In the

United States Court of Appeals For the Seventh Circuit

Nos. 18-1918 & 18-2598

WILLIAM LIEBHART & NANCY LIEBHART,

Plaintiffs-Appellants,

v.

SPX CORPORATION, TRC ENVIRONMENTAL CORPORATION, & APOLLO DISMANTLING SERVICES, INC.

Defendants-Appellees.

Appeals from the United States District Court for the Western District of Wisconsin.No. 16-cv-700 – James D. Peterson, *Chief Judge*.

Argued December 4, 2018 — Decided March 6, 2019

Before BAUER, KANNE, and BRENNAN, Circuit Judges.

KANNE, *Circuit Judge*. William and Nancy Liebhart together own three houses on the same block in Watertown, Wisconsin. Besides a few other houses, the rest of the block was previously occupied by an abandoned transformer factory, last owned by SPX Corporation. In 2014, SPX demolished the building with the assistance of TRC Environmental Corporation and Apollo Dismantling Services (collectively, "the defendants"). The Liebharts allege that dust and debris containing toxic chemicals migrated onto their properties, contaminating their yards and jeopardizing their health and the health of their tenants.

The Liebharts sued under federal statutes authorizing private rights of action for environmental contamination. They also brought various state-law claims. Following discovery and the submission of expert witness reports, the district court denied the Liebharts' motion for partial summary judgment and granted summary judgment to the defendants with costs. Although the district court adequately evaluated the expert witnesses and did not abuse its discretion in its procedural decisions, the court set the bar unnecessarily high for the plaintiffs to show a violation of the applicable federal statutes. For that reason, we vacate the district court's judgment and remand for reconsideration.

I. BACKGROUND

The factory dates to the 1920s and was used to manufacture various industrial equipment. Most relevant to our purpose, the factory manufactured power transformers containing polychlorinated biphenyls (PCBs), a carcinogenic chemical banned by the Environmental Protection Agency in 1979. *See* Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions, 44 Fed. Reg. 31,514 (May 31, 1979) (codified at 40 C.F.R. pt. 761). The parties all agree that the facility has not manufactured or handled any items containing PCBs since 1971, and that it shut down completely in 2005.

But even with all the products and manufacturing equipment removed, PCB contaminants remained in the facility. In 2009, SPX retained TRC and another company (not named as a defendant in this suit) to study the property and determine the extent and precise location of any PCB contamination. Those studies revealed that the concrete floor of the factory was generally contaminated, with concentrated amounts located in specific areas throughout the site.

Several years went by. In 2014, SPX decided to move ahead with the demolition, retaining Apollo to conduct the work and TRC to supervise the project. That November, the defendants timely proposed a self-implementing cleanup plan to the EPA, as required by 40 C.F.R. § 761.61(a). The trouble began as demolition commenced in January 2015. The Liebharts allege that Apollo demolished the building recklessly, failing to use appropriate safety methods to control the dust generated by demolition equipment. They assert that their properties were covered in dust, and they submitted hundreds of photos and videos of dust from the facility blowing toward their homes to support their allegation.

The Liebharts filed a complaint with the local government in February. They also collected a dust-covered sample of snow from their yard and placed it in a mason jar. Soon thereafter, a representative of the Wisconsin Department of Natural Resources ("DNR") contacted the defendants about the Liebharts' concerns. In April, TRC collected samples of the surface soil (roughly down to eight inches below ground) on both the industrial and residential properties. Sure enough, the properties tested positive for the presence of PCBs. In August, the Liebharts vacated the property on advice of their physician to avoid further exposure to the chemicals. Frustrated with the lack of action, William Liebhart had the snow sample tested for PCBs. Although the sample did, in fact, contain PCBs, the irregular manner of collection and storage spoiled the sample, and the laboratory declined to endorse the results with any confidence.

In September 2015, SPX submitted a plan to remediate the contamination to the DNR. In turn, the Liebharts sued in federal district court in October. The complaint sought injunctive relief under both the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 *et seq.*, and the Toxic Substances Control Act (TSCA), 15 U.S.C. § 2601 *et seq.* In addition, the Liebharts brought a host of state-law claims under supplemental jurisdiction, including strict liability, negligence, trespass, nuisance, and negligent infliction of emotional distress.

During discovery, the Liebharts submitted to further testing for PCBs both in their yard and inside their home. They also underwent blood testing. Although the external surveys revealed a more comprehensive picture of the extent to which the soil on the Liebharts' properties contained PCBs, the internal sampling and blood tests were both negative for contamination. The Liebharts later learned in October 2017 that the defendants allegedly buried some of the concrete remains on-site rather than removing them to a toxic waste dump as required by the EPA-approved clean-up plan.

The parties prepared and submitted the reports of the expert witnesses who were to testify at trial. Among those, three are pertinent to our discussion. First, the Liebharts submitted a report by John Woodyard, a licensed professional engineer. His report included a description of standard methods used when demolishing PCB-contaminated buildings and an analysis of the purported ways in which the defendants deviated from those practices, thereby causing the contamination of the residences. The Liebharts' second expert was Dr. David Carpenter, a public health physician who opined on ways in which the Liebharts might have been exposed to PCBs and the potential health effects of continuing exposure. He concluded that "there is no 'safe' level of exposure to PCBs that does not increase the risk of disease." Finally, the defendants submitted a report prepared by Dr. Russell Keenan, a toxicologist who analyzed the survey data and determined that it was impossible to determine whether the presence of PCBs on the Liebharts' property was due to the recent demolition or to runoff that occurred over the last several decades.

In December 2017, the Liebharts moved for partial summary judgment on the issue of causation, reserving the issue of damages for a jury trial. The defendants cross-moved for summary judgment; they also filed a motion to exclude the testimony of plaintiffs' experts Woodyard and Carpenter under Fed. R. Evid. 702. In February 2018, after those motions were fully briefed to the court, the Liebharts sought leave to amend their complaint. In light of the information they obtained through discovery regarding the burial of concrete on the property, they intended to allege separate RCRA and TSCA violations and seek an enlargement of the proposed injunction to include removal of that material.

The district court issued its decisions on March 30. First, the court granted in part the defendants' motion to exclude the plaintiffs' expert witness reports. The court explained that Woodyard's report was "equivocal" as to the issue of causation; it hedged on whether the contaminants came from demolition or from runoff during the preceding decades. *See Liebhart v. SPX Corp.*, No. 16-cv-700-jdp, 2018 WL 1583296 at

*3–4 (W.D. Wis. Mar. 30, 2018). Second, the report "overlook[ed] too much significant evidence" and failed to account for "obvious alternative explanations" in determining the cause of the contamination. *Id.* at *4 (quoting Fed. R. Evid. 702 advisory committee's note to 2000 amendments). Finally, the court noted that Woodyard's report depended on "unreliable or uninformative" evidence, including the Liebharts' defective snow sample, while omitting other evidence such as grass clippings and a chromatogram that allegedly detected PCBs on the property. *Id.* at *4–5. For those reasons, the court excluded Woodyard's report in its entirety. *Id.* at *5.

Although the court admitted the vast majority of Dr. Carpenter's report, it struck Carpenter's conclusion that "there is no 'safe' level of exposure to PCBs that does not increase the risk of disease" as unsupported by the medical studies he cited. *Id.* at *5. In doing so, the court pointed to the absence of PCBs inside the Liebharts' home and in their blood, suggesting that the Liebharts had not actually been exposed to PCBs and so could not have suffered harm. *Id.* at 5–6.

With that expert testimony off the table, the district court concluded that the Liebharts failed to present any admissible evidence to support their RCRA and TSCA claims. The remaining photos and videos certainly showed dust migrating onto the Liebharts' property, but there was no reliable evidence proving that the dust contained PCBs. Given that any PCBs detected in the soil may have been there prior to the demolition, the lack of evidence doomed the Liebharts' case. The court denied partial summary judgment to the plaintiffs, granted summary judgment to the defendants on the federal claims, and dismissed the state-law claims without prejudice. The district court also denied the Liebharts' petition for leave to amend their complaint on two grounds. First, although the court acknowledged that the plaintiffs discovered the factual basis for the new counts over a year after filing the initial complaint, it also noted that they took an additional four months thereafter to seek leave to amend. During that intervening period, the parties had submitted and briefed their motions for summary judgment, and the trial date was fast approaching. It found their petition untimely. Second, the district court determined that the new claims were futile under both statutes' advance-notice requirements.

The plaintiffs immediately appealed. Several months after the judgment, the clerk of the district court imposed costs on the Liebharts in the amount of \$46,320.02. The Liebharts separately appealed that decision. We consolidated the two appeals and now consider them together.

II. ANALYSIS

The Liebharts raise five issues for our consideration. First, they argue that the district court erred in excluding the opinions of expert witnesses Woodyard in full and Carpenter in part. As part of that argument, they allege that the district court failed to apply the same stringent standard to the defendants' expert Keenan. Second, they contend that summary judgment was inappropriate because, even absent the testimony of their expert witnesses, they submitted adequate photographic and scientific evidence to state a valid claim under RCRA and TSCA. Third, they challenge the district court's denial of injunctive relief in light of deficiencies they have identified in SPX's state-approved clean-up plan. Fourth, they argue that the district court abused its discretion in denying leave to amend their complaint. Finally, they challenge the imposition of costs.

But there's a larger issue looming in the background. The district court's opinion operates under the assumption that RCRA plaintiffs must demonstrate "an imminent and substantial danger with evidence of health problems they have already suffered." *Liebhart*, 2018 WL 1583296 at *6. Relying primarily on *Foster v. United States*, 922 F. Supp. 642 (D.D.C. 1996), the district court set a high bar for RCRA plaintiffs, holding that "it doesn't follow necessarily that there is an imminent and substantial risk of harm simply because there is some amount of PCBs on the property." *Liebhart* 2018 WL 1583296 at *5. We review that question of law, which was the underlying basis for the award of summary judgment, *de novo. Daugherty v. Harrington*, 906 F.3d 606, 609 (7th Cir. 2018).

A. RCRA Requires Only that Harm "May" Be Imminent

The question of how much harm a plaintiff must prove to make out a *prima facie* violation of RCRA has led to much discussion among the circuits. We have yet to tackle that issue head on, so the district court necessarily had to look elsewhere for guidance. Passed in 1976, "RCRA is a comprehensive environmental statute that empowers [the] EPA to regulate hazardous wastes from cradle to grave." *City of Chicago v. Envtl. Def. Fund*, 511 U.S. 328, 331 (1994). The statute's "primary purpose ... is to reduce the generation of hazardous waste and to ensure the proper treatment, storage, and disposal of that waste which is nonetheless generated, 'so as to minimize the present and future threat to human health and the environment." *Meghrig v. KFC Western, Inc.*, 516 U.S. 479, 483 (1996) (quoting 42 U.S.C. § 6902(b)).

Although the EPA has the primary responsibility for enforcing the law, the statute, "like other environmental laws, ... contains a citizen suit provision, § 6972, which permits private citizens to enforce its provisions in some circumstances." *Id.* at 484. As relevant to this case, the statute provides that

> any person may commence a civil action on his own behalf ... against any person, ... including ... any past or present owner or operator of a treatment, storage, or disposal facility, who has contributed or who is contributing to the past or present handling, storage, treatment, transportation, or disposal of any solid or hazardous waste which *may present* an imminent and substantial endangerment to health or the environment.

42 U.S.C. § 6972(a)(1)(B) (emphasis added). Notably, Congress amended the language in 1980 by substituting the phrase "may present" for the original 1976 wording "is presenting." Maine People's All. and Nat. Res. Def. Council v. Mallinckrodt, Inc., 471 F.3d 277, 287 (1st Cir. 2006) (citing Solid Waste Disposal Act of 1980, Pub. L. 96–482, § 25, 94 Stat. 2334, 2348). The section authorizes district courts to grant injunctive relief and "order [a violator] to take such other action as may be necessary" to remediate the endangerment. Id.; see also Me*ghrig*, 516 U.S. at 484 ("Under a plain reading of this remedial scheme, a private citizen suing under \S 6972(a)(1)(B) could seek a mandatory injunction, *i.e.*, one that orders a responsible party to 'take action' by attending to the cleanup and proper disposal of toxic waste, or a prohibitory injunction, *i.e.*, one that 'restrains' a responsible party from further violating RCRA."); Avondale Fed. Sav. Bank v. Amoco Oil Co., 170 F.3d 692, 694 (7th Cir. 1999).

The critical question in this case is how to determine whether alleged contamination "may present an imminent and substantial endangerment to health." § 6972(a)(1)(b). We touched on this question only briefly in Albany Bank & Trust Co. v. Exxon Mobil Corp., 310 F.3d 969, 973 (7th Cir. 2002). There, we first outlined the elements of a *prima facie* RCRA claim: "a plaintiff must allege (1) that the defendant has generated solid or hazardous waste, (2) that the defendant is contributing to or has contributed to the handling of this waste, and (3) that this waste may present an imminent and substantial danger to health or the environment." Id. (citing Cox v. *City of Dallas*, 256 F.3d 281, 282 (5th Cir. 2001)). We then observed, interpreting the final element, that "[i]mminence does not require an existing harm, only an ongoing threat of future harm." Id. (citing Cox, 256 F.3d at 299). That is the extent of our circuit precedent on the "may present" language contained in § 6972(a)(1)(B).

But our sister circuits have engaged with this question in great depth. In the first major case interpreting the provision, the Third Circuit emphasized that the statute "enhanced the courts' traditional equitable powers by authorizing the issuance of injunctions when there is but a risk of harm, a more lenient standard than the traditional requirement of threat-ened irreparable harm." *United States v. Price*, 688 F.2d 204, 211 (3d Cir. 1982). The court found the statutory language "unequivocal," demonstrating that Congress "intended to confer upon the courts the authority to grant affirmative equitable relief to the extent necessary to eliminate" the risks posed by toxic waste. *Id.* at 213–14.

In the subsequent decades, several other circuits adopted and further developed the same interpretation of § 6972. *See* *Mallinckrodt*, 471 F.3d at 277; *Dague v. City of Burlington*, 935 F.2d 1343, 1355–56 (2d Cir. 1991), *rev'd in part on other grounds*, 502 U.S. 1071 (1992); *Interfaith Cmty. Org. v. Honeywell Int'l, Inc.*, 399 F.3d 248 (3d Cir. 2005); *United States v. Waste Indus., Inc.*, 734 F.2d 159, 165 (4th Cir. 1984) (rejecting the argument that "[§ 6972] was designed to control pollution only in emergency situations"); *Cox*, 256 F.3d at 299–301; *Price v. United States Navy*, 39 F.3d 1011, 1019 (9th Cir. 1994); *Burlington N. and Santa Fe Ry. Co. v. Grant*, 505 F.3d 1013, 1019–22 (10th Cir. 2007); *Parker v. Scrap Metal Processors, Inc.*, 386 F.3d 993, 1014–15 (11th Cir. 2004). We now join those courts and explicitly embrace the core content of their interpretation.

The district court therefore used an incorrect legal standard to evaluate the Liebharts' argument that PCBs from the demolition may present an imminent and substantial danger to their health and that of their tenants. It did not cite any of the cases we listed above, but instead relied on a single district court decision from a circuit that has not yet addressed the issue. *See Liebhart*, 2018 WL 1583296 at *5 (quoting *Foster*, 922 F. Supp. at 662 ("While there can be no question that the levels of contamination present at the Site may warrant future response action, the plaintiff cannot establish either a current risk of substantial or serious threatened harm, or some necessity for action.")).

That error undercuts several of the reasons the district court gave for rejecting the Liebharts' RCRA claim. For example, the district court cursorily adopted a passing statement we made over twenty-five years ago that "[t]he [EPA's] accepted safe level of PCBs in the environment is fifty parts per million," *id.* (quoting *Cincinnati Ins. Co. v. Flanders Elec. Motor*

Serv., Inc., 40 F.3d 146, 148 (7th Cir. 1994)), to create a requirement that the Liebharts show that PCB contamination on their property met that threshold. But there is no requirement in RCRA for a plaintiff to make "a particular quantitative showing as a sine qua non for liability." Interfaith, 399 F.3d at 260; see also Dague, 935 F.2d at 1356. Only one circuit has come to an arguably contrary conclusion. In Price v. United States Navy, 818 F. Supp. 1323, 1325 (S.D. Cal. 1992), aff'd 39 F.3d 1011 (9th Cir. 1994), the district court required RCRA plaintiffs to show that "the level of contaminants [was] above levels that are considered acceptable by the State." But as the Interfaith court noted, the Ninth Circuit's opinion affirming the district court's judgment did not discuss that requirement. RCRA does not require that plaintiffs demonstrate contamination above some agency-derived threshold level of concentration. 399 F.3d at 260–61. It merely requires that they show that contaminants on the property are seriously dangerous to human health (or will be, given prolonged exposure over time). See *Cox*, 256 F.3d at 299–300 ("an endangerment is 'substantial' if it is 'serious''' (quoting United States Navy, 39 F.3d at 1019)).

That's especially true when the standard is taken out of context. The district court relied on *Cincinnati Ins. Co.* to support its contention that contamination below the threshold level of fifty parts per million ("ppm") does not qualify as a regulatory violation, thereby contradicting Woodyard's opinion regarding safe levels of PCBs and providing the grounds for excluding it. In that case, we evaluated whether an insurance company was required to indemnify its insured for damages arising out of PCB contamination at an industrial site. The EPA had identified the insured as potentially liable under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. § 9601 *et seq.* In

that context, we noted that the contaminated site contained PCBs concentrated at levels up to 58,000 ppm, well above the EPA's general regulatory threshold of fifty ppm. 40 F.3d at 148 (citing 40 C.F.R. § 761.60).

But that regulation, still in effect today, identifies industrial equipment and other wastes contaminated at levels above fifty ppm and requires special procedures for their storage and disposal. It does not unequivocally state that PCBs concentrated at levels lower than fifty ppm are safe for human exposure. Neither *Cincinnati Ins. Co.* nor the EPA regulation stand for the proposition that PCBs concentrated at forty-nine ppm on residential property do not present a substantial endangerment to the health of the residents. That is especially apparent when we consider that the same set of regulations distinguishes between low and high-occupancy areas and requires that, in high-occupancy areas, bulk PCB remediation waste, such as soil, be cleaned up to levels of concentration at or below one ppm. § 761.61(a)(4)(i)(A). Section 761.3 confirms that the term "high-occupancy area" includes residences. See also § 761.123 (regulating spills of PCBs concentrated at fifty ppm or greater but emphasizing that "[t]he concentration of PCBs spilled is determined by the PCB concentration in the material spilled as opposed to the concentration of PCBs in the material onto which the PCBs were spilled"). "Proof of contamination in excess of [agency] standards may support a finding of liability, and may alone suffice for liability in some cases, but its required use is without justification in the statute." Interfaith, 399 F.3d at 261.

This is not to say that all the plaintiffs must do is to show some bit of soil on their property that tests positive for PCBs

above one ppm (or even above the purported lower Wisconsin DNR standard, which the defendants seem to have acknowledged in their state-approved clean-up plan). Of course, there must be accompanying evidence that establishes some connection between the existing contaminants and some imminent and substantial endangerment to health.¹ But the Liebharts attempted to provide such evidence, and the district court held the bar higher than necessary under RCRA's standard. In criticizing expert witness Carpenter's statement that "there is no 'safe' level of exposure to PCBs that does not increase the risk of disease," the district court rejected Carpenter's citation to studies showing the general risks of PCB exposure because "the Liebharts do not cite any evidence that they have been exposed to PCBs." Liebhart, 2018 WL 1583296 at *5. Moreover, the district court concluded that "[t]he Liebharts do not contend that they can prove an imminent and substantial danger with evidence of health problems they have already suffered." Id. at *6.

As we noted in *Albany Bank*, "[i]mminence does not require an existing harm, only an ongoing threat of future

¹ On appeal, the Liebharts contend that there is no separate requirement for expert witness testimony because the photos and videos they have submitted into evidence suffice to prove their RCRA claim. The defendants push back on that argument, insisting that many of the issues are beyond the competence of lay fact-finders and require the assistance of experts to address. *See, e.g., C.W. ex rel. Wood v. Textron, Inc.,* 807 F.3d 827, 838 (7th Cir. 2015) ("Given the complex nature of this case, … [and w]ith no experts to prove causation … the appellants cannot prove their toxictort case under [state] law.") Because the district court did not make a factual finding as to whether this case is sufficient complex to require expert testimony, and because we remand for reconsideration of a separate legal issue, we need not reach that question today.

harm." 310 F.3d at 973. Although the Supreme Court has instructed that "[a]n endangerment can only be 'imminent' if it 'threaten[s] to occur immediately," Meghrig, 516 U.S. at 485 (quoting Webster's New Int'l Dictionary of English Language 1245 (2d ed. 1934)), it qualified that statement when it approvingly quoted the Ninth Circuit's interpretation that the statutory term "implies that there must be a threat which is present *now*, although the impact of the threat may not be felt until later." Id. at 486 (quoting United States Navy, 39 F.3d at 1019). We take that to mean that the Liebharts must show that there are PCBs currently on the property that have the potential to substantially threaten their health at some point in the future if they continue to occupy the premises and prolong their exposure. On remand, the district court should reevaluate its exclusion of Dr. Carpenter's assertion regarding PCB safety under the standards we have outlined above and determine whether, if admissible, the report demonstrates that a substantial and imminent threat to the Liebharts' health may be present.

B. TSCA Likewise Requires No Heightened Showing

TSCA authorizes a separate, private cause of action allowing "any person [to] commence a civil action … against any person … who is alleged to be in violation of … any rule promulgated under" the Act. 15 U.S.C. § 2619(a)(1). The EPA promulgated the PCB regulations in question pursuant to statutory authority under TSCA, designating PCBs as "hazardous waste" and controlling their manufacture, use, storage, and disposal. *See* 40 C.F.R. pt. 761. The Liebharts' TSCA claim alleged that the defendants violated those regulations, thereby authorizing the district court to "restrain [the] violation." § 2619(a). Unlike RCRA, which authorizes mandatory injunctions to compel remediation of previous violations, TSCA authorizes only prohibitory injunctions to stop ongoing violations. *Id.* The defendants argued that there was no longer an ongoing violation, as demolition was complete by the time the Liebharts filed their claim.²

The purported violation was based on 40 C.F.R. § 761.123, which, as we noted above, regulates "spills" of PCB materials concentrated at levels above fifty ppm. The district court correctly noted that the Liebharts had not shown any evidence that any PCBs had been "spilled" onto their property (by means of dust migration) at that level of concentration, and it granted summary judgment to the defendants on that basis.

But the district court seems to have overlooked the following sentence in the regulation, which directs that "[t]he concentration of PCBs spilled is determined by the PCB concentration in the material spilled as opposed to the concentration of the material onto which the PCBs were spilled." *Id.* The Liebharts' complaint seems to have alleged that the concrete floor of the factory, which contained at least some contaminated areas above the fifty-ppm threshold, was demolished and "spilled" onto the Liebharts' property. By the plain text of the regulation, there is no need to show that contaminants on the Liebharts' property are themselves concentrated above fifty ppm so long as the original material that was the source of that spill met the criteria. On remand, the district court may again determine that there is no ongoing violation, but it must

² The district court determined that the Liebharts waived this claim by failing to engage the defendants' argument that there was no "ongoing violation." But the court chose to analyze the merits of the claim regardless of waiver and reached its conclusion on an alternative basis. We likewise set aside the issue of waiver to reach the district court's merits analysis.

first determine whether the alleged violation comes within the meaning of § 761.123 in the first place.

C. The District Court Should Reconsider the Remaining Issues on Remand

Now that we have clarified the standard the plaintiffs must meet, we turn to the remaining procedural issues the Liebharts have asked to us to address.

1. The District Court did not Abuse Its Discretion in Excluding Woodyard's Testimony

"The summary-judgment decision here turned [in large part] on the district court's conclusion that [the] expert testimony was inadmissible. Whether the district court applied the appropriate legal framework for evaluating expert testimony is reviewed *de novo*, but the court's choice of relevant factors within that framework and its ultimate conclusion as to admissibility are reviewed for abuse of discretion." Lees v. *Carthage College*, 714 F.3d 516, 520 (7th Cir. 2013). When a district court is "[f]aced with a proffer of expert scientific testimony ... the trial judge must determine at the outset ... whether the expert is proposing to testify to (1) scientific knowledge that (2) will assist the trier of fact to understand or determine a fact in issue." Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 592 (1993). "The trial court must have ... latitude in deciding how to test an expert's reliability." Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 152 (1999).

The district court was well within its discretion to exclude the proffered testimony of expert witness Woodyard. Beyond the problem that the plaintiffs seemed to have waived this issue in the district court by failing to engage with the defendants' arguments in their motion to strike the testimony, Woodyard's analysis suffers from a critical flaw that stems from the way in which the parties have framed this lawsuit. The district court briefly noted in its opinion that "both sides assume that none of the defendants can be held liable for any PCB contamination on the Liebharts' property that occurred before the demolition began, so the court will make the same assumption." *Liebhart*, 2018 WL 1583296 at *1. That's a curious choice. RCRA permits the Liebharts to obtain injunctive relief from the owner of the facility for any cognizable contamination, regardless of whether the PCBs migrated onto their property before or after the demolition occurred. *See* 42 U.S.C. § 6972(a)(1)(B) (authorizing suit against "any person … who has contributed … to the past or present handling … or disposal" of hazardous waste); *see also Meghrig*, 516 U.S. at 486 ("RCRA contains no statute of limitations.").

But because the Liebharts restricted their claims to PCBs that allegedly migrated onto their property via the dust from the 2015 demolition, they necessarily excluded claims resulting from PCBs that may have gotten onto their property during the previous century. The district court correctly noted that Woodyard's expert opinion could not distinguish between these two alternatives, as both sets of contaminants originated from the same source. There was even evidence showing that PCBs existed in the soil beneath the Liebharts' asphalt driveway—Woodyard could not explain how that might have occurred as the result of dust blowing in the wind as opposed to seepage over the course of years before any demolition occurred.

Perhaps the Liebharts decided to frame their claims in this way because they wanted to go after defendants TRC and Apollo, who would not be liable for what happened before demolition. Or perhaps some element of their state-law claims, which we have not addressed, required them to constrict the scope. They did not explain their reasoning to us (or it seems, to the district court). But the distinction makes it difficult for Woodyard to make his case, given that he did not "adequately account[] for obvious alternative explanations." *Gopalratnam v. Hewlett-Packard Co.*, 877 F.3d 771, 787 (7th Cir. 2017). Viewed in this light, the district court was within its discretion to exclude the testimony as unreliable and unhelpful to the trier of fact. The district court may choose to rethink that evaluation on remand under the legal standards we outlined above, but it may well reach the same conclusion.

2. The District Court Should Reconsider Its Denial of Injunctive Relief

The district court denied injunctive relief to the Liebharts because the defendants had already agreed to a clean-up plan that had been approved by the Wisconsin DNR. We review that decision for an abuse of discretion. *See AMI Int'l, Inc. v. Datacard Corp.* 106 F.3d 1342, 1352 (7th Cir. 1997) (remanding grant of RCRA injunction).

As we mentioned above, RCRA authorizes district courts to issue either mandatory or prohibitory injunctions, while TSCA authorizes only prohibitory injunctions. "[I]t is appropriate 'to give great deference to the district court's decision as to the precise equitable relief necessary in a particular case." *Bowes v. Ind. Sec. of State*, 837 F.3d 813, 817 (7th Cir. 2016) (quoting *Gjersten v. Bd. Of Election Com'rs for City of Chicago*, 791 F.2d 472, 479 (7th Cir. 1986)). That is especially true when a plaintiff requests a mandatory injunction, which "imposes significant burdens on the defendant and requires careful consideration of the intrusiveness of the ordered act, as

well as the difficulties that may be encountered in supervising the enjoined party's compliance with the court's order." *Kartman v. State Farm Mut. Auto. Ins. Co.,* 634 F.3d 883, 892 (7th Cir. 2011).

Considering SPX's decision to formulate a clean-up plan and obtain approval from the state agency, the district court determined that there was no need for separate, federally-supervised remediation. It reached that conclusion even while assuming that the defendants were in violation of either RCRA or TSCA, despite the fact it found no such violation. Other courts have determined that the existence of a parallel plan of remediation supervised by the state does not necessarily prevent a federal district court from granting an injunction if it finds the state agency's actions to be insufficient to remedy the violation of federal law. See, e.g., Interfaith, 399 F.3d at 264–68. On the other hand, the same courts have also upheld denials of injunctions in similar situations when the district court finds that the parallel plan is adequate to the task. See Trinity Indus., Inc. v. Chicago Bridge & Iron Co., 735 F.3d 131, 139–40 (3d Cir. 2013) (distinguishing Interfaith). We recently reached the same conclusion. See LAJIM, LLC v. Gen. *Elec. Co.*, No. 18-1522, 2019 WL 1011021, at *4–11 (7th Cir. Mar. 4, 2019) ("[T]he district court correctly held that it has discretion to award injunctive relief under the RCRA and is not required to order relief after a finding of liability," particularly in light of ongoing relief supervised by a state environmental agency).

Here, the district court determined that SPX's existing plan was sufficient and that the Liebharts had not "identif[ied] any way that SPX's plan [was] deficient or violate[d] federal law." *Liebhart,* 2018 WL 1583296 at *7. We agree. Although the Liebharts point to certain statistical sampling requirements outlined in 40 C.F.R. § 761.125 and contend that SPX's existing plan fails to meet those requirements, the district court noted that SPX's plan includes further sampling of the soil on the Liebharts' property. It emphasized that "the Liebharts do not otherwise explain why SPX's proposed sampling scheme is substantively inadequate." *Liebhart,* 2018 WL 1583296 at *7. We see no evidence that compels us to contradict that factual finding.

However, in light of the legal standards we outlined above, we ask the district court to reconsider its decision to deny injunctive relief on remand. Because the bar for establishing an imminent and substantial danger is lower than the district court believed when evaluating the request for an injunction, it would be prudent to reassess whether the DNRapproved plan adequately remedies harms that may come within RCRA's scope. *See LAJIM*, 2019 WL 1011021 at *6 ("[O]nce a court finds a defendant liable for creating a risk of imminent and substantial danger, it will usually be the case that injunctive relief is warranted. But that is not always the case.") (internal quotations and citations omitted).

3. The District Court did not Abuse Its Discretion in Denying Leave to Amend the Complaint.

We review a denial of leave to amend a complaint for abuse of discretion. *Life Plans, Inc. v. Sec. Life of Denver Ins. Co.,* 800 F.3d 343, 357 (7th Cir. 2015). District courts are to "freely give leave [to amend] when justice so requires." Fed. R. Civ. P. 15(a)(2). "The Supreme Court has interpreted this rule to require a district court to allow amendment unless there is a good reason—futility, undue delay, undue prejudice, or bad faith—for denying leave to amend." *Life Plans*, 800 F.3d at 357 (citing *Foman v. Davis*, 371 U.S. 178, 182 (1962)). The district court in this case identified two of those grounds as bases for denial: futility and undue delay. While we disagree with the futility analysis, we concur with the finding of undue delay and decline to reverse.

We begin with the question of futility. Both statutes contain advance-notice requirements that citizen plaintiffs must observe prior to filing RCRA or TSCA suits. They require those plaintiffs to notify the EPA 60-90 days in advance of filing the complaint. 42 U.S.C. § 6972(b)(2); 15 U.S.C. § 2619(b)(1)(A). But the district court chose to apply the requirements not only to the filing of the complaint, but also to any subsequent amendments that sought to add new RCRA or TSCA counts. Although the Liebharts complied with the requirements prior to filing their original complaint in April 2016, they gave no new notice to the EPA before filing for leave to amend in February 2018. The district court held that, because the prior notice did not contain any mention of buried PCBs on the SPX property, it was insufficient to alert the EPA to the particular violation the Liebharts sought to include in the amended complaint.

The notice provisions serve two purposes. "First, notice allows Government agencies to take responsibility for enforcing environmental regulations, thus obviating the need for citizen suits. ... Second, notice gives the alleged violator 'an opportunity to bring itself into complete compliance with the Act[s] and thus likewise render unnecessary a citizen suit."" *Hallstrom v. Tillamook Cty.*, 493 U.S. 20, 29 (1989) (quoting *Gwaltney of Smithfield, Inc. v. Chesapeake Bay Found., Inc.*, 484

U.S. 49, 60 (1987)). The district court's decision to require notice for an amendment to a complaint fulfilled neither purpose. By the time the Liebharts attempted to amend their complaint, the EPA had been on notice of alleged PCB contamination at the SPX property for over two years—and it had declined to get involved. Moreover, it was unlikely that the defendants would resolve the alleged violation to avoid being sued when they were already in the midst of an extended lawsuit with the same plaintiffs. See AM Int'l, 106 F.3d at 1351 ("[T]he delay period is designed to allow a [defendant] a period in which to clean up its act and avoid litigation. [This defendant] was clearly not interested in using the delay period to resolve the dispute without going to court."); see also Dague, 935 F.2d at 1351 ("There is no need to maintain a window of opportunity for the government to take the lead enforcement role ... when a citizen, acting as a private attorney general, has already lawfully assumed the lead role in bringing a ... claim against the same facility.") (quoting Dague v. City of Burlington, 733 F. Supp. 23, 26 (D. Vt. 1990)). When the original notice is "sufficiently specific to inform the alleged violator [and the agency] about what it is doing wrong, so that it will know what corrective actions will avert a lawsuit," Atl. States Legal Found., Inc. v. Stroh Die Casting Co., 116 F.3d 814, 819 (7th Cir. 1994), there is no need to require a second round of advance notice for an amended complaint in the same litigation.

But an error in the futility analysis alone does not necessarily constitute an abuse of discretion on the whole. In addition to futility, the district court cited undue delay and prejudice in its decision to deny leave to amend. "[D]elay by itself is normally an insufficient reason to deny a motion for leave to amend. Delay must be coupled with some other reason. Typically, that reason ... is prejudice to the non-moving party." *Dubicz v. Commonwealth Edison Co.,* 377 F.3d 787, 793 (7th Cir. 2004). The district court cited the Liebharts' admission that they learned of the possible burial of contaminated concrete on the SPX property on October 11, 2017 but failed to seek leave to amend their complaint until February 22, 2018. During that more than four-month period, the parties submitted and briefed their cross-motions for summary judgment, and by February, trial was only three months away. The Liebharts provided no justification for their delay.

In response, the Liebharts contend that there was no undue prejudice to the defendants: by the time they filed their motion, five weeks of discovery still remained. We disagree. While the district court's explanation of prejudice was fairly short, even if the district court had failed to articulate a finding of prejudice altogether, we might still "affirm providing" that 'the prejudice that would result from such amendment was apparent."" Park v. City of Chicago, 297 F.3d 606, 613 (7th Cir. 2002) (quoting Feldman v. Am. Mem'l Life Ins. Co., 196 F.3d 783, 793 (7th Cir. 1999)). In Park, the plaintiff waited six months to move for leave to amend a complaint after she knew (or should have known) of the additional alleged violation. *Id.* Because trial was approaching, we concluded that the district court was well within its discretion to deny leave. *Id.*; see also Perrian v. O'Grady, 958 F.2d 192, 194–95 (7th Cir. 1992) ("Because substantive amendments shortly before trial serve to defeat the public's interest in speedy resolution of legal disputes, '[a] district court judge is entitled, in such circumstances, to refuse to allow a plaintiff's amendment."" (quoting Campbell v. Ingersoll Mill. Mach. Co., 893 F.2d 925, 927 (7th Cir. 1990)) (internal citation omitted)).

On the contrary, in *Life Plans*, we found no undue delay when a plaintiff promptly moved to amend its complaint just ten days after learning of the factual basis for its new count during discovery. 800 F.3d at 358. The Liebharts delayed more than four months in the same circumstances. Although discovery was ongoing at the time of the Liebharts' motion, the parties had already briefed their dispositive motions, and the district court was preparing its summary-judgment order that would ultimately dispose of the case. We therefore cannot say that denial of leave for undue delay and prejudice was an abuse of the district court's discretion. Of course, the district court may permit an amendment on remand if the interests of justice so require.

III. CONCLUSION

Although the district court properly exercised its discretion on the various evidentiary and procedural issues the plaintiffs have raised, its analysis on the merits was narrower than the statutes demand. It may reach the same conclusions on reconsideration, but the parties should have another opportunity to litigate whether a substantial and imminent endangerment to health exists in this case under the standards we have outlined. We therefore VACATE the order of the district court and REMAND for further proceedings consistent with this opinion.³

³ The Liebharts also challenge the taxation of costs against them by the clerk of the district court. Because we vacate the district court's judgment, we assume that the imposition of costs is automatically vacated and so do not reach that issue. The clerk of the district court is free to reassess costs on remand as the case proceeds.