

D I A L O G U E

# Setting the Bar for “Injury” in Environmental Exposure Cases: How Low Can It Go?

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## Summary

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On May 16, 2012, ELI convened a panel of experts to provide an overview and analysis of the tension between regulatory and common-law standards for injury in the context of toxic tort litigation. The speakers discussed and debated emerging trends in toxic tort litigation, including claims for property damage or medical monitoring regarding exposure to environmental contamination that never exceeds applicable regulatory standards. The panel also analyzed recent court opinions on the bounds of “injury” in environmental contamination cases and the potential for plaintiffs to recover damages based upon relatively low concentrations of chemicals. Issues explored by the panel included so-called single molecule theories of toxicological harm, the admissibility of expert testimony in support of such theories, and related federal or constitutional law theories, such as preemption, separation of powers and equal protection.

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### Speakers:

**John C. Cruden**, President, Environmental Law Institute (moderator)

**Carla Burke**, Shareholder, Baron & Budd, P.C.

**John Guttmann**, Shareholder, Beveridge & Diamond, P.C.

**Robert V. Percival**, Professor of Law & Director, Environmental Law Program, University of Maryland Carey School of Law

**John Cruden:** Without question, in the last few years of the [U.S.] Supreme Court practice, the most significant decision was decided just last June. It was the *American Electric Power (AEP)*<sup>1</sup> case, which dealt with the issue of whether or not a group of states and others could sue power plants for greenhouse gas (GHG) issues. It came up as a procedural challenge, because it had been allowed in the [U.S. Court of Appeals for the] Second Circuit in an inter-

esting way, by just two judges, because the third judge on that panel had been then-Judge Sonia Sotomayor before she was elevated to the Supreme Court. Justice Sotomayor recused herself, making it an eight-person Supreme Court listening to what had been a case before two judges out of the Second Circuit. As all of you know, the Supreme Court decided that that case could not go forward, but that is not what I’m going to focus on.

I want you to concentrate a bit on the language by the author of this opinion, Justice [Ruth Bader] Ginsburg, who says this about federal common law: “As we all learned in law school, there is no federal common law,” and then cites probably one of the most influential law review articles of all time by Judge [Henry] Friendly.<sup>2</sup>

She says:

Erie left to the states what ought to be left to them and thus required federal courts to follow state decisions on matters of substantive law appropriately cognizable by the states. The new federal law addresses subjects within national legislative power where Congress has so directed or where the basic scheme of the [U.S.] Constitution so demands.

Here, citing the *Milwaukee P*<sup>3</sup> case, “When we deal with air and water in their ambient or interstate aspects, there is a federal common law.” And then later on goes on to say: “And we have recognized that public nuisance law, like common law generally, adapts to changing scientific and factual circumstances.”

Without question, the Supreme Court did not allow that challenge to go forward. That language is expressive and broad in terms of what a federal common law may or could be. There were things that were not really decided by the Supreme Court in *AEP*, very specifically the role of states, whether or not state common law would in fact not be so much preempted as set aside.

Right now, pending before the [U.S. Court of Appeals for the] Ninth Circuit is a case that raises some of those issues, *Village of Kivalina*.<sup>4</sup> In *AEP*, the parties were actually seeking what we would all call injunctive relief to actually put a cap on carbon emissions by those emitting

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1. *American Electric Power (AEP) v. Connecticut*, 131 S. Ct. 2527, 41 ELR 20210 (2011).

2. Henry J. Friendly, *In Praise of Erie—And of the New Federal Common Law*, 39 N.Y.U. L. Rev. 383 (1964).

3. *Illinois v. Milwaukee*, 406 U.S. 91, 2 ELR 20201 (1972).

4. *Native Village of Kivalina v. Exxonmobil Corp.*, 663 F. Supp. 2d 863, 877-80, 39 ELR 236 (N.D. Cal. 2009).

sources. Not true in the *City* case. It's a money case that is fundamentally different.

Kivalina is an Eskimo village of approximately 400 people located on the tip of a six-mile barrier reef on the northwest coast of Alaska, about 70 miles north of the Arctic Circle. Both the [U.S. Army] Corps of Engineers and the [U.S.] Government Accountability Office (GAO) have both stated that the residents need to move because they're protected from weather and high storm events by the Arctic ice, and the Arctic ice is in fact evaporating allegedly due to GHGs, and moving costs money. So, the city and tribe sued to get the people that they say contributed to the problem that we now have under common law, and they want money damages. It's been argued to the Ninth Circuit and we're waiting for a decision now.

Let me turn to the people who are going to talk to you about this interesting intersection between common-law issues and regulatory issues.

Prof. Bob Percival of the University of Maryland is a recognized expert in environmental issues, one of the leading scholars of the nation on environmental law. He joined the Maryland faculty in 1987 after having been a senior litigator for the Environmental Defense Fund. He currently teaches environmental law, a global environmental law seminar, constitutional law, and administrative law. In 2007, he was named the University's Teacher of the Year.

Carla Burke is one of the leaders of Baron & Budd's water contamination litigation group. She's been actively involved in the MTBE [methyl tertiary butyl ether] multidistrict litigation cases. She's authored numerous papers and presentations on the topics of toxic tort and water contamination litigation and liability law.

John Guttman is a principal at Beveridge & Diamond. He is well-known as one of the leading litigators of the nation in this area. His practice is devoted to both trial and appellate litigation in commercial, securities, and environmental cases. He served as lead counsel for clients in numerous cases under virtually every federal [environmental] statute. He's litigated many of them to conclusion. He's litigated cases before DOI's [U.S. Department of the Interior's] Board of Land Appeals. He, too, has been involved in MTBE product liability case and is a member of the defense steering committee for the refining industry in those cases.

## I. The Common Law of Environmental Torts

**Robert Percival:** I would like to begin by discussing a bit about the history of the common law of environmental torts. Most of our regulatory statutes are fairly recent in origin, being implemented only within the last 40 years, and people often forget that we have a long Anglo-American tradition of common-law tort litigation involving environmental issues that extends back over 400 years. The early cases all involved situations in which there existed a large, single source of pollution that was causing vis-

ible environmental harm. Nonetheless, these cases helped establish some of the bedrock principles of the common law that govern today.

*Aldred's Case*<sup>5</sup> in 1611 in England was the first time a British court recognized that even a non-trespassory invasion of property could be actionable if it interfered with someone's quiet use and enjoyment of land; in that case, a pig sty. The principle that you had the right to use your property as you please, but you had a responsibility to ensure that you didn't cause significant harm to others, was established by the British courts early in the 18th century.

In 1862, in *Bamford v. Turnley*,<sup>6</sup> the British court said that it was not a requirement to prove preexisting violations of regulatory standards in order to establish tort liability. Therefore, even if one was in compliance with existing regulations, you could still be held liable if you were doing something that caused significant harm to another.

In the early 20th century, there were intense disputes between states over interstate pollution that were heard by the Supreme Court exercising its original jurisdiction. The first of these was *Missouri v. Illinois*<sup>7</sup> in 1906, a case involving whether or not Chicago should be stopped from dumping its raw sewage in a new drainage canal that would take it to the Mississippi River, the source of drinking water for St. Louis. At the beginning of his opinion for the Court, Justice Oliver Wendell Holmes noted that if this suit had been brought 50 years ago, it almost necessarily would have failed, due to an absence of visible harm. However, he observed that the germ theory of disease recently had come to be accepted, improving society's understanding of environmental causes of harm. Missouri failed to convince the Court that the dumping of sewage by Chicago had caused it harm, but a year later, Georgia won an injunction from the Court to slash emissions from a smelter in Tennessee that can destroy all vegetation over a wide area.<sup>8</sup>

Today, though, environmental torts face what I have called in some of my academic writings the "causation conundrum." We no longer live in a world where single, large sources of pollution, such as some of the old smelters, cause so much highly visible harm that it is easy to prove causation. Instead, we are now awash in a sea of low-level exposures to multiple pollutants from multiple sources. Thus, it is extremely difficult to prove that it is more probable than not that one particular source caused a particular harm. An exception to this situation are cases of asbestos exposure where the chemical is uniquely related to some sort of signature injury, i.e., mesothelioma and asbestosis. But in the absence of exposure to chemicals that cause signature injury, proof of causation can be very difficult in environmental tort cases.

In recent years, there have been some efforts to relax traditional causation doctrines in order to cope with this problem, particularly in situations where people have been

5. Aldred's Case, 9 Co. Rep. 57 b, 77 Eng. Rep. 816 (1610).

6. Bamford v. Turnley, 3 B & S. 67, 122 Eng. Rep. 27 (Exch. Ch. 1862).

7. Missouri v. Illinois, 202 U.S. 598 (1906).

8. Georgia v. Tennessee Copper Co., 206 U.S. 230 (1907).

exposed to a toxic chemical that is likely to, in a probabilistic fashion, cause harm to some of them, although we cannot tell specifically which of them.

In 1980, when [the U.S.] Congress adopted the Superfund legislation, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA),<sup>9</sup> the word *compensation* was in the statute because it was anticipated that the law would include a program for administrative compensation of those exposed to toxins due to their proximity to polluted landfills. On a close vote, however, Congress eliminated this from the program, fearful that it would open up the floodgates too much due to the difficulty of determining who should be compensated. Instead, CERCLA focused on relaxing causation standards in determining who can be held liable for the cost of environmental cleanups.

During the 1950s and early 1960s, the United States was involved in a nuclear arms race with the Soviet Union. In some years, the U.S. government tested an average of one nuclear weapon per week in the atmosphere at the Nevada test range. Mushroom clouds from these explosions were visible from casinos in Las Vegas. As a result, people who lived near the Nevada test range were exposed to dangerous levels of radiation. Decades later, people with diseases that can be caused by radiation exposure brought suit. A creative federal district judge in Utah decided that in the circumstances, normal standards for proof of causation could be relaxed somewhat. He held that if individuals could prove that they were exposed to significant amounts of radiation from the testing and that they suffered certain types of diseases capable of being caused by radiation exposure, then the burden would shift to the government to prove that it had not caused the harm. Unfortunately, that decision, *Allen v. United States*,<sup>10</sup> was reversed by the [U.S. Court of Appeals for the] Tenth Circuit on other grounds—that the government was exempt from liability because of the discretionary function exemption to tort liability under the Federal Tort Claims Act.

In recent years, a number of other countries have tried to deal with the problem of proving causation in environmental tort cases by shifting the burden of proving causal injury. The Chinese Code of Civil Procedure shifts the burden of proof to polluters to disprove causation in certain circumstances.<sup>11</sup> Once plaintiffs demonstrate that they have suffered harm associated with exposure to envi-

ronmental pollutants, Chinese law authorizes shifting the burden to defendants to disprove that their discharges of those pollutants caused the harm. In April 2009, China's Supreme People's Court awarded damages against a textile mill for harm to a fish farm that occurred in 1994 because the textile mill could not disprove that its discharges were the source of the harm.<sup>12</sup> Notice, however, that it also takes the Chinese legal system a long time to resolve those cases.

In the aftermath of the Minamata tragedy, where mercury dumped into the harbor of a small fishing village from 1932 to 1968 caused widespread birth defects in children, Japan has adopted a number of innovative measures for compensating victims of environmental harm without having to prove individualized causation.

In 1969, Japan adopted the Law Concerning Special Measures for the Relief of Pollution-Related Health Damage.<sup>13</sup> This legislation designated certain highly polluted geographic areas and mandated that the government provide health benefits to residents certified as having pollution-induced health damage. Later, Japan adopted the Pollution-Related Health Damage Compensation Law<sup>14</sup> that refined this program of using geographic-based certifications for determining who was eligible to recover. Even though Japan has cut back on those compensation programs, the recent Tokyo air pollution lawsuits resulted in a very large ¥1.2 billion settlement in a lawsuit against city governments and the local automobile manufacturers for smog that harmed people living in the vicinity of the expressway.<sup>15</sup>

Creative efforts are being made to construct a settlement for damage claims from the 2010 Deepwater Horizon oil spill. The settlement uses geography-based presumptions to deal with this issue of how far to cast the net of compensation. The settlement does some very creative things that can be viewed on the website, [www.deepwaterhorizonsettlements.com](http://www.deepwaterhorizonsettlements.com).<sup>16</sup>

There are separate programs for economic and property damages and for medical benefits where causation is essentially presumed if you live in certain areas that were heavily polluted by the spill. These zones can be viewed by going to the website and clicking on these maps under the "Settlement Agreements" tab. An individual who falls into certain categories of people who claim to have suffered injury does not have to prove individualized causation in order to be eligible to file claims under the settlement.

9. 42 U.S.C. §§9601-9675, ELR STAT. CERCLA §§101-405.

10. *Allen v. United States*, 588 F. Supp. 247 (D. Utah 1984), *rev'd*, 816 F.2d 1417 (10th Cir. 1988).

11. See Some Provisions of the Supreme People's Court on Evidence in Civil Procedures, art. 4 (promulgated by the Judicial Committee of the Sup. People's Ct., Dec. 6, 2001, effective Apr. 1, 2002). Burden-shifting provisions also are contained in Article 86 of China's Solid Waste Pollution Control Law and Article 87 of its Water Pollution Control Law. See Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes, art. 86 (promulgated by the Standing Comm. Nat'l People's Cong., Dec. 29, 2004, effective Apr. 1, 2005); Law of the People's Republic of China on the Prevention and Control of Water Pollution, art. 87 (promulgated by the Standing Comm. Nat'l People's Cong., Feb. 28, 2008, effective June 1, 2008).

12. See Zhang Changjian et al. v. Rongping Chemical Plant (on file with author). This case is discussed in Robert Percival, *Liability for Environmental Harm and Emerging Global Environmental Law*, 25 MD. J. INT'L L. 37 (2010).

13. Law Concerning Special Measures for the Relief of Pollution-Related Health Damage, Law No. 90 of 1969 (Japan).

14. Pollution-Related Health Damage Compensation Law, Law No. 111 of 1973 (Japan).

15. The Tokyo Air Pollution Lawsuit, 1885 HANJI 23 (Tokyo D. Ct., Oct. 29, 2002). Eri Osaka, *Reevaluating the Role of the Tort Liability System in Japan*, 26 ARIZ. J. INT'L & COMP. L. 393, 421 (2009).

16. Deepwater Horizon: Court-Supervised Settlement Program, <http://www.deepwaterhorizonsettlements.com>.

There also is an authorization of a risk transfer premium to cover possible future losses, inconvenience, aggravation, and emotional distress. If you are in the tourism industry, for example, you can recover 2.5 times your demonstrated injuries; seafood processors, three times; and fishing boat owners, 8.75 times.

For claims of medical harm, there are presumptions favoring those who worked on the cleanup between April 2010 and April 2012, as well as for those who resided in certain specified beachfront areas who have specified physical conditions that arose prior to September 30, 2010, or December 31, 2010. There are also provisions for people who do not manifest these medical harms until later.

It seems that around the world law is getting more creative when determining how best to deal with this issue of overcoming the causation conundrum. Legal systems are adapting, due to the increasing recognition that environmental torts defy the traditional civil litigation paradigm of A strikes B, where it is clear that there exists a single tortfeasor and a single victim, allowing one to easily assess what harm was done. Some have argued that the climate change litigation to which John referred is going to have a major impact on influencing the development of tort law in the future. Given the vast array of sources of GHGs, and the diffuse nature of the harm from climate change, these cases certainly challenge the traditional "A struck B" paradigm of civil litigation.

*American Electric Power*<sup>17</sup> confirms one of the essential lessons that we should bear in mind: the tort system serves as an essential backstop when the regulatory system fails to prevent environmental harm. In *American Electric Power*, the Court dismissed the suit because the [U.S.] Environmental Protection Agency (EPA) successfully asserted its ability to regulate the source of climate change, GHG emissions, under the Clean Air Act (CAA).<sup>18</sup> If this authority is repealed by Congress in the future, these suits presumably would no longer be preempted, and the centuries-old backstop of environmental tort litigation would be restored. Thank you.

## II. A Plaintiff Perspective

**Carla Burke:** Hello, everyone. I am Carla Burke. I'm a plaintiff's attorney, so I appreciate being welcomed here. We're not welcomed everywhere. This is actually a really good panel for these issues. Mr. Guttman and I have been litigating against each other in MTBE cases for about seven years, so we have fought out some of these things before, and we're happy to talk about them from both sides today.

So, let me tell you who I am and what I do, so you will understand my perspective on a couple of topics. Most of my work every day is in representing public drinking water providers all across the United States, except for Texas, which is my home state. We don't do environmental litigation

in Texas. We rely on regulators to do that in Texas. We can spend all day on that. Anyway, public drinking water providers who have some kind of chemical contamination in their drinking water supply. That chemical can be anything. We'll talk about MTBE in a minute. It can be a pesticide or an herbicide or some kind of industrial, chemical, or solvent.

They find some chemical in their water supply and they call us, and what we try to do for them is to recover money, so that they can remove that chemical from their water before they serve it to the residents, so pretty straightforward. We tend to do that in common-law claims, and to us, it seems very easy. It's a property damage case. You've interfered with our right to provide water, and we file a lawsuit. It's not really that easy though. I'm going to use MTBE as the example here.

We represented in an MDL, which is a multidistrict litigation. MDL, for the non-lawyers, is a consolidation of similar lawsuits from anywhere in the United States. So, right now, there has been an MDL court established in the Southern District of New York under Judge Shira Scheindlin. She has had these cases since, I think, 2003, 2004. So, any case that is filed in the United States that alleges similar harm, similar case against the same defendant could be removed to federal court. And if it's removed to federal court from state court, it would be transferred to Judge Scheindlin's court.

The goals are, of course, effective litigation, efficient use of resources, etc. From a plaintiff's perspective and probably from a defendant's perspective, there are risks to that: both sides risk having one judge who does not agree with your side. So, now all of your cases are consolidated in front of one judge who doesn't buy your arguments and opinions. That's very risky. Maybe it's better to have 12 different state court judges, each of whom has a different opinion.

Anyway, we've been in front of Judge Scheindlin, so when we talk about MTBE, we're really talking about one judge's opinion of the case. She has published dozens of opinions. If you look them up on Westlaw or Lexis, you'll find them. But it's important to remember that this is not a consensus of opinions from across the nation; it is just Judge Scheindlin. Now, she's a very thorough, analytic, and careful judge, and very, very smart, so we're confident that she reaches the right results, but it's something to keep in mind.

MTBE is a gasoline additive. It was intended to increase the oxygen content of gasoline and to reduce vehicle emissions, and it was blended into gasoline by refiners as lead was phased out. So, starting in the late 1970s, early 1980s, MTBE was blended into gasoline. Almost immediately, people started reporting groundwater contamination. MTBE was turning up in drinking water, wherever it was used. There are many reasons for that. We don't need to discuss all the possibilities of tanks leaking and et cetera, et cetera, but just know that there are a lot of ways that MTBE can get into the environment.

17. *American Electric Power Co. v. Connecticut*, 131 S. Ct. 2527, 41 ELR 20210 (2011).

18. 42 U.S.C. §§7401-7671q, ELR STAT. CAA §§101-618.

So, water providers across the country started dealing with this MTBE issue. What is it? Why is it making our water smell funny and taste bad? How can we get rid of it? What we did in the cases is a little different from, I think, what most people think of as an environmental approach. We did not look for nearby gasoline stations that had leaking tanks. We looked at the manufacturers of MTBE and the manufacturers of gasoline containing MTBE, i.e., refiners in the United States. We said when you chose to sell that product, when you chose to blend MTBE into gasoline and to sell gasoline containing MTBE, you sold a defective product. You knew about its risks to the environment and you didn't warn about the risks. You didn't use a safer alternative. That's a pretty straightforward common-law claim in every state.

So, we planted ourselves in common-law territory and didn't expect the regulatory aspect to come into play. Enter my colleagues on the other side of the bar who raised a creative defense, which was to look at the water quality regulations in each state. The argument goes like this. I don't want to spoil it too much, but I can give the broad lines. If the level of MTBE in the water—in the drinking water—is below the maximum that is allowed by federal or state regulation, then the water provider can continue legally to serve that water to the public. If the water provider can continue to legally serve the water to the public, the water provider is not harmed by the presence of MTBE.

Now, our response to that was that those two don't fit together. That water quality regulations govern a water provider's conduct in providing water to the public. Water quality regulations do not address a third party's conduct. They do not speak to a polluter's conduct. They do not address a manufacturer's duty not to sell a defective product. To us, it was apples and paperclips. It just didn't add up.

And instead of using a standard, as a bright-line measure for when a plaintiff, a water provider, was injured, we said a court should not just adopt this as a bright-line measure. A court should conduct a factual inquiry and should look at how the water provider is affected by the level of chemical in the water, no matter what the level is. Are they affected by the amount of MTBE below the regulatory level? That has been our model, and those are the arguments that we make in every single one of our cases, whether it's MTBE; it could be atrazine, which is a case I've been litigating now for several years. Atrazine is an herbicide, a weed killer that is used in agricultural areas. It could be PCE used for dry cleaning. This issue has come up in every single one of those cases.

Also, in every one of those cases, we have one on that issue on getting the court to refuse to adopt it as a measure of injury per se, and to look at how the water provider was actually affected. So, courts have been pretty receptive to that argument, and I think there are reasons that courts are more receptive.

You can look, by the way, at Judge Scheindlin's opinion out of the MTBE MDL. She looks at all of the previous cases around the country. She was trying to look for pre-

cedent for how does this come out, because there are not cases out there that have a products liability action in an environmental context with the presence of a regulation. There really aren't those kinds of cases out there. Judge Scheindlin looked at every possible case and kind of pulled principles from different areas of the law. So, her opinion does a pretty good job of setting up a landscape in drawing her own conclusions.

One of the things that is persuasive to courts is evidence that we show of how the water provider actually does respond to the level of chemical that is below the regulatory limit. Certainly, water providers use the regulatory limit, I guess, as an outer edge for what is acceptable to them. What they want to avoid more than anything is to reach that level or exceed it, but they cannot operate just below it. They have to build in a level of sort of a safety level for this sort of buffer. So, they may have an internal policy that they take action when the level of chemical reaches one-half the MCL.

So, if we can show the court that this particular water provider takes an action at a lower than MCL level, maybe changes water supply or uses an available treatment technology or even provides bottled water, whatever the case may be, judges seem to find that persuasive.

They also find persuasive evidence of scientific disagreement about the health effects of that chemical at different levels of concentration or different types of exposure. There are not a lot of studies that look at health effects of low-level chronic ingestion of chemicals, which is what drinking water, when you think about it, what drinking water is. It's not an accident where there is a high level of exposure to something. It's a little bit of chemical all day long as you drink your water. So, there are many questions and a lot of debate about various chemicals.

I mentioned atrazine earlier. Right now, atrazine is sort of a hot topic on the regulatory side. EPA is looking very closely at atrazine. The primary manufacturer of the active ingredient atrazine is Syngenta. Syngenta has been diligent in defending its product and in performing lots of scientific studies that are published everywhere showing how safe its product is. At the same time, there are independent scientific experts looking at atrazine and reaching opposite conclusions and saying not only is atrazine not safe, it's not safe at any level, and it's an endocrine disruptor. So, it doesn't follow the traditional dose-response curve that we're all used to. It follows an entirely different pattern. In fact, low levels of atrazine are much more dangerous than high levels of atrazine. So, if you put all of that type of information before a court, a judge is likely to understand that it's reasonable for that water provider to want to take an action at a level below the regulatory limit.

The third thing that courts tend to find persuasive is if we have evidence of a political battle over a chemical, then they could see that health is not the sole motivating factor in arriving at this level. That has been pretty persuasive in the case of atrazine, certainly. So, those are the types of evidence that courts tend to really see as persuasive, and

that is considered, I think, compellingly against the backdrop of considerations of preemption and concerns about the role of regulation and the role of the tort system.

So, the Supreme Court said in response, okay, look. The FDA [Food and Drug Administration] is a little out-manned here. There are 11,000 drugs out there. The FDA has limited resources, and it's the manufacturers of these drugs who have superior knowledge about the effects of the drugs, the potential risks associated, the dangers of the drugs. And there was not an attempt by FDA to become an expert on every drug, nor was there an attempt by FDA to fully occupy the field and preempt the states from taking their own action. I mean, I can directly analogize that to the Safe Drinking Water Act (SDWA),<sup>19</sup> which is the regulation at issue in all of our cases. The SDWA expressly states that states may impose more stringent standards if they choose.

You see that with California in particular. It tends to have slightly lower MCLs or maximum contaminant levels for chemicals than EPA. It's easier to do on a state-by-state basis, I would imagine, and there are different political forces at play. But the Supreme Court recognized that the Food and Drug Act gives consumers some minimal protection, but the state tort system could maximize protections if they wanted to. Through the tort system, we could discover more about the health risk of drugs, etc.

### III. A Defense Perspective

**John Guttman:** Well, thank you everyone for coming today, and I appreciate the opportunity to be on this great panel talking about these interesting topics. But the first thing I want to say is this: Carla indicated that we've been kind of locking horns on these issues for a long, long time—she and I and our two firms—in MTBE and also in some other contexts outside of MTBE, including PCE [perchloroethylene], for example. But a lot of it, as she said, is in front of Judge Scheindlin in the [U.S. District Court for the] Southern District [of New York].

I just want to say in this public place on the record today that I completely agree with my colleague here that Judge Scheindlin is thoughtful and careful and deserving of the utmost respect, even when I disagree with her, so let that be noted. Let it also be noted, by the way, that some of the rulings that Carla mentioned are in the Second Circuit at the moment subject to review, but I'm not going to go there. What I'd like to do is start with sort of a hypothetical. Bear with me, because it's not really a concrete, factual hypothetical, but just to kind of provide a little context, because I'm going to respond to some of the things that both Bob and Carla said and also talk about a few other issues. But anyway, here's the kind of scenario I think we live with today.

Science today is—as it always is—constantly improving. One of the results of that is that there is an increasing ability all the time to detect chemicals at lower levels in the

environment, whether we're talking about air, water, where we are in litigation all the time together, or soil contamination. Chemicals can be found at levels way below regulatory standards. So, that's really a key aspect, I think, of what we're talking about today, is that the science is getting better and better at this.

We have plaintiffs who argue, as Carla just indicated, I think, that sometimes there is no safe level of exposure. In some contexts, a single dose, a single molecule can be enough from a plaintiff's perspective to raise a risk or cause an injury. Sometimes, these cases arise in the absence of direct evidence that the chemical was in a plaintiff's body in a personal injury case. What the plaintiff alleges is that the circumstances show that it would be in my body.<sup>20</sup> I'll come back to that in a second.

What it really means is that the plaintiff says the chemical has to be in my body because of the frequency and regularity of my exposure and my proximity to the source, if it's an air or water issue. I drink the water all the time. And plaintiffs' experts will argue that even in the absence of the direct evidence that you can find from medical tests, the exposure is there, the alteration of the body is there. That equals an injury or, depending on state law, it equals an increased risk. Therefore, plaintiff says, I'm entitled to damages for present personal injury, for emotional distress, for fear of cancer—conceptually that can be different from other forms of emotional distress—for medical monitoring. I'll talk about the water providers in a minute in terms of their injuries.

But I wanted to say one other thing, just kind of as a backdrop in setting the table. There are cases going both ways, as Carla suggested, on this issue of whether contamination in the environment that is below a regulatory level, be it an MCL in water, which in many cases are established at the state level as she noted, or some other federal standard or a guideline. There are cases going both ways on the question of whether or not the contamination below those levels can constitute an injury. I think, given the time issues, enough said. If anybody is interested, we can talk about specific cases later, or I'll be happy to send you summaries of them. But they go both ways on that.<sup>21</sup>

20. *National Bank of Commerce v. Associated Milk Producers*, 22 F. Supp. 2d 942, 946 (E.D. Ark. 1998) (aflatoxin, occupational exposure); *Merry v. Westinghouse*, 684 F. Supp. 847, 851, 18 ELR 21218 (M.D. Pa. 1988) (PCBs, drinking water); *Peteet v. Dow Chemical Co.*, 868 F.2d 1428, 1433 (5th Cir. 1989) (herbicide, occupational exposure).

21. *In re MTBE Products Liability Litig.*, 458 F. Supp. 2d 149, 158 (S.D.N.Y. 2006) (“While the MCL may serve as a convenient guidepost in determining that a particular level of contamination has likely caused an injury, the MCL does not define whether an injury has occurred.”); *Adams v. A.J. Ballard Jr. Tire & Oil Co. Inc.*, Nos. 01-CVS-1271, 03-CVS-912, 03-CVS-1124, 2006 WL 1875965, at \*3 (Sup. Ct. N.C. June 30, 2006) (“[U]nless each Plaintiff [must] establish the existence of concentrations of MTBE or other contaminants sufficient to violate the state groundwater quality standards, they do not have standing to pursue their claims at trial and their claims must be dismissed.”); *Bentley v. Honeywell Int'l, Inc.*, 223 F.R.D. 471, 478 n.11 (S.D. Ohio 2004) (“Regardless of whether the municipal water supply has been deemed safe by the Ohio EPA and/or determined to be below the federal and state established maximum contaminant levels (MCL), the [plaintiffs] still may have suffered diminution in their property values . . . .”); *In re Wildewood Litig.*, 52 F.3d 499, 503 (4th Cir. 1995)

19. 42 U.S.C. §§300f to 300j-26, ELR STAT. SDWA §§1401-1465.

The other thing I was going to say at this point is it's important to remember that there's a distinction between regulatory standards and a tort plaintiff's burden of proof, regardless of who the plaintiff is. And I'll come to different categories of plaintiffs momentarily. By and large, there are differences in statutory language, differences in legislative preambles, all that sort of thing, differences in statements in the *Federal Register*. But as a general proposition, regulatory standards are established as prophylactic rules to protect public health, which is a different question from whether injury has been caused to a specific plaintiff in a specific case. Bob was describing a situation abroad where things may be shifting a little bit. But in tort litigation, it's important to remember that, in the United States, it's incumbent upon the plaintiff in a particular case to establish injury.

So, let me turn to the defense perspective on a lot of these questions. It's important to recognize, as Carla noted, these are state law issues, by and large. In some states, talking just about the personal injuries, for example, in some states, you have to have a present physical injury to be entitled to medical monitoring. There are other states where you don't have to have an illness, but where exposure and the presence of the chemical in the body or maybe just exposure, even without an illness, might provide a basis for a medical monitoring claim. In terms of how courts view these claims, it may depend on the type of plaintiff you're dealing with. It also may be influenced by the type of claim, the legal theory involved. And it most definitely will be influenced by the type of injury that's alleged.

So, let me just take a moment and review them and explain what I'm suggesting. There are a variety of categories of plaintiffs who can raise an environmental tort claim. One, Carla and I deal with it on a day-to-day basis, is the water providers.<sup>22</sup> The water providers say the contamination is in the water we pull out of our wells. That's an injury to us because we've got to treat it. Judge Scheindlin has said that the MCL does not define whether a water provider has suffered an injury.<sup>23</sup> Carla has laid out, I think quite nicely, why that is in Judge Scheindlin's view, because the water provider sees a need potentially to treat—to test and treat—at lower levels of contamination. So, she has said in her decision that the MCL may be a guideline, but it's not a bright line.

But a second category of plaintiffs would be private-property owners, private well owners in particular if we're talking about water. Judge Scheindlin said in her decision that the MCL may have more relevance in that context than it does in the context of a water provider, because an MCL is established to provide a margin of safety from a health point of view.<sup>24</sup> We could debate that one all day long, and I don't mean to go into it. I simply want to

make the point that a private well owner actually stands in a different position than that public water provider. It may influence how courts view these issues. States can be plaintiffs in these cases, and that's a significant factor as well, because if the state steps forward exercising its *parens patriae* rights to protect water, for example, it will be viewed very differently by any court than either a water provider or a private plaintiff.

The claims, I think, have been laid out, so I'm not going to spend any time on them other than to say negligence, maybe product liability as with MTBE, nuisance, trespass, possibly strict liability for ultrahazardous activities depending on what we're talking about, statutory claims for consumer protection, and the like. But the key thing I want to spend just a moment on is the types of injuries, because I think that really is the critical issue that ties back to the type of plaintiff.

We can have property damage claims. That's what the public water provider is bringing. And the issue is, has there been causation of an injury to that water provider? And we've talked about Judge Scheindlin's ruling on that. So, that involves cost of water treatment and remediation. Those costs, though, can also be brought, be incurred, and part of the claim for damages by the private well owner plaintiff. Personal injury is obviously there with those private well owners or property owners if they're claiming soil contamination.<sup>25</sup> There's dioxin sediments in my backyard, would be an example.

Medical monitoring, I mentioned already. Sometimes, you have to have a physical injury, sometimes you don't. It's a function of state law.<sup>26</sup> Damages for emotional distress—you typically would have to show verifiable presence of the toxin in the body. In some states, though, you would actually have to show a present injury.<sup>27</sup>

When we get to the states, and this is an important one and I would suggest this is going to be an area of future litigation big-time involving claims of contamination below regulatory standards—and the gentleman on my right has already been involved in this in his prior lifetime—natural resource damage claims brought by states. States have arguments, as I said, that other plaintiffs don't have. The key question it will boil down to there, has the resource been injured? And in that regard, has there been a loss of services is a key question. If water can still be delivered to the public, from my perspective as a defense lawyer, there's a compelling argument that there hasn't been a loss of services in terms of the impact on the resource.

The key message, though, in all of these is what Bob said at the outset, and it was great that he set up my line, because my basic message today is you have to look at all these issues in the context of all these plaintiffs and all these

(Contamination must "rise to the level of toxicological concern" before plaintiffs can pursue common-law actions.)

22. *Developments in Toxic Tort Liability for the Quality of Groundwater Served*, 49 ARIZ. L. REV. 469, \*485 (2007).

23. *In re MTBE Products Liability Litig.*, 458 F. Supp. 2d at 158.

24. *Id.* 458 F. Supp. 2d at 155.

25. *See, e.g., In re MTBE Products Liability Litig.*

26. *Exxon v. Ford*, No. 1804, 2012 Md. App. LEXIS 16, \*\*105-07 (Md. App. 2012); *Rhodes v. E.I. DuPont 253 F.R.D.* 365, 372-73 (S.D.W. Va. 2008).

27. *Exxon*, No. 1804 at \*78 ("It is enough that the fear be based on a substantial and medically verifiable possibility of contracting the disease."); *In re MTBE Products Liability Litig.*, 528 F. Supp. 2d 303 (S.D.N.Y. 2007).

claims through the prism of causation. That's the bottom-line question in all of these.

Under *Daubert v. Merrill Dow Pharmaceuticals*,<sup>28</sup> which those of you who are lawyers know was the seminal case from the Supreme Court defining a federal court's role in assessing the admissibility of expert testimony (and all these things hinge on expert testimony<sup>28</sup>), the Court is playing a gatekeeper function. And even if we're in a state court that doesn't apply that rule, under the old traditional test in other words, the court still plays a role in reviewing the reliability of the testimony of experts.

So, remember it's the proponent of the expert who has the burden. It's Carla when we are in litigation together who is trying to establish the injury. It's the plaintiff's burden in that context to demonstrate by a preponderance of the evidence that the expert's proof is reliable. Obviously, it's my burden with respect to a defense expert. But if we're trying to establish injury in the first instance, the plaintiff has the burden of proof to show injury; the plaintiff has the burden of proof to put forth reliable scientific evidence to support it.

So, the question that I ask, and that is, as a defense lawyer you have to ask, is the evidence reliable for—not in an abstract sense—but for purposes of helping this plaintiff meet his or her burden of proof at the low levels of contamination below an MCL or other standard that we're talking about, even if it would be reliable at higher levels? This gets into this question of dose that Carla alluded to.

In looking at this, it's important to remember that regulatory standards are based on determinations of risk. Epidemiology is based on assessments of risks, but there's a distinction between risk and causation when considering the burden of proof of the individual plaintiff. Even if there's risk, outside of those cases Bob talked about where there's a signature disease like mesothelioma, typically dose and exposure are going to come into play. And as Carla noted, at these very low levels, there aren't many studies for most chemicals.

So, from a defense perspective, what you want to look at is in the absence of those studies, or if there are a few studies, is there speculation built into the opinion of the experts, however qualified the experts may be? Are there gaps in the data that if they were filled could potentially yield a different conclusion? But the bottom line is what you're assessing it through is causation, and Bob was right on the money in saying that that was the critical issue.

Sometimes plaintiffs claim that these low levels of contamination can lead to what are called biomarkers, changes in the body at a sub-cellular level, DNA adducts. What are DNA adducts? DNA adducts are a situation where the chemical binds to the DNA and causes a change in it. The argument is that this can lead to mutations; it can lead to disease. Cytogenetic changes alter the chro-

mosomes, cause breaks or rearrangements in the chromosomes, things like that.<sup>29</sup>

The bottom line, though, is that many things in life can cause these changes, and the question is, is it the chemical exposure at these low levels that's caused it? In some states, under the law, DNA adducts, if the jury finds they were caused by the chemical, that alone constitutes proof of an injury, period.<sup>30</sup> In other states, the DNA adducts aren't deemed to be an injury because they don't necessarily lead to a disease. We all have DNA adducts. They come from apples, according to some studies; a variety of things, like coffee that we're exposed to. Many of us—I drink a lot of coffee, so who knows what my chromosomes look like? But you have to look at what it's causing and where it leads.

So, here are the key questions in a personal injury case. What's the evidence that they're in the body? Have there been genetic tests? Have there been medical tests? Sometimes, the plaintiffs will argue, going back to my scenario in the beginning, frequency of exposure, regularity of exposure, proximity to a source. I can infer from that that's in the body. It might not be, but I think it's more probable than not than it is. Assuming they're in the body, what's the risk of future disease? Does it justify medical monitoring at these low levels in the absence of studies? If we're talking about the water providers, under Judge Scheindlin's view, and there are cases to the contrary, under Judge Scheindlin's view, is the water provider in a position where that lower level of contamination has led it to spend money, or was it spending the money for some other reason? What levels would a reasonable water provider take action in? There are lots of questions, but they all boil down to the issue of causation.

So, let me just return, if I may, to where we started. With these low levels of contamination in the environment, you've got to look at: what kind of plaintiff are you talking about? What kind of alleged injury are you talking about? Does this kind of plaintiff have a claim for contamination below the MCL or whatever other regulatory standard is at issue for this kind of alleged injury? Look to see if the detection is getting ahead of the science. If the detection level is getting ahead of science in other respects, I should say, because even if there's increased risk from exposure to a chemical, is there sufficient evidence of causation for this plaintiff alleging this injury to make a prima facie case that it's more probable than not that the exposure caused the injury? Is there speculation? Are there gaps?

That's key, because we are in a situation, as Carla noted, where the science may be lagging behind. One area where the science is ahead is the ability to detect things. But in terms of analyzing the effects of these low levels, there's a lag, and the gap may never be filled. So, that's how on my side we look at these issues, and I'll turn it back over to John.

28. *Daubert v. Merrell Dow Pharmaceuticals*, 509 U.S. 579, 23 ELR 20979 (1993).

29. *Genetics in the Courtroom: Genetics and Toxic Torts*, 31 SETON HALL L. REV. 949, 970 (2001).

30. *In re MTBE Products Liability Litig.*, 528 F. Supp. 2d 303; *James v. Chevron*, 301 N.J. Super. 512 (N.J. Super. 1997).

#### IV. Discussion

**John Cruden:** Bob, you gave us examples from both China and Japan, but those are laws they enacted. If you're going to change what you call the causation conundrum, do you have to have laws to do that, or is the evolving common law capable of filling in gaps?

**Robert Percival:** I think the case of *Allen v. United States* that I mentioned earlier is about the furthest we have seen a U.S. court do that. Had that decision stood, it would have really been a quiet sensible response to a situation where it was clear that enormous harm had occurred due to the exposure to the radioactive fallout, and yet, it was difficult trying to sort out who should be able to recover. When implementing the idea of identifying people who can show exposure and who can show that they have suffered the kind of injury that is related to that type of exposure, there always will be problems of overinclusion and underinclusion. However, I thought that was a very creative way of handling that issue in a circumstance where the government would have been the one held liable.

Then, we have the Superfund program. At the time the program was enacted, many thought that we were going to start seeing serious widespread health problems in people who live near Superfund sites. Congress commissioned a study to show that traditional doctrines of tort law were just simply inadequate to cope with that type of injury, which contributed to the momentum toward creating a victims' compensation program. Instead, Congress decided to focus on site cleanups while just putting it in a provision for health assessments, which may have been a sensible choice in light of the dearth of studies documenting severe health problems in populations living near such sites.

However in a situation, like the radiation issue where it was clear that many people were injured, Congress responded after the Tenth Circuit reversed the *Allen* decision by adopting a program of administrative compensation for the victims of exposure to the nuclear testing and for uranium miners as well.

**John Cruden:** Before I ask Carla and John if they have any comments on yours, I need you to be a law professor one more time, because we're now in this intersection between statutory and regulatory construct and the common law. *AEP* talks about displacement. Other cases talk about preemption. What are preemption and displacement?

**Robert Percival:** I now am grading my Constitutional Law exams, and I have a question in there about preemption, which is one of the things we study. I thought it was particularly interesting that Carla mentioned *Wyeth v. Levine*<sup>31</sup> because the legal doctrine is actually fairly simple. It is a matter of congressional intent: did Congress intend to preempt or displace state law when it adopted a particular regulatory statute? And yet, we have a bizarre situa-

tion with respect to preemption and therapeutic drugs. In *Wyeth*, the Supreme Court held that state failure-to-warn tort litigation was not preempted for the brand name drug, but the Court subsequently held that it *is* preempted for the chemically identical generic equivalent of the drug. Therefore, whether or not one can even seek relief under state tort law depends on whether it is a generic drug or the actual brand name drug at issue. The Justices of the Court agreed that this is crazy and that Congress should change the law.

There usually is a presumption against preemption, unless Congress has expressly indicated an intent to preempt. Yet, a line still has to be drawn in many cases. There are situations in which congressional intent is uncertain, but a court is going to have to decide how far the preemption extends. It is a mess that should probably be in Congress' hands. However, as we all know, we have a totally dysfunctional Congress, and it is likely that it is going to continue, thus making it very unlikely that we are going to get any help from them on this issue. Consequently this issue will remain with the judges to sort out in the future.

**Carla Burke:** Bob, I'm just wondering about your opinion: if there is legislative action taken on environmental issues on the causation side, should that be a federally driven initiative, or should it be reserved to the states and let every state kind of cook up its own?

**Robert Percival:** Some states have already taken action. Minnesota has a program for a type of administrative compensation for exposure to hazardous chemicals. This reveals the possibility of the states acting as laboratories of democracy by coming up with their own programs. Additionally, with its Proposition 65, California has been fairly creative at adopting much more protective standards for preventing exposure to carcinogens and reproductive toxins than anything that we have on the federal level.

The problem with respect to the issue of generic drugs versus brand name drugs is a result of the way Congress wrote the statute. Here, the Supreme Court's reasoning depended upon whether the manufacturer was free to seek a label change from the FDA. With respect to generic drugs, they said, "no," and that it had to be absolutely identical. I am sure Congress never even contemplated the issue of preemption in this context when it adopted the statute.

**John Guttman:** Well, all I wanted to say is that the preemption issues, I think, in the tort context, are going to be very dicey most of the time, because Congress doesn't necessarily speak clearly. And even when it does, there are still issues about how far it goes. If I can return just for a second back to Carla's and my favorite subject, which is MTBE, because there, the defendants, including yours truly, argued that the claims were federally preempted for a variety of reasons.

Their arguments boiled down to the fact that MTBE is an approved oxygenate to be put into gasoline, and Con-

31. 555 U.S. 555 (2009).

gress knew it was going to be used, and EPA knew it was going to be used, and knew how it behaved in water. Now, there are big debates about what EPA knew and didn't know, but we don't need to go there.

But here's what Judge Scheindlin ruled on the issue. She said—this is obviously a paraphrase—she said, you're talking about whether these claims are preempted by the CAA. The CAA regulates the composition of motor fuels. What these cases are talking about, what the plaintiffs are complaining about is contamination of the water. That's a different issue. So, she implied that claims might—she didn't say they are—be preempted, if we were dealing with issues about claims related to air contamination. But these cases deal with MTBE and water, and that's beyond the scope, in her view, of any preemption, assuming there is any.<sup>32</sup> But I think it is clear that the CAA does preempt at least certain types of claims with respect to the composition of motor fuels.

There are other state judges who have ruled the other way and who have said, this is a consequence of the stuff being in gasoline, and I find preemption. There are several decisions in New York State and, I think, perhaps elsewhere to that effect. So, the point I'm trying to make simply is that you have to look again at the kind of claim and the kind of injury you're talking about, not just has Congress dealt with this issue in some fashion.

**John Cruden:** I was in the Supreme Court hearing the *AEP* case, and part of the concern by all the Justices was, we're going to have to make this stuff up. It's enormously scientific. This is GHGs, of all things, and we don't want to be a legislature. We're not good at that. Carla, you must be hearing all the time people saying, wait a minute, you're second-guessing a legislature. They've got the MCLs. The MCLs have built-in safety margins. That's what they're there for, precisely for that particular purpose. Aren't you really second-guessing now what those people who are charged with that responsibility are doing? And your answer is?

**Carla Burke:** Yes.

**John Guttman:** That's my answer too.

**Carla Burke:** I think you have to be very specific about what the intent was in coming up with—I'm going to stick with water—with an MCL, with the regulatory standard. And if you look at the statute, EPA is charged with setting a regulatory limit for contaminant in drinking water that is as close to its goal. There's an MCLG which is the MCL goal. So, if they set the enforceable standard as close to the goal as possible taking cost and other feasibility issues into account, so there are several standards that EPA comes up with.

The goal, the MCLG, is the most protective of health. For a chemical like benzene, for example, the MCLG is 0, but the enforceable MCL is 5 parts per billion. So, somewhere in there, EPA said, what we really want is zero, but zero may not be feasible for everyone. It might be expensive to get to zero. It might require fancy membrane treatment systems. I don't know what the arguments from the industry side were, but it might chill certain kinds of trade to have a low MCL.

So, to the extent that there is space in there between feasible and absolutely are protective of health, we are saying there is room in here, not to second-guess, but to supplement and to say that the regulatory goal and aim is a minimum safety standard. It's a minimum. And if we as a state want to enforce a more protective level via the tort system or via a new regulation, we can do that. So, I wouldn't say second-guess. I would say supplement, which is friendlier in any event.

**John Guttman:** The question I want to ask Carla in response is whether she would agree then that contamination levels below the goal might not give rise to run a cause of action.

**Carla Burke:** As science changes and as we can detect chemicals at lower and lower levels, people tend to respond with, oh, well, maybe we should be removing it more and more. Maybe the goal really should be zero. If you talk to water providers, their goal in serving water to their communities is to have zero contaminants. They understand that that's not necessarily possible. But we want to get close to zero.

Typically, over time, the MCL comes down and down and down. I don't remember off the top of my head, but the benzene MCL used to be like 30 or 50 parts per billion. And remember, all this has happened in a pretty compressed period of time. These regulations went into effect and water providers had to start following them in the 1980s, late 1980s or early 1990s. So, this is not a lot of the time, and the regulations tend to drop over time. It's rare that EPA says, oh, wait, go ahead and have more of a given chemical in your water. As it can be detected lower and as we learn more about these things, the trend is always going to be downward.

I think it depends on the chemical, frankly. Certain things behave differently. Chemicals do not all behave the same way in your body or in the environment. There are things that a single-molecule theory fits better with. The same chemical can have a no-threshold level with respect to certain physical manifestations, and it can have a threshold level with respect to others. What does that mean?

Benzopyrene, I think, is a gasoline constituent. Benzopyrene can cause skin irritation at certain doses. So, a little bit of it, it's going to hurt you a little bit. A lot more would cause more irritation, maybe some respiratory symptoms. Benzopyrene also causes cancer, and it's thought to be a zero-safe level or single-molecule theory chemical for can-

32. *North Carolina v. Tennessee Valley Authority*, 615 F.3d 291, 302, 40 ELR 194 (4th Cir. 2010).

cer, so that it causes the kind of—John mentioned—DNA mutation and cellular effects. That's one of those chemicals that's thought to, with a single exposure, be able to cause the kind of cellular change that would enable the genesis of cancer.

So, chemicals are not the same, and I think that is something that is becoming more obvious in science. Unfortunately, I think where we all live, which is in the courtroom, courts are a little behind the science on that. So, they tend to want to treat all chemicals the same. They tend to want to see a dose-response curve or a little is safe but a lot is dangerous. And I think it's something we're going to, I'm sure, deal within the next several years as the sophisticated nuances among these different chemicals and among the different effects in the environment and effects in the human body.

**John Cruden:** John, there is this concept in water law of total maximum daily load, the TMDL, The concept, of course, is if you add things to a stream that already has a bunch of junk in it, you actually have to know that. You actually have to regulate it. Why isn't that applicable here? Why does it matter whether or not it's just a little tiny bit if you're adding it to a water body, for instance, that already has a bunch of contaminants in it?

**John Guttman:** Well, if we're talking about a water body, then we're going to be talking about typically claims brought by the state or the federal government, as the case may be in terms of contamination of a river, a lake, a stream, and in a tort context as opposed to regulatory issues. And I think that precisely those arguments are made and will be made. And from the defense point of view, the argument in a tort context would be it's not what would be called an indivisible injury, because each chemical or each substance in the water has different effects and comes from different sources. And certainly, in the case of my clients, it's just a little, itty-bitty bit of something that didn't really add anything of significance to the mix, by and large. So, I think that's the argument.

In the other context that Carla and I deal with, dealing with water providers, dealing with the plaintiffs claiming personal injury, the issues come up in different ways. In the personal injury context, generally different chemicals can cause different effects in the body. Sometimes there can be overlaps, but not always, so that one of the things when we talk about these sub-cellular changes and things like that, this is an area where I would think science is going to be headed, and it's quite skimpy now, is can you tell a difference between a sub-cellular effect that is caused by chemical A versus one that's caused by chemical B, because if you can, then it supports the proposition that maybe one defendant is liable but not the other on the causation issue?

In terms of the water providers, the issue you raised, John, comes up every day because defendants argue: "Wait a minute, you have to treat your water anyway. You have to treat your water because there is all sorts of stuff in it."

Some of these arguments I agree with wholeheartedly. I agree with Carla that water providers and everybody in this room, all of us would like H<sub>2</sub>O and nothing else. But the reality is that water isn't that simple. There's naturally occurring stuff in the water. There's naturally occurring stuff that's harmful in water. If you live in the state of New Hampshire, anyone on the phone, there may be high levels of arsenic in your water, and that's true in other places as well.

So, the issue arises in these cases that my low levels haven't changed your regime of treating anything. So, then you get into the issue, okay, if in fact we're found to be responsible, are we responsible for the whole ball of wax or is it just an incremental cause that comes into play, which is certainly what I would argue? Can I shift gears completely, John?

**John Cruden:** You may.

**John Guttman:** And just make a comment because there is something I wanted to bring up that I thought was sort of interesting and I overlooked it, frankly, earlier.

We've talked about the Deepwater Horizon situation in which Carla's firm is involved—we're not—and the structure of settlements there where causation, essentially, if you fall under certain buckets, causation will be presumed. And Bob also mentioned the *Allen* case, where the district court went in that direction. Carla and I have been involved in negotiating settlements in which all of these kinds of things come into play where the issue arises, okay, we can deal with what's in front of us today by negotiating a settlement amount or a court or a jury decides it, but what about the things that might happen tomorrow? These cases are so complex and so costly to litigate for everybody and involve so many different plaintiffs.

In the MTBE context, we've had well over 100 cases, and each one is very, very large in terms of what's at stake when you're talking about water providers, class actions, all these things, that what this does often is drive parties to settlements along those lines. And so, the parties have said, okay, how are we going to create a mechanism for dealing with the next one that comes up, the next well where there's contamination? And we'll sort of agree upon a reasonable resolution to some of these issues in the context of a settlement.

If a well is contaminated to a certain level that the water providers and the defendants will agree upon for some purposes, then the following comes into play. And you might have complex structures, you might have simple ones, but lots of these cases, because of what's at stake for everybody and the cost of dealing with them, are ultimately resolved through settlement and those kinds of mechanisms, you sort of put the MCL to the side. You say, okay, now we have to sit around a table and figure out a way to resolve this. And I think that's what has happened, as I understand it, in the Deepwater situation.

**Robert Percival:** I just realized I did not answer your question about the difference between displacement and preemption. The issue the Court addressed in *American Electric Power* was whether the CAA displaced the federal common law of nuisance. The Court held that it had been displaced by the CAA and EPA's ability to regulate GHGs. In that circumstance, it is one branch of government, Congress, passing the law that then displaces the federal common law that otherwise would be formulated by another branch of government, the judiciary.

Preemption comes in when the issue is whether or not Congress intended to use the Supremacy Clause of the Constitution to preempt state common law. The Court in *American Electric Power* expressly did not reach that issue. So, theoretically, climate change cases can still be brought with the same kind of litigation using the state common-law claims.

**Audience Member:** My question is in tort litigation. How helpful or unhelpful is biomonitoring, such as what the CDC [Centers for Disease Control and Prevention] does?

**Carla Burke:** Okay. I'm going to have to ask you a question first. What types of monitoring is CDC doing?

**Audience Member:** Well, they're monitoring for various chemicals, and they do a program that can be 152 chemicals, or it can be 10. And they're looking for it statistically, not individually.

**Carla Burke:** Okay, so it's more of an epidemiological study. In a given population, we see X blood level of lead or something else. It's certainly instructive, but, as John said, you would have to draw an inference from that. And in the tort system, it's not so much about what happened to the community; it's what happened to me. So, I could be that one person in the community that's not exposed to something for whatever reason. We would have to go beyond and put me, put the plaintiff, in the exact circumstances as someone who is comparable.

So, for children, I'm going to use lead, even though I really don't know much about lead paint cases. If you can show that there's lead paint in the home or that there is flaking of lead paint on a windowsill or that there's lead in the carpet or leaded dust in the attic or something like that, that ties it to that individual, that's what you would need to do in the tort system.

**Audience Member:** And biomonitoring can be done on an individual?

**Carla Burke:** Sure.

**John Guttman:** When you look at it on an individual basis, that's getting into the kind of thing I was talking about where, whether it's blood test or a genetic test, saliva, it all depends on what you're talking about. Is the chemical

present in the body of a specific individual? And that's one category of proof. And if it's there, it's there. And the issue might be, at what levels? But if it's there, it's there.

I think Carla is right, though, when she's talking about epidemiological studies, which are basically used to establish levels of risk. They provide some, but limited, probative value in the typical case on whether the chemical is in my body. And there, it's dealt with typically in two ways. One is, what you mentioned, the kind of testing that is focused on me as an individual. The second is plaintiffs will talk about the factors I mentioned before, frequency of exposure, regularity, proximity to the source of contamination, depending on what you're talking about, things like that.

To argue that essentially there's circumstantial evidence that makes the case that this particular plaintiff must have been exposed and it must be in the body. Sometimes plaintiffs prevail with those kinds of arguments; sometimes they do not. It really depends on the scope of the evidence.

**John Cruden:** But, John, how about class actions? Deepwater Horizon is a good example of a case where it was a combination. Some of those were individual lawsuits where people said, I became sick from breathing oil fumes or touching oil fumes. But others were, in fact, a class action where you have a whole body of cases. How is that epidemiological data relevant there in those Rule 23 sorts of situations?

**John Guttman:** Well, then the issue is, is it appropriate that this case be certified as a class action that turns on many factors, including whether the class representatives—the punitive representatives, I should say, since the class hasn't been certified—are seeking money damages or just injunctive relief. That's a key factor because it's a whole different analysis. But the basic argument is what we've been talking about.

The question becomes, does that epidemiological evidence, does that statistical evidence suffice to make the case that individual inquiries are not needed? Therefore, the common questions predominate or at least that the common questions can be dealt with in a first phase trial or something and the individual inquiries can be dealt with later. That's another way in which plaintiffs sometimes approach it. Defendants disagree that that type of approach should be applied.

But, at the end of the day, it is hard, by and large, although there are examples to the contrary, to get a case certified involving toxic tort issues as a class action because of what we're talking about. The need to look at exposure and causation on an individual basis as well as what's the injury? Is there an injury?

**Audience Member:** I want to follow up on that issue, and I guess my first question is, when the Tenth Circuit in *Allen* reversed the district court decision, did they address the causation? As you know, they found it unnecessary to address it. But, because the case has been reversed, it's no longer a good law. What's going to happen in the element

of causation going forward as you have more litigation over sort of mass tort claims? Do you think that *Allen* or the Deepwater Horizon lessening of the causation standard would become more common, or are those outliers that aren't going anywhere?

**John Guttman:** I believe that if it becomes more common, it's going to be through legislation, because I think the way our system is designed is to basically say that a plaintiff has the burden of proof of showing an injury and showing that it was caused by the defendant. And there may be changes in how one proves an injury, but at the end of the day, the plaintiff has to prove, I am injured, and it is more likely than not that it was caused by this defendant.

**Robert Percival:** But when you have massive complex litigation with multiple parties, typically a court will try to sample claims as a way of facilitating settlements to avoid having to individually litigate thousands and thousands of claims. I believe that trend will continue.

**John Guttman:** Fair point. That gets back into what I was talking about before, which is lots of these things are settled and mechanisms are created, and they're created ad hoc sometimes, and then those ad hoc creations become models, and the Deepwater Horizon may be one as things go forward for how to deal with these complex issues.

**Audience Member:** I have a question for Carla. I was struck by one of the things you said earlier, which was that low levels of atrazine are much more dangerous than high levels. Could you explain that?

**Carla Burke:** Sure. I said earlier in my remarks that atrazine, which is an herbicide, is an endocrine disruptor. I've been asked to put my biologist hat on and explain why. So, I'll do the best I can. In fact, next month, there will be published in *Endocrine Reviews* an article that does this analysis of atrazine and other endocrine disruptors and sort of looks at this in a way that you might want to see after you hear my very amateur remarks.

What is interesting about endocrine-disrupting chemicals is that I think they're the first group to get the attention as behaving differently. So, in a time where we've lost a planet and science is going crazy, there's also this recognition that there are chemicals that behave in the body in ways that just don't make sense, given the traditional toxicology. So, with atrazine, the study found that with frogs, when you give frogs a little bit of atrazine, they exhibit hormonal changes. It actually feminizes male frogs and some frogs develop both female and male sex organs, which is very strange. At high levels, the frogs don't have that response. It's strange. I mean, it's a whole new world, but look at the article that's coming out in June; that might help.

So, I think that's one of the things where we need to, you know, as litigators we're going to have to figure out

how to deal with that. I don't know how many of you practice in federal court, but if you're familiar with the *Reference Manual on Scientific Evidence*, the reference manual says, in most cases, chemicals follow this dose response curve. That's traditional toxicology. And it goes on to say not everything follows that curve; some things are a little different. But then it cites a case that says we got to stick to the traditional.

So, courts are going to be all over the place, and this is definitely emerging science. It's one of the things that came up in the atrazine litigation, given that we did fight over the MCL, and whether one part per billion of atrazine in the water was dangerous or could be a reasonable basis for a water provider to install treatment or filtration, so it came up there clearly. And it's come to EPA's attention, and EPA is doing a special review now of atrazine and of the related compounds. So, there may be things on EPA's website as well. I'm sure there are in the public docket for all of the materials that have been submitted to EPA to consider with atrazine. There's a ton of science that has been submitted, so check that out.

A lot of courts have allowed single-molecule testimony, especially in asbestos cases with mesothelioma. That's tended to be thought of as a potentially single-molecule response. With atrazine, there was a case in Louisiana. It's the Iberville Parish Waterworks case in Louisiana, 1999 maybe. I don't know if they got to the point of doing expert testimony to that level, but that might be in the docket for that.

**John Cruden:** Bob, I'm going to you for a second because we have now got into the world of good science. If there is anything we know and that is every legislator, every judge, every plaintiff, every defendant is wedded to the concept of good science, they probably mean different things, each of them, but they are all wedded to that concept. And the Supreme Court said, in *Daubert*, we're going to be the gatekeeper of good science, but this stuff is now evolving at such a rate as we've just seen recently now and DNA results coming up. Is that working? Is *Daubert* effective particularly in this world where it's moving so quickly?

**Robert Percival:** I think *Daubert* was a classic Justice Harry Blackmun opinion. The actual issue before the Court when the case was argued was whether or not one can even testify about novel theories, or if they have to be generally accepted at the time, which is what the lower court ruled. The Supreme Court did not agree, so in theory, the decision was supposed to permit more types of evidence to be admitted. However, because Justice Blackmun's majority opinion lectured the lower courts on the importance of being gatekeepers, I think the perception is that it actually tended to result in more judges feeling like they have to keep more types of evidence out.

It is kind of ironic, though, when you look at the history of the use of science in some of these cases involving products liability and the like. The original purveyors of junk science were really tobacco manufacturers, who

went to great lengths to manipulate data to cloud any link between their product and lung cancer. When that failed, they then got Congress to provide them with an automatic assumption of risk defense by mandating warning labels. Regarding the climate change litigation, some have argued that we are now going to see junk science provided by the defendants in an attempt to dispute the notion that GHG emissions are causing climate change.

**Audience Member:** Given the remark about the causation conundrum and the advancements of science, is it time to advance law and change causation? It sounds like Dr. Percival is suggesting that *Allen* is the way to go. If you have manufacturers who tend to have more data, is there a product that goes into the environment to unwilling recipients perhaps? If you can show exposure, can the causation burden flip? And then be on the defendant to show that they even cause harm?

**John Guttman:** From my perspective, the answer, as a general rule at least, is no, and the reason for that is that the reality is that something like asbestos, where there is a signature disease that results, actually a couple of them, is the exception rather than the rule. So, that for example, Carla mentioned lead issues earlier, and there is no question that lead is not good for you, but plaintiffs will argue that lead causes children to develop developmental issues—ADD, ADHD. In the case of a particular child, that may very well be demonstrable. But in the case of another child, it may not be, because you might have a family history. There might be a multitude of other factors that can come into play, but genetics and family history being a significant component of it.

And from where I sit, that kind of thing is out there in most cases, or put differently, few cases are like mesothelioma in asbestos. In a litigated context, as opposed to settlement, where as we talked about everybody just says forget about this stuff, there is too much at stake. There's too much involved. And maybe there's a public health issue. We're going to come up with our own way of dealing with it. Put that to the side. In a litigated context, I think at the end of the day, the types of proof that are available, scientific or otherwise, for a plaintiff to make the case may change.

Certainly, as science changes, it can go both ways. It sometimes becomes easier for a plaintiff to prove the case. It could also become more difficult in some contexts. So, there's always going to be changes, but I think when you have multiple things that can cause the harm, I don't see it happening in a common-law context. Now, what Congress might decide to do or a state legislature is a whole other issue, and I don't know about that.

**Robert Percival:** But if you could show a genetic predisposition to get that disease, isn't that a case where you *could* discharge a burden of showing that it was not in fact the cause?

**John Guttman:** Maybe. I'll go back to where we started talking about causation, and dose, and exposure, and does my one instance where I had exposure to whatever it is, MTBE, or lead, or pick anything else, is that sufficient? In the case of asbestos, the answer would be yes, if you've got mesothelioma. But in other contexts, not necessarily, unless the plaintiff has the burden of proof.

You have to remember also that these are—when we're talking toxic tort, we're talking of things where emotions and feelings are very, very significant, and that's one of the things that comes into play in all these cases. It's also one of the things that leads to these settlements that we're talking about.

**John Cruden:** Carla, what other types of chemicals have you been working on with your client? And do they actually create other legal issues to be discussed?

**Carla Burke:** Of the, say, 7,500 water contaminants that EPA has identified as, hey, we might need to regulate this at some point, there are only enforceable MCLs for about 90. So, the argument that we tend to hear about following the regulations and being in this level or at a level where a water provider is not injured, that argument doesn't apply, of course, if you have an unregulated chemical.

One example is a case that we worked on a few years ago involving a chemical called PFOA or C8, which has gotten a lot of attention. There are these perfluorinated carbons that are used in paper processing, microwave popcorn, the package of the microwave popcorn comes in, Teflon pans, and nonstick carpet, and those kinds of things that have a sleek, nonsticky surface. Those are not regulated by EPA or by most states.

We had a case in the state of Florida, and EPA has issued a public health advisory level for PFOA. But anyway, Florida did not have an enforceable MCL, and EPA did not. So, in that context, with an unregulated chemical, the arguments changed slightly. I mean, it does take some of the wind out of the sails of being below the MCL so it's somehow safe, and if there's a public health advisory that can be instructive, but it doesn't have the weight of an enforceable regulation.

To answer your first question, the other chemicals are perchlorethylene, which is used in dry cleaning, trichloroethylene, which is an industrial solvent that's found in lots of chemicals. Gasoline byproducts tend to be so commonly found because we all drive obsessively, so benzene or xylene or toluene. And again, we have these atrazine cases that are most concentrated in the Midwest, in the corn-growing states, so a huge cluster of them in the Midwest and there is some atrazine found in California, but it's pretty severe in agricultural areas.

**John Cruden:** John, when Carla was talking about bringing her lawsuit, she said, actually I could have sued those local gasoline places, but that's not fun. Let's go after the big guys. Let's go after refineries and things. But is that

relevant to this discussion, who you sue? I mean, if you're representing the big guy, do you want to take it out on the little guys too?

**John Guttman:** Well, taking it out on little guys is one thing; suggesting that the little guys are really the cause of the injuries is another. And talking as Carla was about the MTBE context where the typical source is a gas station that's had a leak, the refiners have argued that the source of the contamination is typically a tank, and if the owner of the gas station didn't follow the regulations to maintain the tank properly, there's an intervening cause. The product is not defective to begin with. But even if it is, there's an intervening cause that caused the harm.

Judge Scheindlin has, by and large, disagreed with that, because she said, look, it's a product liability case, and the issue that the plaintiffs are raising is the way the chemical behaves in the environment. But that kind of thing is front and center in the lot of these cases and also involving other chemicals.

**John Cruden:** Carla, as a plaintiff, you're speaking in terms of most often a single chemical. You're talking for instance about MBTE, but is there an argument that the mixture, the synergistic effect of that chemical as it interacts with other chemicals could have a larger effect, an effect that even goes beyond what other regulatory restraints exist?

**Carla Burke:** Sure. That's one thing that has been, let's say, in the last few years, really discussed in environmental scientific circles. It's called the cocktail theory. It sounds more glamorous than it is, but it is the idea that if a person is exposed to different chemicals at the same time, might there be an additive effect, might there be a synergistic effect, might one chemical make the body more vulnerable to a different chemical acting a different way, and I have no answers sitting here.

I mean, common sense would tell me that it's much different, but I don't have science to point you all to. But that is something that we have seen especially recently with EPA and atrazine. EPA has said, okay, we want the makers of atrazine; let's address not only the effects of atrazine in the environment, but we know that atrazine comes sort of in a package with these related chemicals. It degrades a bit in the environment, and the degradant products should be—we should look at all of them together because they persist a little bit as well. So, you add atrazine to water and you actually get three or four chemicals in the water because of the degradation process. So, that is a current event. I think it's actually a future event that will get more attention as we go along.

**John Guttman:** I think it is a future event. I agree with Carla. I think it's something where there's a lot of research, and it's very important. It's going to be important to these cases as they go on. I don't know. I'm sure it's there in some situations. I'm sure there are situations where people are

looking at it and they're going to say, no, it's not there. I couldn't tell you what ones are what.

## V. Closing Remarks

**Robert Percival:** The world is obviously a very different place than it was hundreds of years ago when the British common-law courts started dealing with environmental tort cases. That is why we shifted to a system in which we largely rely on preventative regulation rather than the tort system to provide us with environmental protection. Despite the fact that it is so difficult to prove causation in the modern era, it is still absolutely vital to have the tort system as that backstop.

So-called tort reformers have argued that approval of a product by a regulatory agency should insulate the manufacturer from tort liability. I think that is extremely dangerous, because it would create an incentive for companies to lobby for riskier things to be approved since there would be no liability if it ends up harming people. That is why it is essential for the tort system to be available: to provide some avenue of redress when the regulatory system fails to prevent serious environmental harm.

**Carla Burke:** I couldn't agree more. I would add that any of the new more creative theories that are applied in the tort system, whether it's a rebuttable presumption of causation, it seems a pretty good balance, again, from the plaintiff's perspective, of allowing businesses to exercise their rights to sell their products pretty freely in the United States and for them to bear some of the burden of the environmental contamination that happens inevitably.

We never said, gee, you have to stop selling gas or you have to sell it in these hermetically sealed containers. Everyone understands that some contaminants are going to be in the environment. The question is who has to pay for them to be removed from the environment? Is it taxpayers, is it the ratepayers who pay their water bills, or should corporations absorb that cost as part of the cost of doing business? Obviously, that's where we come up.

**John Guttman:** Or should it be the person who released it into the environment? I'm just going to stop where I think Bob started, which is causation is the issue with all these things, whatever the context, but you have to look at it and say what kind of plaintiff am I talking about? What does that mean? What kind of injury is being alleged here? Does this kind of plaintiff have the claim for this kind of injury at this low level? Look to see if the argument, the ability to find the stuff, is getting ahead of the science in other respects in assessing what the plaintiff puts forward to establish the case. And that the key thing, as we've come back to now a couple of times, is that the science is evolving and the claims may be ahead of the science and the claims will change with the science in terms of injury allegations and legal theories.