

**NOT RECOMMENDED FOR FULL-TEXT PUBLICATION**  
**File Name: 13a0713n.06**

**Nos. 11-4369; 12-3995**

**UNITED STATES COURT OF APPEALS  
FOR THE SIXTH CIRCUIT**

**FILED**  
**Aug 02, 2013**  
DEBORAH S. HUNT, Clerk

CAROLYN BAKER; DANIEL BROCKMAN, et al., )  
  )  
Plaintiffs-Appellants, )  
  )  
v. )  
CHEVRON U.S.A. INC.; CHEVRON TEXACO )  
CORPORATION; CHEVRON PIPELINE, INC.; )  
CHEVRON ENERGY SOLUTIONS LP; CHEVRON )  
ENERGY SOLUTIONS MANAGEMENT LLC; )  
CHEVRON ENVIRONMENTAL MANAGEMENT )  
COMPANY; CHEVRON ENVIRONMENTAL )  
SERVICES COMPANY, )  
  )  
Defendants-Appellees. )  
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BEFORE: GRIFFIN and KETHLEDGE, Circuit Judges; and ZATKOFF, District Judge.\*

GRIFFIN, Circuit Judge.

This case arises from defendant Chevron's activities at its crude oil refinery near the Village of Hooven in Hamilton County, Ohio.<sup>1</sup> Chevron acknowledges that from 1931 to 1986, the refinery was the source of considerable environmental contamination, including hazardous air emissions and

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\*The Honorable Lawrence P. Zatkoff, Senior United States District Judge for the Eastern District of Michigan, sitting by designation.

<sup>1</sup>Although plaintiffs named seven different Chevron entities as defendants, there appears to be no reason to distinguish between each of the separate entities because the parties collectively refer to all defendants throughout their briefs simply as "Chevron." We follow suit.

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a cumulative release of approximately eight million gallons of gasoline that gravitated through the soil and formed a plume atop the groundwater under the refinery. By 1996, the plume had migrated under a portion of the Village of Hooven.

Plaintiffs are approximately 200 former and current neighbors of the refinery who allege claims for damages arising out of the refinery's air emissions, the groundwater plume, and the "soil vapors" arising from the plume that escape to the surface. Plaintiffs fall into three distinct categories: (1) individuals who claim personal injury because of the air emissions; (2) individuals who seek medical monitoring damages because their exposure to the plume and its soil vapors has given them an increased risk of contracting a serious disease; and (3) individuals who claim property damage because of the plume and its soil vapors.

The district court bifurcated the personal injury plaintiffs from the property damage plaintiffs and selected bellwether plaintiffs from each group to determine the viability of each category of claims. After excluding two of plaintiffs' experts opinions as unreliable, the district court granted summary judgment to Chevron on all claims. The district court also granted Chevron's motion for Rule 11 sanctions, ordering plaintiffs' counsel to pay Chevron \$250,000 in defense costs because their positions regarding the legal and evidentiary basis for medical monitoring damages were objectively unreasonable. Plaintiffs appealed the orders excluding their experts and granting summary judgment to Chevron; plaintiffs' counsel appealed the order granting Rule 11 sanctions to Chevron. For the reasons that follow, we affirm.

I.

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A.

The Village of Hooven lies in the western part of Hamilton County, Ohio. State Route 128 demarcates Hooven's eastern boundary. From approximately 1930 to 1985, Gulf Oil Company ("Gulf") operated a petroleum refinery next to Hooven, just across State Route 128. The refinery produced gasoline, diesel fuel, jet fuel, heating oil, sulphur, and asphalt. The southwestern corner of the refinery's property line abuts the northeastern corner of Hooven. The refinery sits in the flood plain of the Great Miami River, which establishes the eastern boundary of the refinery. Chevron purchased the refinery from Gulf in 1985 and closed it in 1986. Chevron acknowledges that while the refinery was operational, various hydrocarbon compounds escaped from refinery equipment into the air as "fugitive emissions."

In 1985, gasoline appeared to be seeping from the riverbank inside the refinery property line into the Great Miami River. It was later determined that gasoline and diesel fuel, which had been leaked or spilled at the refinery over the years, had gravitated through the soil and entered the groundwater under the refinery. In total, about eight million gallons of fuel leaked into the groundwater. The fuel settled on top of the groundwater, creating a light, non-aqueous phase liquid ("LNAPL") plume. Over time, the plume migrated from the refinery's boundaries and entered at least the eastern subterranean area of Hooven. The plume under the eastern portion of Hooven is at a depth of anywhere from fifty to seventy feet below the surface. The principal chemical of concern in the plume is benzene, which is a known carcinogen in sufficient doses. Benzene also

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originates from vehicle exhaust, cigarette smoke, and is present in common household products, such as glue and paint.

As the level of the groundwater rises, so does the LNAPL plume floating atop the water. When the groundwater falls, a “smear zone” of LNAPL-saturated soil is left behind. When the water table does not encompass the smear zone, constituents from the plume remaining in the soil may volatize into “soil vapors” which could potentially reach the surface, depending on, among other things, the chemical properties of the particular constituent, the depth of the smear zone, and the porosity of the soil. Under the right conditions, however, the soil vapors may biodegrade naturally.

Soon after Chevron discovered the seeping gasoline in 1985, it notified the Ohio Environmental Protection Agency and began the process of installing groundwater monitoring and recovery wells throughout the refinery to capture the contamination. Later, in 1993, Chevron and the United States Environmental Protection Agency (“U.S. EPA”) entered into a consent order which governs the remediation of the refinery site. Pursuant to the order, a number of monitoring wells were installed to assist in determining the footprint of the plume, as well as provide a means to conduct soil vapor testing. These efforts led Chevron to discover that the plume had migrated under Hooven in 1997.

In 1999, to mitigate the risk of soil vapor intrusion from the plume, Chevron installed a horizontal soil vapor extraction (“HSVE”) system in Hooven. The HSVE is a vacuum-type system comprised of three horizontal extraction pipes located underneath Hooven’s main roadways that intercepts soil vapors from the plume and sends them to a thermal oxidation unit for incineration.

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In 2006, the U.S. EPA reviewed Chevron's monitoring well sampling data and concluded that "there are no exposure pathways from Chevron's contamination to the community residents, and that Chevron's contamination does not pose any current human health risks to the residents or workers in the community." An "exposure pathway" or "completed pathway" is a pathway by which soil vapors from the plume can reach the surface and enter a building. The existence of a completed pathway generally requires: (1) the observation that a particular chemical is present at all soil depths and in the subject building's indoor air; (2) confirmation that the specific chemical is present at concentrations above background levels; and (3) confirmation that the measured concentrations did not come from nonplume sources.

Also in 2006, using the same Chevron sampling data as did the U.S. EPA, the Ohio Department of Health ("ODH") prepared its own health risk analysis. The ODH found an "indeterminate public health hazard" and requested additional sampling under a "wors[t] case scenario." To accommodate the ODH's request, the U.S. EPA went into Hooven in 2008 and 2009 and collected several quarters of sub-slab and indoor vapor samples under what it deemed a "worst case scenario," that is, when the HSVE was turned off and when Chevron was engaged in high-grade groundwater pumping which would lower the water table and expand the smear zone.

The ODH drew two conclusions from its "worst case scenario" study. First, "[t]he levels of vapor-phase petroleum hydrocarbons detected in the indoor air of area residences and the Hooven Elementary School during the [U.S. EPA] quarterly sampling did not pose a public health hazard to residents, students or staff." Second, a completed pathway for isopentane and trimethylpentane at

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concentrations above screening levels could be found in the subsurface near two monitoring wells in the eastern portion of Hooven. Regarding this second conclusion, however, the ODH noted that, although those hydrocarbons were detected in the *subsurface*, there was no health risk because the *indoor air* concentrations of those chemicals “did not increase to above levels of concern,” even under “worst case scenario” conditions. The ODH also observed that when Chevron reactivated the HSVE, the vapor levels quickly and significantly decreased.

The ODH also released an ecological study titled “Cancer Incidence Among Residents of Hooven, Hamilton County, Ohio, 1996-2003.” The ODH designed the study to compare the incidence of cancer among Hooven’s 164 residents with national background rates. The study found “significantly higher than expected numbers of cancer cases for the 25 observed cancers combined and cancers of the female breast; lung and bronchus; and bladder.” The study concluded, however, that the “types of cancer diagnosed among Hooven residents differ with respect to risk factors, latency, course of disease and probability of survival. For this reason, it is not likely a specific point source of exposure or single risk factor is playing a role in the increased cancer burden.” The ODH later supplemented its study with data from 2004 to 2007, reporting seven additional cancer cases. In this update, the ODH reaffirmed its earlier conclusion that “it is not likely that a common risk factor is contributing to the development of these cancers.”

The 200 plus individual plaintiffs in this case, former and current neighbors of the refinery, assert a litany of personal injury and property damage claims against Chevron under Ohio state law. For case management purposes, the matter was bifurcated between personal injury plaintiffs and

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property damage plaintiffs. The district court also allowed the parties to select bellwether plaintiffs for each trial group. The parties vigorously litigated whether the refinery damaged each category of plaintiffs. In four separate opinions, the district court rejected all claims. A summary of each of these rulings is necessary for the issues raised on appeal. We start with the bellwether property damage plaintiffs.

B.

Of the sixty-one individual plaintiffs advancing property damage claims, there are fifteen bellwether plaintiffs. These plaintiffs, whose properties were directly above the plume, alleged property damage resulting from the plume's contamination of the subsurface and groundwater, and the soil vapors emanating from the plume that reach the surface. In support of these claims, plaintiffs offered, *inter alia*, the expert opinion of Philip Bedient, Ph.D. Dr. Bedient broadly opined that the “[p]roperties and residents of Hooven have been adversely impacted” by the plume. He also stated that soil vapors from the plume were “the only way to explain” the presence of benzene, toluene, xylene, and ethyl benzene in the shallow subsurface soils in and around Hooven.

Chevron filed a motion to exclude Dr. Bedient's opinions under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and a motion for summary judgment. The district court granted Chevron's motions, holding that “the record fails to show that the hydrocarbon plume caused any damage to Plaintiffs' property or interfered with their property rights or with the use and enjoyment of their properties.” The court first determined that:

[N]one of the bellwether Plaintiffs have demonstrated that the plume actually interferes with their use of the subsurface. Plaintiffs do not use the groundwater for

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any purpose. Plaintiffs' water supply does not come from ground wells; rather, they have a municipal water source. Plaintiffs have not indicated that the plume has caused them to abandon any particularized and non-speculative plans which require drilling or excavation on their properties.

(Footnote omitted.)

The court next excluded Dr. Bedient's opinions because he admitted he was not a soil vapor expert and, even if he was, his opinions were unreliable, vague, and conclusory because he did not perform any analysis to determine whether there is a completed soil vapor pathway from the plume to the surface. The court went on to conclude that plaintiffs' remaining evidence of soil vapor intrusion—Chevron's *theoretical* model of completed soil vapor pathways and plaintiffs' deposition testimony of gasoline odors in their homes and around their properties—was insufficient to create a genuine issue of material fact on whether soil vapors from the plume caused compensable property damage. All bellwether property damage plaintiffs appealed.

C.

The district court next addressed the bellwether claims of the personal injury plaintiffs. Of the 200 plus plaintiffs in this case, only seven claimed personal injury from being exposed to benzene contained in the refinery's "fugitive emissions." Of those seven, the parties selected four as bellwether plaintiffs. These plaintiffs, and their respective injuries, are as follows: Mary Etta Greener-Brown, Hodgkin's disease and breast cancer; Carol Lipscomb, monoclonal gammopathy/multiple myeloma; Jean Runck, monoclonal gammopathy/multiple myeloma; and Michelle Schrader, acute myelogenous leukemia ("AML").

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Plaintiffs offered three expert witnesses to prove that the refinery's airborne benzene emissions caused their injuries. First, Dr. Cheremisinoff, a chemical engineer, calculated a total gross amount of benzene released from the refinery through emissions. Second, Dr. Rosenfeld, using Dr. Cheremisinoff's calculations, created an air flow model to calculate the cumulative dose of benzene to which each plaintiff was exposed, a number expressed in micrograms. Dr. Garabrant, Chevron's expert, converted Dr. Rosenfeld's microgram figures into the more conventional expression of parts per million per years ("ppm-years"). Finally, Dr. Dahlgren, using Dr. Rosenfeld's dose estimates, opined in his First Report and untimely Second Report (filed in response to Chevron's motion to strike the First Report) that each plaintiff's dose of benzene was sufficient to cause her specific illness.

Chevron filed a motion to exclude Dr. Dahlgren's causation opinions under *Daubert* and a motion for summary judgment. Chevron based its motion for summary judgment on the asserted inadmissibility of Dr. Dahlgren's opinion. Plaintiffs responded by submitting Dr. Dahlgren's Third Report, a forty-nine page affidavit which purportedly clarified his first two reports. The district court held a hearing at which Dr. Dahlgren testified. After the hearing, as a result of additional motion practice, plaintiffs obtained discovery of some 270 documents that Chevron wrongly identified as privileged. With leave of court, Dr. Dahlgren prepared a Fourth Report limited to the issues raised in the newly discovered evidence, and the parties filed supplemental memoranda on Dr. Dahlgren's new opinion.

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In a forty-seven page order, the district court held that Dr. Dahlgren's causation opinions were not reliable under *Daubert* and therefore inadmissible. The court first determined that Dr. Dahlgren's First Report failed to comply with Rule 26(a)(2)(B) of the Federal Rules of Civil Procedure because it did not provide the "how and why" of his opinion that each plaintiff's cumulative benzene exposure caused her specific illness. The court explained:

Dr. Dahlgren's [First Report] on these Plaintiffs consists almost entirely of a recitation of their family and medical histories. Each report concludes with a brief "discussion" which apparently sets forth Dr. Dahlgren's opinion that the Plaintiff's illness was caused by her exposure to benzene. Then, attached to each report is an "Appendix on benzene toxicity," which is essentially a bibliography and summary of a number of articles and medical studies on illnesses purportedly caused by benzene. With one exception, however, Dr. Dahlgren never explains in his report how the bibliography supports his conclusion that a Plaintiff's cumulative benzene exposure was sufficient to cause her disease.

The "one exception" noted by the district court was Dr. Dahlgren's opinion regarding plaintiff Michelle Schrader, where he cited a 1948 report issued by the American Petroleum Institute which states that there is no safe level of exposure to benzene. The court concluded, however, that Dr. Dahlgren's "no safe level" opinion was not a reliable causation theory under *Daubert*, noting that "the one-hit theory could not be established because it would be just as likely that ambient benzene was the cause of Plaintiffs' illnesses."

The court next determined that the Second Report—submitted nearly two months after the expert report deadline and without leave of court—contained the same fatal flaw as the First Report: Dr. Dahlgren made no effort to tether his causation theory to the medical literature attached to his report.

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As for the Third Report, the district court observed that it “is arguably the only report from Dr. Dahlgren which complies with the requirements of Rule 26(a)(2)[(B)] and yet Plaintiffs provided no justification for providing this report five months late.” The court concluded that there was nothing in the Third Report that could not have been included in the First Report and, therefore, the Third Report must be excluded as an improper attempt to correct the weaknesses of Dr. Dahlgren’s opinions that Chevron identified in its *Daubert* motion. The court further determined that submitting the specifics of the expert’s opinion on the dispositive issue in the case more than five months late was not harmless error. Because of these defects, the district court did not consider Dr. Dahlgren’s Third Report.

The district court then addressed Dr. Dahlgren’s Fourth Report. Interestingly, the additional discovery that plaintiffs obtained on the documents that Chevron had wrongly claimed as privileged showed that the refinery’s benzene emissions were actually thirty percent *lower* than initially believed. Nevertheless, Dr. Dahlgren maintained his original causation opinion and raised for the first time the issue of short-term exposure. On this new issue, he opined that plaintiffs’ peak exposures to benzene in excess of regulatory levels were worse than lower levels of exposure for a longer period of time. Dr. Dahlgren also stated that in 1977, plaintiffs, and all Hooven residents, should have been wearing air respirators when benzene emissions exceeded regulatory levels near the refinery’s fence line with Hooven. Additionally, Dr. Dahlgren cited nine medical studies in support of his Fourth Report.

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The district court rejected the Fourth Report as unreliable. The court found that Dr. Dahlgren's opinions were inadmissible to the extent he was relying on regulations on short-term benzene exposures. Citing *Nelson v. Tennessee Gas Pipeline Co.*, 243 F.3d 244, 252–53 (6th Cir. 2001), the court explained that the mere fact that plaintiffs were exposed to benzene in excess of regulatory limits was insufficient to establish causation in a tort case. The court also found the discussion of short-term benzene exposures in 1977 wholly irrelevant because Dr. Dahlgren failed to account for the fact that “not only did none of the Plaintiffs live near the refinery fence line in 1977, none of the Plaintiffs even lived in Hooven in 1977.” The court then exhaustively analyzed the medical studies Dr. Dahlgren offered in support of his opinion, ultimately concluding that “none of these studies supports an opinion that benzene can cause the illnesses from which Plaintiffs suffer at the extremely low doses or exposures experienced in this case.” Having excluded Dr. Dahlgren's opinions—plaintiffs' only evidence of causation—the district court granted Chevron's motion for summary judgment. Greener-Brown, Schrader, and Lipscomb appealed; Runck did not.

D.

The remaining property damage plaintiffs attempted to meet the district court's criticism of the bellwether claims with new expert opinions from Matthew Hagemann, a former U.S. EPA geologist, Dr. Cheremisinoff, and Dr. Bedient. Although Mr. Hagemann agreed with Chevron's assessment of the size of the smear zone, he broadly concluded that the plume and its soil vapors could be found “in Hooven.” Dr. Cheremisinoff similarly opined, in nonspecific fashion, that soil vapors intruded into basements and crawl spaces of the buildings “in Hooven.” Dr. Bedient

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disagreed with Mr. Hagemann over the size of the smear zone, stating that the smear zone boundaries had been “misrepresented” and that further sampling was necessary “to determine the full extent of the hydrocarbon contamination.”

Chevron moved for summary judgment; the district court granted the motion. Adopting Mr. Hagemann’s opinion on the size of the smear zone, the court held that all property owners who were not above the smear zone, or within 100 feet of its edges,<sup>2</sup> had no property damage claims as a matter of law. As for the claims involving the remaining properties, the court summarized its reasons for rejecting those claims as follows:

Plaintiff[s’] claims fail because none of them pointed the [c]ourt to specific evidence that his or her property had experienced [soil] vapor intrusion. Instead, as alluded to earlier, Plaintiffs have approached this case as if the Village of Hooven is the real party-in-interest in this case. But Hooven is not a plaintiff in this case and proof that there was a completed pathway for vapor intrusion “in Hooven” does not suffice—to take one example—to prove that there was or is a completed pathway at 113 Ohio Avenue. Plaintiffs’ proof of vapor intrusion is simply at too general a level to create a triable issue of fact on this issue.

(Emphasis removed.) All property damage plaintiffs appealed.

#### E.

One hundred eighteen plaintiffs requested medical monitoring damages because their alleged exposure to the plume and its soil vapors put them at an “increased risk” of contracting a number of serious diseases. Plaintiffs submitted a medical monitoring plan from Dr. Lockey designed to “balance increased health risks of contracting injuries or diseases associated with the involuntary

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<sup>2</sup>The district court adopted the 100-foot limit based on U.S. EPA guidance regarding the methodology of detecting soil vapors.

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environmental contamination of the soil and ground water of Hooven by Chevron hazardous chemicals and help mitigate individual and community distress related to health outcome uncertainties.” After reviewing Dr. Lockey’s plan, the district court ordered plaintiffs to show cause why their claims should not be dismissed in light of *Hirsch v. CSX Transp., Inc.*, 656 F.3d 359 (6th Cir. 2011), a case in which this court addressed the evidentiary requirements for medical monitoring damages under Ohio law.

After considering the parties’ briefing, the district court dismissed all claims for medical monitoring damages with prejudice. The court offered three reasons for its ruling. First, plaintiffs failed to specifically identify any disease or illness that they might have an increased risk of contracting because of the plume and its soil vapors. Second, plaintiffs failed to show “not only that he or she was exposed to a specific chemical, but also to quantify the exposure, i.e., provide a dose, in some way that it can be reliably determined that he or she has a significantly increased risk of contracting some disease or medical condition.” And third, Dr. Lockey’s plan was not designed to address any disease that might be caused by the chemicals in the plume; rather, it was a general wellness plan that supposedly would offset the deleterious health effects that may or may not have been caused by the plume. The district court also commented that “[a]s was the case with the property damage Plaintiffs, the medical monitoring Plaintiffs have apparently treated this lawsuit as a class action. It is not, however.” All medical monitoring plaintiffs appealed.

F.

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After all property damage claims and bellwether personal injury claims were adjudicated, but while the claims for medical monitoring damages were pending, Chevron filed a motion for Rule 11 sanctions against plaintiffs' counsel. Chevron argued that it was entitled to defense costs and attorney's fees relating to those pending claims because plaintiffs' counsel continued to prosecute these claims after conceding at a discovery conference that they had no causation evidence under the standards set by the district court.

The district court granted Chevron's Rule 11 motion about two months after it dismissed the claims for medical monitoring damages, holding that:

Plaintiffs' counsel took objectively unreasonable positions with respect to both the facts and the law and persisted in maintaining the medical monitoring claims despite the absence of legal and factual support for the claims. These two problems are intertwined in this case. It may be that counsel's unreasonable view of the law influenced the manner in which they attempted to develop evidentiary support for these claims. Counsel's conduct, nevertheless, was unreasonable.

The court identified the "most serious" problem with counsel's conduct in further detail: "Because it was so well-established . . . that a toxic tort claimant needed proof of specification causation, i.e., dose, counsel's complete failure to adduce proof of dose had to be the product of a deliberate decision and cannot be blamed on inadvertence or on a reasonable misinterpretation of the case law."

The court subsequently awarded Chevron \$250,000. Plaintiffs' counsel appealed.

## II.

It is undisputed that the LNAPL plume under a portion of Hooven originates from Chevron's refinery and that fugitive emissions escaped from the refinery while it was operational. It is fiercely disputed whether these environmental hazards have caused any cognizable personal injury or

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property damage. On appeal, the parties have abandoned the bellwether distinctions used below and have organized their arguments around the three categories of plaintiffs: (1) those claiming personal injury damages from airborne benzene emissions; (2) those claiming property damage; and (3) those claiming medical monitoring damages. We address each category in the order presented after reciting the applicable standards of review.

We review a district court's decision on a motion for summary judgment de novo. *Savage v. Gee*, 665 F.3d 732, 737 (6th Cir. 2012). "The question on summary judgment is whether the moving party has demonstrated that the evidence available to the court establishes no genuine issue of material fact such that it is entitled to a judgment as a matter of law." *Dobrowski v. Jay Dee Contractors, Inc.*, 571 F.3d 551, 554 (6th Cir. 2009) (citing Fed. R. Civ. P. 56(c)). In evaluating a motion for summary judgment, we view the record in the light most favorable to the nonmoving party. *Id.* "A mere scintilla of evidence is insufficient to create a material question of fact and defeat a motion for summary judgment; 'there must be evidence on which the jury could reasonably find for the [non-movant].'" *CareToLive v. FDA*, 631 F.3d 336, 340 (6th Cir. 2011) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 252 (1986)).

"We 'review the exclusion of expert testimony for abuse of discretion, even when the exclusion results in the entry of summary judgment for the opposing party.'" *Pluck v. BP Oil Pipeline Co.*, 640 F.3d 671, 676 (6th Cir. 2011) (quoting *Meridia Prods. Liab. Litig. v. Abbott Labs.*, 447 F.3d 861, 868 (6th Cir. 2006)). "A district court abuses its discretion if it bases its ruling on an erroneous view of the law or a clearly erroneous assessment of the evidence." *Ky. Speedway, LLC*

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*v. Nat'l Ass'n of Stock Car Auto Racing, Inc.*, 588 F.3d 908, 915 (6th Cir. 2009) (citation and internal quotation marks omitted). Consequently, “we will not substitute our own judgment for that of the district court and will reverse an evidentiary decision only where we are left with a definite and firm conviction that [the district court] committed a clear error of judgment.” *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 528 (6th Cir. 2008) (alteration in original) (citation and internal quotation marks omitted).

### III.

#### A.

Starting with the category of plaintiffs claiming personal injury damages from airborne benzene emissions, the parties here dispute whether the district court properly excluded Dr. Dahlgren’s expert opinion. Resolution of this issue controls whether the district court properly granted summary judgment to Chevron because Dr. Dahlgren’s opinion is plaintiffs’ only evidence of causation. And although whether Dr. Dahlgren was properly excluded is outcome determinative, we nevertheless review the district court’s decision under the abuse of discretion standard. *See Newell Rubbermaid, Inc. v. Raymond Corp.*, 676 F.3d 521, 532 (6th Cir. 2012); *Pluck*, 640 F.3d at 676.

Plaintiffs argue that the district court erred because it did not “take into consideration the full record presented” in excluding Dr. Dahlgren. Plaintiffs claim that the court ignored his *Daubert*

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hearing testimony, a slideshow that he prepared but did not present at that hearing,<sup>3</sup> and a CD containing numerous benzene-related scientific studies that he gave the court during the *Daubert* hearing. Plaintiffs also criticize the district court for rejecting a number of studies that Dr. Dahlgren relied on in his Fourth Report because those studies did not contain statistically significant findings.<sup>4</sup>

Chevron responds by first noting that plaintiffs do not specifically challenge the court's rulings that the First and Second Reports failed to comply with Rule 26(a)(2)(B) or that the Third Report was procedurally improper. Chevron next asserts that the district court was not required to consider Dr. Dahlgren's testimony, his slideshow, or CD of studies because those materials related to his *Third Report*, which the court correctly rejected as a prejudicially late, transparent effort to reopen an opinion after its weaknesses had been exposed. Finally, Chevron provides five reasons why Dr. Dahlgren's causation opinion in the Fourth Report lacks a reliable scientific foundation: (1) He never identified the dose of benzene from short-term bursts that he opined was causally related to plaintiffs' blood diseases; (2) he failed to proffer any specific information relating to the short-term benzene bursts each plaintiff allegedly received; (3) he did not cite any scientific literature establishing that short-term benzene exposure, of any intensity, was capable of causing plaintiffs' injuries; (4) he relied on results of studies that contained statistically insignificant results; and (5)

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<sup>3</sup>Plaintiffs' counsel apparently gave the district court a printed copy of Dr. Dahlgren's slideshow during the *Daubert* hearing.

<sup>4</sup>“A study that is statistically significant has results that are unlikely to be the result of random error[.]” *Matrixx Initiatives, Inc. v. Siracusano*, 131 S. Ct. 1309, 1319 n.6 (2011) (quoting Federal Judicial Center, Reference Manual on Scientific Evidence 354 (2d ed. 2000)).

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the Fourth Report did not reflect any differential diagnosis or other accepted scientific methodology for ruling out non-benzene explanations for plaintiffs' diseases.

Chevron's arguments are well-taken, and we cannot conclude that the district court made a clearly erroneous assessment of either Dr. Dahlgren's opinion or the studies on which he relied. Plaintiffs do not create a jury question on causation simply because Dr. Dahlgren opined that the refinery's airborne benzene emissions caused plaintiffs' diseases. It is the district court's duty to ensure that all expert opinion evidence "rests on a reliable foundation." *Daubert*, 509 U.S. at 597. Federal Rule of Evidence 702 assigns the district courts a "gatekeeping role" in screening the reliability of expert testimony. *Id.*; *Kumho Tire Co., Ltd. v. Carmichael*, 526 U.S. 137, 152 (1999). "It is broadly accepted that the district court has considerable leeway in making these sorts of determinations." *Davison v. Cole Sewell Corp.*, 231 F. App'x 444, 448 (6th Cir. 2007) (internal quotation marks and brackets omitted).

In this case, the methodical analysis in the district court's forty-seven page order shows that it fully embraced its gatekeeper role and carefully considered, but ultimately rejected, the alleged scientific foundation of Dr. Dahlgren's expert opinion. First, we agree with Chevron that plaintiffs do not argue that the court abused its discretion by excluding the First and Second Reports for failing to comply with the requirements in Rule 26(a)(2)(B). These reports are therefore not considered in our analysis.

Second, the court acted within its discretion when it refused to consider Dr. Dahlgren's Third Report and the information offered in support of that report. "We have recognized that '[d]istrict

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courts have broad discretion to exclude untimely disclosed expert-witness testimony,’ particularly when these reports serve as a ‘transparent attempt to reopen’ the *Daubert* inquiry after the weaknesses in the expert’s prior testimony have been revealed.” *Pluck*, 640 F.3d at 681 (quoting *Pride v. BIC Corp.*, 218 F.3d 566, 578–79 (6th Cir. 2000)). Other than vaguely objecting to the “procedural fairness” of the district court’s ruling, plaintiffs do not specifically challenge the court’s conclusion that the untimely Third Report was an obvious attempt to bolster a deficient opinion. Indeed, at the *Daubert* hearing, plaintiffs’ counsel all but admitted it intentionally held back on the “how and why” of Dr. Dahlgren’s initial opinions because, according to counsel, it was purportedly “unknown” how the district court would have liked that information presented.

Third, the court exhaustively reviewed the medical studies that Dr. Dahlgren offered in the Fourth Report to support his opinion that a cumulative benzene exposure of 3.1 ppm-years can cause Hodgkin’s disease (Brown); that 0.12 ppm-years can cause AML (Schrader); or that 2.2 ppm-years can cause multiple myeloma (Lipscomb). The court’s primary criticism was that the subjects of the cited studies generally had much higher exposures to benzene than the plaintiffs, and thus, “there [was] simply too great an analytical gap between the data and the opinion proffered.” *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997). Based on a review of the district court’s comprehensive analysis, we cannot say that its rejection of these studies was clearly erroneous. Relatedly, the district court acted within its discretion when it discounted studies that contained statistically insignificant results. *See Pluck*, 640 F.3d at 680 (affirming the district court’s exclusion of expert evidence because, *inter alia*, the expert relied on studies containing statistically insignificant results).

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Fourth, the court noted that there was no consistent support in the studies that benzene exposure significantly increases the risk of developing plaintiffs' various diseases. And although it is medically accepted that benzene exposure can cause AML, the court also observed that Dr. Dahlgren did not cite any study finding that a cumulative exposure of .12 ppm-years (Schrader) significantly increases the risk of developing AML.

Finally, plaintiffs offer no response to Chevron's argument that the Fourth Report does not contain any differential diagnosis or other accepted scientific methodology for ruling out non-benzene explanations for plaintiffs' diseases. We have held previously that the absence of a differential diagnosis is fatal to the admissibility of an expert's opinion regarding disease causation in cases involving hazardous substances. *See Pluck*, 640 F.3d at 678–80; *Tamraz v. Lincoln Elec. Co.*, 620 F.3d 665, 674–76 (6th Cir. 2010). After reviewing this record, we are not left with a definite and firm conviction that the district court committed a clear error of judgment by excluding Dr. Dahlgren's expert opinion. Accordingly, we affirm the grant of summary judgment in favor of Chevron.

B.

Turning now to the category of plaintiffs who claim property damage, the parties dispute the legal thresholds of evidence necessary to establish two different types of property damage claims—groundwater damage and indirect subsurface trespass—under Ohio law. They also dispute whether the district court properly excluded Dr. Bedient's expert opinion. We start with the disagreements over the property damage claims.

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First, plaintiffs claim that they have a viable groundwater damage claim under *McNamara v. Rittman*, 838 N.E.2d 640 (Ohio 2005), because the plume has unreasonably interfered with their groundwater rights. *McNamara* held that “[a] property owner has a potential cause of action against anyone who unreasonably interferes with his property right in groundwater.” *Id.* at 644. Plaintiffs argue that Chevron has unreasonably interfered with their groundwater rights because (1) the plume has made the groundwater undrinkable for some 500 years, and (2) Hooven is subject to a village-wide groundwater zoning use restriction because of the plume. Chevron responds that *McNamara* is distinguishable because it addresses harm to groundwater resources that homeowners were *actually using* at the time of the defendant’s alleged interference.

We agree with Chevron that plaintiffs have no groundwater claim under *McNamara*. An Ohio landowner has a property right in groundwater only to the extent he actually uses that water; he has no property interest in that water simply because it resides beneath his land. *See Wood v. Am. Aggregates Corp.*, 585 N.E.2d 970, 972 (Ohio Ct. App. 1990) (“One does not acquire title to underground water but rather a right to use a reasonable amount so long as neighboring landowners are not unduly prejudiced.”). Thus, under Ohio law, the property interest in groundwater is use-based, not title-based. *See Smith v. Summit Cnty.*, 721 N.E.2d 482, 486 (Ohio Ct. App. 1998) (“No landowner in Ohio . . . has ever held title to ground water.”). And here, it is undisputed that plaintiffs never used or planned to use the groundwater. Accordingly, Chevron did not “unreasonably interfere” with the plaintiffs’ use of the groundwater under *McNamara*.

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Second, plaintiffs challenge the district court's holding that they had presented insufficient evidence that the plume and its soil vapors indirectly trespassed into the subsurface of their properties. The claim at issue here—an indirect subsurface trespass claim—was first recognized by the Ohio courts in *Chance v. B.P. Chemicals, Inc.*, 670 N.E.2d 985 (Ohio 1996). In *Chance*, BP had a permit from the State of Ohio and the EPA to dispose of hazardous waste by injecting it into wells drilled to a depth of some 2,600 feet below the ground surface. *Id.* at 986–87, 989. There, the injectate mixed with the groundwater and migrated in some instances to nearly five miles away from BP's property. *Id.* at 987. Plaintiff landowners brought claims against BP for, *inter alia*, trespass on the grounds that the injectate contaminated the groundwater beneath their properties. *Id.* at 986.

The Ohio Supreme Court held that plaintiffs had not demonstrated an unlawful entry on their properties by BP. First, the court defined the limited nature of plaintiffs' subsurface property rights, finding that “subsurface rights in their properties include the right to exclude invasions of the subsurface property that actually interfere with [their] reasonable and foreseeable use of the subsurface.” *Id.* at 992. Second, the court explained “[e]ven assuming that the injectate had laterally migrated to be in an offending concentration under some of the [plaintiffs’] properties, we find that some type of physical damages or interference with use must have been demonstrated for [plaintiffs] to recover for a trespass.” *Id.* at 993. The court further held that absent physical damage to, or interference with their properties, the plaintiffs could not recover damages for loss in value of their properties resulting from the stigma from the public perception that their properties were contaminated. *Id.* In the end, given the limited nature of the plaintiffs subsurface rights, and no

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proof of “physical damage” to the subsurface, the court determined that, as a matter of law, plaintiffs had not shown unlawful entry. *Id.* at 993–94.

In *Lueke v. Union Oil Co. of Cal.*, No. OT-00-008, 2000 WL 1545077 (Ohio Ct. App. Oct. 20, 2000) (unpublished), the Ohio Court of Appeals interpreted and applied *Chance*. Faced with a plaintiff advancing an indirect trespass claim for damages to a groundwater well that had been contaminated with gasoline from a nearby leaky underground storage tank, the court stated: “In cases of indirect trespass, damages are not presumed, and actual damages in the form of physical damages or interference with use must be shown before the person suing for trespass can prevail. Furthermore, the damages must be substantial.” *Lueke*, 2000 WL 1545077 at \*7 (internal quotation marks and citations omitted). The appellate court affirmed the trial court’s ruling that the plaintiff had not suffered a substantial or unreasonable interference with the use and enjoyment of the property because the defendant quickly remedied the problem by installing carbon filters to the plaintiff’s water system. *Id.* at \*8.

In this case, plaintiffs claim that the district court wrongly required them to establish “physical damage” under *Chance* with proof that the soil vapors from the plume were found on their properties at concentrations that were harmful to humans. They argue that the “physical damage” prong of an indirect trespass claim is satisfied upon the “mere detection of constituents” on the property, without regard to whether they are harmful. They argue that the presence of Chevron’s contamination on plaintiffs’ properties ranging from above background to regulatory health threat levels is sufficient injury to meet the property damage requirements of *Chance*. Chevron responds

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that the “mere detection” of constituents is insufficient to constitute the physical property damage under *Chance*.

We agree with Chevron that plaintiffs have to show something more than the “mere detection” of soil vapors on their properties to establish the physical damage prong of an indirect trespass claim. Under *Chance*, plaintiffs must produce evidence showing that (1) the plume or its soil vapors have invaded their property, and (2) that invasion has caused either substantial physical damage to the land or substantial interference with their reasonable and foreseeable use of the land. These elements are plainly apparent in *Chance* because, as the court explained, even if it assumed that BP’s injectate invaded the plaintiffs’ properties, the plaintiffs were still required to show that the invasion physically damaged the property or interfered with their use and enjoyment of the property. *Chance*, 670 N.E.2d at 993; *see also Rini v. Dyer*, No. 07CA3180, 2008 WL 3824790, \*5 (Ohio Ct. App. Aug. 13, 2008) (unpublished) (“[W]here property owners are relying on a theory of “indirect” trespass, there is no presumption of damages.”) (quoting 88 Ohio Jur. 3d Trespass § 19); *Ramirez v. Akzo Nobel Coatings, Inc.*, 791 N.E.2d 1031, 1034 n.2 (Ohio Ct. App. 2003).

Plaintiffs unpersuasively criticize *Lueke* for adding the “substantial” qualifier to the second element. In *Merino v. Salem Hunting Club*, No. 07 CO 16, 2008 WL 5124549 (Ohio Ct. App. Dec. 4, 2008), plaintiffs explain, the court held that “if the plaintiff proves the elements of trespass, he has a right to nominal damages without proof of actual damages.” *Id.* at \*7. *Merino* does not help plaintiffs because it is plainly distinguishable from *Lueke*: *Merino* involved a direct trespass claim based on stray bullets entering the plaintiff’s property from a nearby shooting club; *Lueke*

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involved an indirect subsurface trespass claim based on contaminant seepage. Moreover, in support of the “substantial” qualifier, the *Lueke* court cited the indirect trespass cases of *Williams v. Oeder*, 659 N.E.2d 379, 383 (Ohio Ct. App. 1995) (“The trial court did not err in instructing the jury that appellees were culpable in trespass for causing dust or dirt to fall on appellants’ property only if the jury concluded that appellants had established ‘substantial damages.’”) and *Brown v. Scioto Cty. Bd. of Commrs.*, 622 N.E.2d 1153, 1161–62 (1993) (acknowledging that the modern view of indirect trespass liability requires “substantial actual damage” to the property). *See Lueke*, 2000 WL 1545077 at \*7. Having identified the essential elements of an indirect trespass claim under Ohio law, we now examine whether plaintiffs’ proofs create a genuine issue of material fact on both elements, starting with the first.

Because this is not a class action, the district court correctly required plaintiffs to offer sufficient evidence showing the presence of subsurface contamination or soil vapors originating *from the plume* on each and every property involved in this case. *See Brown*, 622 N.E.2d at 1161 (noting that there cannot be a trespass unless some substance has entered the land itself). Plaintiffs claim this is reversible error because it essentially amounts to a requirement that they install a monitoring well on every property in Hooven. We do not agree that the district court required this exacting level of specificity. Instead, it required something more than the speculative proof offered that Chevron’s soil vapors were vaguely present “in Hooven.” Plaintiffs’ best evidence of soil vapor intrusion—completed subsurface pathways for two hydrocarbons at two monitoring wells under the

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ODH’s “worst case scenario” conditions—was simply insufficient to justify a trial for the sixty-one property damage plaintiffs in this case.

This leads us to the question of whether the district court abused its discretion by excluding Dr. Bedient’s opinion that the mere presence of benzene, toluene, xylene, and ethyl benzene in varying concentrations in the soils of Hooven could *only* have originated from the plume. It did not. Dr. Bedient is not a soil vapor expert, and he did not complete any vapor pathway analyses. Likewise, Dr. Cheremisinoff did not undertake such an analysis. These evidentiary deficiencies mean that plaintiffs have failed to create a genuine issue of material fact regarding whether the plume and its soil vapors invaded their properties.

Even assuming arguendo that they had, plaintiffs cannot genuinely dispute whether that invasion caused *substantial* physical damage or *substantial* interference with use and enjoyment. Regarding the latter, plaintiffs claim that the odor of gasoline on and near their properties has caused substantial use interference because plaintiffs have abandoned various home improvement plans and refused to enter their basements. The district court correctly rejected this argument because the alleged interference, based on a thorough review of plaintiffs’ depositions, was either *de minimis* or irrational and, therefore, not compensable. *See Banford v. Aldrich Chem. Co., Inc.*, 932 N.E.2d 313, 319 (Ohio 2010) (“Fear and emotional harm alone are insufficient for damages for annoyance and discomfort.”).

As for “substantial physical damage,” it appears the district court interpreted this element to mean that plaintiffs must demonstrate that the soil vapors found on the properties were harmful to

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humans. Plaintiffs' proofs on this matter are insufficient to create a genuine issue of material fact. Their experts, Mr. Hagemann and Dr. Cheremisinoff—neither of which are medical doctors or health experts—simply adopted ODH's early position that the health risk from the plume was “indeterminate.” And notably, the ODH later concluded, after conducting its “worst case scenario” sampling, that the concentrations of vapor-phase petroleum hydrocarbons detected in the indoor air of area residences and at the Hooven Elementary School “did not pose a public health hazard to residents, students or staff.” Further, plaintiffs' best evidence of a cancer risk—the EPA's 2005 letters to certain property owners that sub-slab hydrocarbons posed an increased cancer risk of “8.0E-5” (that is eight additional cases of cancer above the background cancer incidence rate) for every 100,000 individuals living in the basement for 24 hours, 365 days per year, for 70 years—is insufficient to establish a substantial injury to the property because there is no evidence that any Hooven resident will live under such circumstances. Accordingly, we affirm the grant of summary judgment in favor of Chevron on the property damage claims.

C.

As for the final category of plaintiffs, the parties agree that in order to justify medical monitoring damages under Ohio law, plaintiffs must demonstrate that they have been exposed to the plume and its soil vapors and that this exposure has proximately resulted in a substantially “increased risk” of contracting a serious disease to the extent that a reasonable physician would order a medical

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monitoring program. The parties disagree, however, on whether plaintiffs' evidence creates a genuine issue of material fact on that question. We conclude it does not.<sup>5</sup>

As this court explained in *Hirsch*, in accordance with *Day v. NLO*, 851 F. Supp. 869 (S.D. Ohio 1994) and *Wilson v. Brush Wellman, Inc.*, 817 N.E.2d 59 (Ohio 2004), "medical monitoring" is a remedy for being presently injured with an "increased risk of—and corresponding cost of screening for—certain diseases that . . . are more likely to occur as a result of [a defendant's tortious conduct]." *Hirsch*, 656 F.3d at 363. And because "not every increased risk of disease warrants increased medical scrutiny[,]" plaintiffs must offer "evidence that a reasonable physician would order medical monitoring for them." *Id.*

The claim for medical monitoring damages fails most acutely in this case because plaintiffs lack individualized exposure data. "[I]t is well-settled that the mere existence of a toxin in the environment is insufficient to establish causation without proof that the level of exposure could cause the plaintiff's symptoms[,]" the symptom being, in this case, a substantially "increased risk" of contracting a number of serious diseases. *Pluck*, 640 F.3d at 679; *see also McClain v. Metabolife Int'l, Inc.*, 401 F.3d 1233, 1242 (11th Cir. 2005) (stating that causation "requires not simply proof of exposure to the substance, but proof of enough exposure to cause the plaintiff's specific illness").

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<sup>5</sup>We apply the summary judgment standard of review to this category of claims because we construe the district court's order of dismissal with prejudice as an order granting summary judgment to Chevron *sua sponte*. Although the district court did not expressly invoke Rule 56(f) in its order to show cause why these claims should not be dismissed, it followed the notice procedures contemplated therein and considered the evidence of record in reaching its decision. Additionally, we note that the parties treat this order on appeal as if it were one granting summary judgment to Chevron.

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Plaintiffs' medical expert, Dr. Lockey, admitted that he did not determine what exposure level to what chemical caused an increased risk of what disease in each plaintiff. Without reliable, individualized proof that each of the 118 plaintiffs were exposed to contaminants sufficient to cause an increased risk of a specified disease, there is no evidence that a reasonable physician would order medical monitoring because that doctor would have no idea which disease he would be screening for or treating. *Hirsch*, 656 F.3d at 363; *see also Ball v. Union Carbide Corp.*, 385 F.3d 713, 728 (6th Cir. 2004) ("[Medical monitoring damages are] necessarily proportional to [a plaintiff's] exposure to toxic emissions or waste.").

Furthermore, Dr. Lockey drafted his plan "without regard to conditions potentially related to environmental contaminant exposure." (Emphasis added.) Such a plan undeniably fails to satisfy the legal standard that plaintiffs must meet to prove they are entitled to medical monitoring, which is that "monitoring must be directed toward the disease for which the tort victim is at risk, and will only include procedures which are medically prudent in light of that risk as opposed to measures aimed at general health." *Day*, 851 F. Supp. at 881.

In sum, plaintiffs have not identified a specific chemical from the plume that can cause a serious latent disease; they prepared no estimate of each plaintiff's exposure to that specific chemical; and they have no idea whether they face an increased health risk from the alleged exposure. The district court rightfully observed that these evidentiary deficiencies mean that the claims for medical monitoring damages fail as a matter of law.

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Plaintiffs cannot escape this conclusion by offering the ODH's cancer study incidence report as a substitute for individualized exposure data. *See Gates v. Rohm and Haas Co.*, 655 F.3d 255, 266 (3rd Cir. 2011) ("Averages or community-wide estimations would not be probative of any individual's [medical monitoring] claim because any one class member may have an exposure level well above or below the average."). Although this report, an ecological cancer study, found "significantly higher than expected number of cancer cases," it ultimately concluded that "it is not likely a specific point source of exposure or single risk factor is playing a role in the increased cancer burden." Most importantly, it did not find that the plume or its soil vapors were the reasons for the increased cancer rate in Hooven: "Information regarding the history of chemical and environmental exposures . . . is not available to determine possible causes of each case of cancer." Even plaintiffs acknowledge the equivocal nature of the report: "Although courts do view ecological studies as useful for establishing associations, they are relatively weak for establishing a conclusive or definitive causal relationship between exposure and the disease in question."

Finally, we agree with the district court that *Hirsch* compels dismissal. In *Hirsch*, this court determined that the plaintiffs were not entitled to medical monitoring damages because they were unable to meet their burden of establishing an increased risk of disease. *Hirsch*, 656 F.3d at 363–64. *Hirsch* involved a derailment of a train carrying hazardous materials, leading to a serious fire and the spread of hazardous dioxins into the plaintiffs' neighborhood. *Id.* at 361. The *Hirsch* plaintiffs presented only speculative individualized exposure data—they sampled dioxin levels at homes in the area and used modeling to predict who in the community had been exposed to dioxins at

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concentrations above the U.S. EPA action level. *Id.* Plaintiffs here have no individualized exposure data. The *Hirsch* plaintiffs established only a legally insignificant increased risk, a one-in-one-million increased risk of cancer. *Id.* at 364. Plaintiffs here have no evidence of a legally significant increased risk. The *Hirsch* plaintiffs failed to establish that a reasonable physician would order medical monitoring for such a *de minimis* risk of future harm. *Id.* Plaintiffs here have produced a physician who crafted a medical monitoring plan “without regard” to individualized exposure data. Thus, the district court correctly recognized that plaintiffs’ proofs in this case compare less favorably to those of the plaintiffs in *Hirsch*. Accordingly, we affirm the dismissal of the claims for medical monitoring damages.

#### IV.

In the sanctions appeal, plaintiffs’ counsel and Chevron dispute whether the district court abused its discretion in imposing Rule 11 sanctions. “We review a district court’s decision to impose sanctions under Rule 11 for abuse of discretion[,]” *DiPonio Const. Co., Inc. v. Int’l Union of Bricklayers & Allied Craftworkers, Local 9*, 687 F.3d 744, 752 (6th Cir. 2012), and apply this deferential standard of review to “all aspects of a district court’s Rule 11 determination.” *Runfola & Assoc., Inc. v. Spectrum Reporting II, Inc.*, 88 F.3d 368, 372 (6th Cir. 1996) (per curiam) (citation and internal quotation marks omitted).

Rule 11 permits sanctions if “a reasonable inquiry discloses the pleading, motion, or paper is (1) not well grounded in fact, (2) not warranted by existing law or a good faith argument for the extension, modification or reversal of existing law, or (3) interposed for any improper purpose such

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as harassment or delay.” *Merritt v. Int’l Ass’n of Machinists and Aerospace Workers*, 613 F.3d 609, 626 (6th Cir. 2010) (citation and internal quotation marks omitted). “Rule 11 sanctions are warranted if the attorney’s conduct was unreasonable under the circumstances.” *Andretti v. Borla Performance Indus., Inc.*, 426 F.3d 824, 833 (6th Cir. 2005). Additionally, “it is important to review the grant of sanctions in the context of the litigation history of th[e] action.” *Merritt*, 613 F.3d at 627.

Plaintiffs’ counsel argue that they did nothing more than zealously advocate for the medical monitoring plaintiffs. Counsel also argues that the district court sanctioned them with the benefit of hindsight and punished them for preserving their clients’ appellate rights, rather than voluntarily dismissing their claims. Chevron responds that counsel unreasonably interpreted the elements of the medical monitoring remedy, misrepresented their exposure evidence, and submitted a flawed medical monitoring plan.

The parties’ positions reflect a fundamental disagreement over the quantity and quality of exposure evidence needed to justify medical monitoring damages under Ohio law. This disagreement has infected the entire case and how it was litigated. Under the circumstances of this case, however, we conclude that the district court did not abuse its discretion in holding that plaintiffs’ attorneys were objectively unreasonable in maintaining that (1) they need not show individualized exposure data to obtain medical monitoring, and (2) plaintiffs need only show a *potential* “increased risk” of contracting a serious disease, as opposed to a *present* “increased risk,” in order to be entitled to medical monitoring.

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Even in this appeal, plaintiffs' attorneys continue to assert that "to justify medical monitoring, all the Plaintiffs needed to do in this case was prove the elements of one of the underlying torts pled in their complaint (negligence, nuisance, trespass and fraud)—nothing more and nothing less." This statement of the law is patently unreasonable. Claims for medical monitoring damages must be supported with individualized exposure data that justifies the cost of a defendant funding such a program. *Hirsch*, 656 F.3d at 363; *see also In re Welding Fume Prods. Liability Litig.*, 245 F.R.D. 279, 292 (N.D. Ohio 2007) (medical monitoring plaintiffs must offer proof that an exposure to a defendant's toxic substance caused an increased risk of serious disease); *Day*, 851 F. Supp. at 881 (plaintiffs must show by "expert medical testimony that they have increased risk of disease which would warrant a reasonable physician to order monitoring"). Counsels' position that medical monitoring is reasonable and appropriate *without* individualized exposure data has absolutely no support in the case law. And we do not consider their insistence otherwise a "good faith" argument to reverse, extend, or modify existing case law.

Counsels' position that Chevron should provide medical monitoring to plaintiffs, who only have a *potential* of suffering an "increased risk" of disease, but no *present* "increased risk," is likewise objectively unreasonable. Quite obviously, they are advancing claims that are not ripe in an attempt to collect damages for nonexistent harm. *Hirsch* suggests that a medical monitoring remedy potentially exists for plaintiffs who are presently injured with an "increased risk," not for those who might suffer the potential injury of an "increased risk." *See Hirsch*, 656 F.3d at 363. Contrary to their repeated assertions otherwise, counsel cannot seek medical monitoring damages

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for clients who have yet to suffer an “increased risk” of contracting a serious disease. The district court did not abuse its discretion by sanctioning counsel for continually perpetuating such an “irrational” view of medical monitoring law, especially after counsel frankly admitted to the district court they had no causation proofs under the district court’s standards.

Moreover, we do not agree with counsel that the district court imposed sanctions with the “benefit of hindsight.” While the court awarded sanctions only after reviewing Dr. Lockey’s plan and this court issued *Hirsch*, it obtained no “benefit of hindsight” from that review because counsel conceded at a discovery conference—more than a year earlier—that they could not prove their medical monitoring claims by the causation standards required by the district court, which *Hirsch* did not alter. Thus, the court did not sanction counsel for litigating claims that were ultimately found to be without merit; rather, it sanctioned them for continuing to litigate claims that were admittedly meritless.

Finally, we are not persuaded that the district court punished counsel with sanctions because their clients wanted to preserve their appeal rights, rather than voluntarily dismiss their claims. After counsel admitted they had no causation proofs, the court suggested a *Raceway* dismissal<sup>6</sup> so that

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<sup>6</sup>In *Raceway Properties v. Emprise Corporation*, the district court entered an interlocutory order in a private antitrust case that made it impossible for the plaintiffs to prevail. 613 F.2d 656 (6th Cir. 1980) (per curiam). The plaintiffs requested, and the district court entered, a formal order of dismissal with prejudice that would permit a challenge of the order on appeal. This court subsequently affirmed that it had appellate jurisdiction over the matter because the plaintiffs’ “solicitation of the formal dismissal was designed only to expedite review of an order which had in effect dismissed appellants’ complaint.” *Id.* at 657; *see also Libbey-Owens-Ford Co. v. Blue Cross and Blue Shield Mut. of Ohio*, 982 F.2d 1031, 1034 (6th Cir. 1993) (describing the *Raceway* dismissal).

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counsel could challenge the court's legal rulings on appeal; the parties agreed. Later, however, counsel reneged because they wanted to dismiss the claims for medical monitoring *and* the non-bellwether property damage claims, whereas Chevron wanted to adhere to the compromise struck on the record and dismiss *only* the medical monitoring claims. In light of counsels' admission regarding their lack of evidence, Chevron subsequently sent counsel a Rule 11 safe-harbor letter advising counsel to voluntarily dismiss or face the possibility of paying defense costs for the medical monitoring claims going forward. Counsel refused to dismiss, believing that they were ethically obligated to preserve the medical monitoring plaintiffs' appellate rights. Counsel was mistaken.

Rule 11 sanctions are appropriate when an attorney refuses to dismiss a claim after becoming aware that it lacks merit. *See Merritt*, 613 F.3d at 627 (“Rule 11 imposes a continual obligation on attorneys to refrain from pursuing meritless or frivolous claims at any stage of the proceedings . . . .”) (citation and internal quotation marks omitted); *Runfola*, 88 F.3d at 373 (affirming Rule 11 sanctions against counsel who failed to dismiss the action after becoming aware of their inability to assert any evidence in support of their claims). Given the history of this case, the district court did not commit a clear error of judgment by sanctioning counsel for continuing to litigate meritless claims. Further, counsel's false dilemma argument—either dismiss and lose appeal rights or litigate and pay costs—is unpersuasive. The district court offered counsel a *Raceway* dismissal that would have allowed counsel to promptly challenge the district court's rulings in this court. Despite this offer, counsel refused to dismiss only the claims of the medical monitoring plaintiffs and continued litigating under the specter of Rule 11 at their own peril.

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V.

For these reasons, we affirm the judgment of the district court.