example, they can travel through the air. I've heard about them being found in polar-bear blood and in arctic ice. They can get into clouds and move around globally. Although PFOA, for example, has been phased out in the U.S., some of these chemicals continue to be made in other countries, like China. And since the pollution can move with clouds and come down in the rain, it can move into the groundwater table. Vegetation can take it up, pulling it out of the soil and the water. So it gets into plants, and from there into other living things. It doesn't go away. It just continues to be cycled through, and humans end up being a sort of repository for a lot of it.

**Frisch:** Once these chemicals get into our drinking water, is there any way to remove them?

**Bilott:** Some filtration systems are very effective at removing certain types of PFAs chemicals from water supplies. In particular, granular, activated-carbon systems can filter out what we call the "long-chain" PFAs chemicals — those that have eight or more carbons, like PFOA or PFOS. But some of the newer replacement PFAs chemicals — short-chain PFAS with six carbons or fewer — aren't captured as

well. For these a different type of water-filtration system, like reverse osmosis, may be required, which is a lot more expensive.

**Frisch:** I understand that tap water can be filtered, but doesn't the water in wells or in a reservoir stay contaminated?

**Bilott:** Yes, typically the filtration system cleans the water before it goes out to municipal customers, or before it comes into the house. It's not actually cleaning up the groundwater. And even if we were able to clean up the groundwater, it would likely continue to become contaminated. In Little Hocking, Ohio, for example, a massive amount of PFOA was emitted into the air over the years. It fell on the ground and seeped into the soil. So even if you could clean up the groundwater, the soil is still a continuing source of contamination.

**Frisch:** It seems that once these "forever" PFAS chemicals enter the environment, we're screwed.

**Bilott:** Right. And that's why a lot of folks are trying to make sure that, at a minimum, we stop any further releases of these materials.

**Frisch:** Under immense pressure — a lot of it stemming from the publicity your work has generated — DuPont stopped producing and using PFOA in 2013. That sounds like a significant advance, but you're suggesting that it won't solve the problem.

**Bilott:** In 2006, through an EPA program, DuPont committed to stop manufacturing PFOA in the U.S. by 2015, but a DuPont spin-off called Chemours continues to produce those short-chain PFAS chemicals I just mentioned, which can generate PFOA in the environment. This is the subject of a lot of current investigation and litigation.

Beginning in 2009 DuPont started shifting from PFOA to a new chemical manufactured in Fayetteville, North Carolina. They refer to this replacement chemical as "GenX." It's used just as PFOA was. GenX goes up the smokestacks and gets discharged into the river. So basically the cycle continues with a slightly different chemical.

In 2015 DuPont spun off its entire chemical division — the one that makes GenX — into this new company called Chemours. Then DuPont claimed it was Chemours that had all liabilities associated with PFAs. But analysts and commentators said Chemours had been created with insufficient assets to handle all of those liabilities. Chemours ended up suing DuPont, arguing that it had been set up to take the fall. The dispute was eventually settled, with the two companies sitting down and figuring out which would pay what part of the first \$4 billion in PFAs liabilities going forward.

**Frisch:** There's a Maine dairy farm that can no longer sell its cows' milk or crops due to high levels of PFAS chemicals. The source of the contamination was a 1980s state program that promoted the use of sewage sludge as agricultural fertilizer. What should be done about this?

**Bilott:** This is another issue the general public believes has just been discovered, but the concern about PFAS

There are those in the U.S. who say you don't have a right to completely clean water, because the government can give people and companies the right, through permits, to pollute it.

chemicals in biosludge or biosolids [sewage sludge] dates back well over a decade. The federal EPA looked into this issue down in Alabama as early as 2008, where wastewater biosludge had been given to farmers and spread on fields. There was great concern that it would not only potentially contaminate drinking water but also get into the soil that the farmers were using to grow feed for beef cattle. Yet not much was done to educate and alert people about the issue.

**Frisch:** In 2020 I talked to the environmental scientist in charge of my state's sewage-sludge program. She was looking forward to being able to test for PFAs chemicals in sewage sludge *starting* in 2021. Later she said there wasn't funding to do the testing last year.

**Bilott:** I suspect you would find the same situation all over the country. A lot of water supplies are not yet tested for PFAS chemicals. It's expensive, and, the municipalities will argue, "There's no regulatory standard, so what would we do with that data?"

Frisch: In Maine, which now regulates PFAS chemicals in sewage sludge, forty-four samples of sludge that was to be spread on farmland were recently tested. Almost all had PFAS chemicals at levels above the state safety threshold, which some environmental groups say is ten times higher than it should be. So most people's exposure to PFAS chemicals doesn't come from direct industrial releases. It comes from ingesting food.

**Bilott:** It comes from a wide variety of sources. There could be downstream users of this material who dispose of it in landfills or send it to wastewater-treatment systems

without even knowing they've been using the chemicals. Since they are unregulated, they may not even be listed on Material Safety Data Sheets or in product information. Also the materials have been used in many different consumer products, like fast-food wrappers and packaging and stain-resistant carpeting. But if you're in a community with contaminated drinking water, that is likely to be your primary source of exposure.

**Frisch:** I was alarmed to find that even hand sanitizers may contain PFAs chemicals.

**Bilott:** People are only now starting to understand the full scope of the product range. It's not easy to find out where these chemicals were used because, again, they often weren't listed on labels. There are groups out there trying to make that information available to the public. The manufacturers of the chemicals have withheld pertinent information as "confidential." So it's difficult to know whether or not you're exposing yourself to PFAS chemicals through a certain product.

Some companies are making it known that they are switching away from all PFAS chemicals, so people do have some choice.

**Frisch:** What should justice for people harmed by these types of environmental crimes look like?

**Bilott:** I hope it looks like what you saw at the end of *Dark Waters*, where people obtain access to clean water and get compensated for their injuries, and states and municipalities are able to get reimbursed for the multimillion-dollar costs of water treatment and sampling and monitoring equipment. Those costs should be paid for by the companies that actually caused the problem, that knew this would happen, and that treated people like guinea pigs.

Frisch: We also need to rebalance the warped set of incentives and penalties that exist, so that this doesn't happen again and again.

**Bilott:** Right. There's got to be a sufficient deterrent, so that it doesn't make good business sense to do what DuPont did.

We have more than enough information to take action on all PFAS compounds based on what we know about PFOA. That information should be used in a precautionary way to evaluate chemicals that are similar in structure and toxicity. We shouldn't be waiting for more people to get cancer and die before we take appropriate action to address the problem.

**Frisch:** What do you say to people who find this information too overwhelming?

**Bilott:** It can be overwhelming, but if you step back and look at this particular story of Earl Tennant, it can be inspiring. A farmer in a small community in West Virginia was able to take on DuPont, and we got the information out, and laws are being changed. Rules are being changed. Products are being changed. The public is becoming aware of something we weren't aware of before. So we can make a difference.