In the Supreme Court of the United States

No._____

COTROMANO, RICHARD ET AT, PETITIONER

V.

RTX CORPORATION, RESPONDENT

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

PETITION FOR WRIT OF CERTIORARI

MARA R. P. HATFIELD
Counsel of Record
SEARCY DENNEY SCAROLA BARNHART & SHIPLEY, P.A.
2139 PALM BEACH LAKES BOULEVARD
WEST PALM BEACH, FLORIDA 33409
PHONE: (561) 686-6300
ATTORNEY E-MAILS: MRH@SEARCYLAW.COM AND _HATFIELDTEAM@SEARCYLAW.COM
Counsel for Petitioner

QUESTIONS PRESENTED

Petitioners' children were victims of a neighborhood-wide pediatric brain cancer cluster, which was confirmed by federal authorities. They claim the cluster was caused by radioactively contaminated fill-soil originating from Defendant's nearby negligent remediation of contaminated soil.

The Eleventh Circuit summarily affirmed orders surrounding the admissibility of specific causation testimony that Petitioners argue were arbitrary and fail to reflect the careful assessment required by this Court's precedent and Federal Rule of Evidence 702. The orders marginalize the use of generally accepted techniques, failing to perform the assessment set forth in *Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993)* and replacing it with a draconian application of the Eleventh Circuit's dose relationship-response assessment requirements. Together, they suggest that the Eleventh Circuit mandates that a dose response assessment in a nuclear case must utilize a dose reconstruction extrapolated from environmental exposure rather than from a victims' tissue even when those conclusions are supported by generally accepted principles of their relevant fields of expertise. The question presented is as follows:

Whether the abuse of discretion standard requires the Circuit Courts to assess whether a trial court performed its gatekeeping function adequately rather than whether it was performed at all?

PARTIES TO THE PROCEEDING

Petitioners Richard and Beth Cotromano, Frank and Paulette DeCarlo, Greg and Jenniffer Dunsford, and Joyce Featherston are parents of children diagnosed with brain cancer in 2004-2008. The illnesses were studied as part of a cancer cluster existing in their neighborhood, "the Acreage neighborhood" of western Palm Beach County, Florida. The cluster was confirmed by the Centers for Disease Control and Prevention in 2010. In 2013, they filed this action for the recovery of neighborhood-wide diminution in property value as putative class representatives for their Acreage neighborhood. The Circuit court did not reach the issue of whether the trial court erred in denying the motion to certify the class, which is not a part of this appeal.

Respondent is RTX Corporation, formerly Raytheon Technologies Corporation, formerly United Technologies Corporation, all doing business as Pratt & Whitney Division.

RELATED PROCEEDINGS

Richard Cotromano, et al. v. RTX Corporation*, d/b/a Pratt & Whitney, No. 13-80928, U.S. District Court of the Southern District of Florida. *Then Raytheon Technologies Corporation.

Richard Cotromano, et al. v. RTX Corporation, d/b/a Pratt & Whitney, No. 22-13024, U.S. Court of Appeals for the Eleventh Circuit. Judgment entered April 24, 2024, rehearing denied June 11, 2024.

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OPINIONS AND ORDERS BELOW

The Eleventh Circuit's per curium panel opinion (Pet. App. 1a-4a) is unpublished and can be found at 2024 WL 1759217. The orders of the district court may be found as follows.

- Order denying Plaintiff's motions to exclude Defendants' experts, 2021 WL 8821413 (Pet. App. 5a-8a)

- Order granting the motion to exclude Plaintiff's toxicologist, William B. Sawyer, Ph. D TCAS, 2021 WL 3616058, (Pet. App. 13a-16a)

- Order granting the motion to exclude Plaintiff's transport and remediation expert Brian Moore, Licensed Site Professional, 2021 WL 3616051 (Pet. App. 17a-20a)

- Order granting the motion to exclude Plaintiff's radiation dosimetrist, Bernd Franke, 2021 WL 8821414, (Pet. App. 9a-12a)

JURISDICTION

The Eleventh Circuit entered judgment on June 11, 2024. This Court has jurisdiction under 28 USC §1254(1). Plaintiffs' Original Petition was timely

filed on September 9, 2024.[1]

CONSTITUTIONAL AND STATUTORY PROVISIONS AND RULE INVOLVED

Federal Rule of Evidence, Rule 702
Testimony by Expert Witnesses

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if the proponent demonstrates to the court that it is more likely than not that:

(a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue.

(b) the testimony is based on sufficient facts or data;

(c) the testimony is the product of reliable principles and methods; and

(d) the expert's opinion reflects a reliable application of the principles and methods to the facts of the case.

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[1] On November 5, 2024, the Clerk instructed Petitioner to resubmit the Appendix, providing 60 days to refile the Petition. No substantive changes have been made to this petition. Citations to the appendix are edited. This is the second resubmission.

STATEMENT

I. The claims as filed and at trial.

In 2009, the Florida Department of Health, FDOH declared an increased incidence of pediatric brain cancer in the Acreage neighborhood of western Palm Beach County after Petitioners Dunsford and DeCarlo brought the coincidental 2008 diagnoses of their children and others to their attention. (Pet. App. 98a) In 2010, the Centers for Disease Control and Prevention confirmed that even before the 2008 diagnoses, the Acreage incidence of pediatric brain cancer was four times what would be expected for 2004 through 2007. (Pet. App. 98a)

Upon the discovery of radioactive materials in the Acreage environment, Petitioners filed this putative class action regarding diminution in property values arising out of the stigma caused by the cancer cluster designation and related personal injury actions in the Fifteenth Judicial Circuit Court of Florida in and for Palm Beach County. This action was removed to the Palm Beach County Division of the Southern District Court of Florida by Respondent RTX Corporation, formerly United Technologies Corporation, Pratt & Whitney Division on the basis of diversity jurisdiction under the Class Action Fairness Act, 28 U.S.C. 1332(d) and 1441(a) and the removal provisions of 42 USC 2210(n)(2), the Price Anderson Act, claiming that allegations related to any release of nuclear materials is a public liability claim under the act as defined in 42

USC 2014.

Eventually, Plaintiffs added a Price Anderson Public Liability claim as an alternative to their original claims based on state law, but retained the negligence and the Florida statutory civil remedy claim for violations of Florida's Water Control Pollution Act, Section 376.313 Florida Statutes. Shortly before trial, the District Court entered an order agreeing with Petitioners' position that pursuant to *Cook v. Rockwell Int'l Corp., 790 F.3d 1088, 1090 (10th Cir. 2015),* the claim for diminished property values does not constitute a nuclear incident under the Price Anderson Act and so the claims alleging negligence and violations of Florida Chapter 376 proceeded to trial. (Pet. App. 27a-30a.)

II. The Ruling admitting Pratt & Whitney's Specific Causation Expert Duane Mitchell

One of P&W's disclosed experts is subject to this appeal: Dwayne Mitchell, MD, a neurosurgeon administering the clinical trial program for the University of Florida. His opinion, essentially, was that the cancers in the FDOH cluster were too disparate in type to share any cause and that only high dose radiation could cause brain cancer because nothing else could penetrate the blood brain barrier and that there was no known association between low-dose radiation and these cancers. (Pet. App. 61-62a.) During deposition however, he

demonstrated that his disclosed opinion failed to demonstrate the collective view of his scientific discipline and then he refused to explain the grounds for his differences in any coherent way:

- Mitchell conceded that the cancers in the cluster were all subtypes of the type of glioma, which share the cause ionizing radiation. (Pet. App. 121a.) Testimony of Duane Mitchel, May 9, 2018, 26:19-27:09, 29:20-30.

- He did not cite generally accepted studies correlating low-dose radiation to such cancers, such as CT scan exposure with brain and CNS cancers (instead citing only the follow-on studies showing no increase of brain cancer in those who administer such tests). When asked if these studies presented epidemiological evidence expressly concluding a correlation between low-dose exposures and brain cancer, he would not answer the question as he had not read the follow-on studies and would only hypothesize about the difference between low-dose in CT-scan exposure as opposed to inhalation exposures. (Pet. 121a) Testimony of Duane Mitchel, May 9, 2018, (26:19-27:09, 29:20-3; 36:12-37:02, 40:24-41:15, 80:13-81:18).

- He ignored the general acceptance of the linear no-threshold response even though it was discussed in the articles he and Sawyer

cited. When it was pointed out that the Chernobyl study he relied upon critiqued the widely accepted LNT model, but that he had not even cited the model, he refused to answer whether he would agree that it should be characterized as "generally accepted," instead asking for time to review the study as though he had not himself cited it. When asked if he agreed that the International Committee on Radiation Protection accepted the LNT model as was directly stated in the article he cited, he answered, "I'm not trying to be difficult. I couldn't characterize what they've accepted." (Pet. App. 122a). He then insisted that it was irrelevant to his opinions because dose modeling was not the issue.

• He admitted that if thorium made its way to the cerebral spinal fluid-brain barrier pathway, it could possibly move to the ventricles. ((Pet. App. 122a) Testimony of Duane Mitchel, May 9, 2018, (54:3- 56:12) and (80:13-81:18). Plaintiffs argued that Mitchells' "no causation" opinion overlooked several well-regarded epidemiological studies concluding that such a correlation existed—including generally accepted theories of radiation and glioma causation. (Pet. 122a.)

The court remarked upon the complexity of the matter:

> I don't really understand all

of the medicine that you keep referring to, and but beyond that, I mean, you say, well, there's the study and he should have cited it, and he didn't. And there's this Chernobyl study and you misread it, or he says it's the opposite of what he said. Again, is it my job to conclude that this expert who knows a lot more about it than I do used the -- didn't cite the proper study? Or am I supposed to read this Chernobyl study and decide whether he misread it? I'm having trouble trying to understand how I'm supposed to decide who's right and who's wrong here, and it seems like those are the arguments that you're making is why he's wrong, and because he's wrong, he should be excluded. I don't know how I'm supposed to decide that he's right or wrong on the merits of his opinions versus whether he's doing something improper in terms of from a methodological standpoint. I'm -- I'm sorry, if I'm not making myself clear but that's kind of the problem I'm having to follow up your argument.

(Pet. App. 62-64a, 91a.)

In one order, the court denied all three of the Plaintiffs motions to strike P&W's experts including Mitchell with a single explanation:

> To the extent (Plaintiffs) are challenging the opinions, the Court finds that these challenges go to the credibility, and not to the admissibility, of the opinions. See *Rosenfeld v. Oceania Cruises, Inc.*, 654 F.3d 1190, 1193 (11th Cir. 2011) ("it is not the role of the district court to make ultimate conclusions as to the persuasiveness of the proffered evidence*"); Banta Properties, Inc. v. Arch Specialty Ins. Co.,* No. 10-61485-CIV, 2011 WL 13096476, at *2 (S.D. Fla. Dec. 22, 2011) ("[i]n the court's role as a gatekeeper, however, it must be careful to rule only on the admissibility of expert testimony, not its weight or credibility".

(Pet. App. 5a-7a)

III. The Rulings Precluding Petitioner's Specific Causation Experts Franke and Sawyer

Years before the trial, Plaintiffs disclosed nine expert opinions, two are relevant to this appeal. Both include opinions regarding radioactive materials found in the post-mortem tissues of cluster victim Cynthia Santiago. (The wrongful death claim of Cynthia Santiago was subject to summary judgment based upon statute of limitations defenses that are not at issue in this appeal. See *Pinares v. Raytheon Technologies Corporation, 2023 WL 2868098 (S.D. Fla., 2023).* Also at issue is the responsive opinion of Pratt & Whitney's neurooncologist, Duane Mithcell, MD.

A. William Sawyer MD.

William Sawyer, PhD, D-ABFM, chief toxicologist disclosed reports regarding the specific causation of the cluster and three Acreage brain-CNS cancers including Cynthia's Santiago 2009 ependymoma diagnosis, for which he provided a dose-assessment relating the amount of thorium (Th-230) isolated from Cynthia's post-mortem ependymal tissues to her disease, finding that the amount of thorium discernible in her post-mortem tissue documented an exposure that most likely caused her cancer. ((Pet. App. 86a.). The extensive report includes, but is by no means limited to, the following areas:

Identification of the disease and the alleged carcinogen:

Cynthia's ependymoma was diagnosed at age 13. Sawyer summarized her cancer through the final ependymal tumors at her lower spine. She lived in the Acreage from when she was 4 months old until death in October 2016. (Pet. App. 112a). He first described ependymoma as "a central nervous system cancer originating from the ependymal cells that line the spinal cord and supportive brain structures called the ventricles and create and distribute cerebral spinal fluid (CSF)." Pet. App. 112a)[2]

General causation:

Sawyer notes the only established environmental risk for brain and central nervous system cancers is ionizing radiation, and then discusses how alpha radiation causes cancer by mutating the DNA of nearby cells. Of the four sources of radiation known to be carcinogenic, "thorium dioxide decay by alpha emission is one," citing the 2016 Report on

[2] Doc. 605-02 at 23, P&W's responding expert opinion from Duane Mitchell, MD at issue below for its summary admission, Mitchell admits in his report that "Ependymomas are central nervous system tumors that arise from the cells that line the ventricles and passageways in the brain and the spinal cord. Ependymal cells make cerebrospinal fluid (CSF) and are a type of glial cells."

Carcinogens published by the U.S. Department of Health and that "alpha emitting radioactive materials emit subatomic particles carrying energy as they are ejected by the atoms of the thoria." He discussed the seminal *Ron et. al.* study on ionizing radiation and brain cancer noted above where relatively low-dose radiation was used in one skin treatment session. Pet. App. 112a)

Amount.

Cynthia's spinal ependymal tumor was resected upon death, and Sawyer confirmed that the tissue excised included intradural and extradural ependymal tumor tissue. (Pet. App. 113a)

He compared the amount in Cynthia's spinal ependymal tissue with a separate amount found in her adjacent vertebra tissue and found them to be in biologically plausible ratios, reinforcing the 90% to 95% certainty numbers the laboratory assigned them.

He compared the amount and circumstances of the thorium found in her spinal cord with the amount of thorium injected into patients who received thoratrast, now banned, and were later diagnosed with cancers in adjacent tissues. He noted that to draw a complete correlation, the thorium had to be at or near the system where the cancer originates and had to be suspected of being introduced to the system within a reasonable latency period. Both were true here: First, thorium was found in the diseased ependymal tissues of her

spine and her original tumor was located in the ependymal tissues of her third ventricle—the cord and ventricles together circulate and create CSF. Second, Cynthia was diagnosed with ependymoma brain cancer in 2009, she moved to the Acreage in 1996. (The exposure was considered to have occurred during the P&W remediation of 1999-2001.) One year latency or more is considered appropriate for children.

Sawyer compared the separate amount found in Cynthia's spinal vertebra to similarly exposed populations (uranium miners inhaling uranium dust), demonstrating that Cynthia's levels were in considerable excess of that exposed cohort, which he opines suggests exposure via inhalation to thorium dust particles.

Pathway and Timing

He studied and described multiple pathways for the thorium to have entered her body including through inhalation to deposition into the spinal vertebra and cord, including ependymal tissues of the cerebral nervous system system-brain barrier (CNS-Brain barrier), accounting for the size of thorium particles generally and the size of a separate thorium particle found independently on the original 2009 ventricular ependymoma cancer diagnostic slide. (Pet. App. 114a)

He reviewed the likely sources of thoria in her environment including the thorium particles used by P&W processes and considered that data in

concert with the increased incidence of brain cancer incidence found by NIOSH at its facility. (Pet. App. 114a) He reviewed another expert's reporting on the presence of thorium-230 and its parent uranium at the facility and in the Acreage residential soils. (Pet. App. 114a)

He explains the mechanism of carcinogenicity by radiation and how radioactive materials cause cell damage, carcinogenesis and tumor progression through the decay and spread of free radicals emanating from the materials themselves. (Pet. App. 114a).

He notes that while thorium can only cause brain cancer by passing the brain barriers, it is thought to do so when small particles of thoria are released from larger thoria from the free radical activity he described earlier. This is substantiated by studies finding thoria in brain tissue. (Pet. App. 114-115a)

Differential Assessment

Sawyer assessed other causes in determining that the thorium retained in her CNS tissue was the likely cause of her ependymoma disease. Aside from sporadic idiopathic cancers, only ionizing radiation and genetic predisposition were known causes of her cancer. Her medical history included only episodes reinforcing his pathway model (she had meningitis the year before diagnosis), there was no genetic disposition for the disease, and Cynthia was known to be one of a cluster significantly unlikely to occur randomly. (Pet. App. 115a).

B. Bernd Franke

Due in part to the nature of the Price Anderson public liability claim, which requires demonstrating a violation of the federal regulations pertaining to a licensee of the Nuclear Regulatory Commission, Plaintiffs disclosed three opinions in the report of Dosimetrist Bernd Franke:

Comparison to Background

Franke first compared the amount of thorium in the spinal section of Cynthia's diseased central nervous system tissue to background numbers of similar tissue, suggesting an excessive exposure. (Pet. App. 87a)

Radiation dose to surrounding tissue.

Franke next calculates the radiation dose Cynthia's surrounding tissue would have received over the course of her lifetime from the estimated date of exposure to before diagnosis. (Pet. App. 87a)

Regulatory Dose

Lastly, using coefficients supplied by the International Commission on Radiological

Protection[3] for brain tissue, Franke provide an effective radiation dose and dose models illustrating a single intake of Th-230 via inhalation type S4 with a particle size (AMAD) of 1 µm and alternatively via the ingestion of soil in the environment. Because the tissue use was metastatic central nervous system tissue, the attendant regulations require him to use those coefficients. (Pet. App. 87a)

C. Decisions regarding both.

The court struck Franke on the rationale that there was "no scientifically reliable or supportable basis to conclude that "a dose of toxins to the spine will be the same as a dose to the brain," and thus, "he has no scientifically reliable basis to measure the dose exposure to the brain in this case," citing to a single page of Franke's deposition in support and without addressing Franke's CNS dose or background comparison. (Pet. App. 9a-12a)

At the hearing, the Court asked whether Sawyer's specific causation opinion relied on Franke's dose, Plaintiffs responded Sawyer that only notes Franke's dose in his deposition and that there was no such reliance: "Dr. Sawyer did not say

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[3] The ICRP publishes Database of Dose Coefficients for Workers and Members of the Public for radiation dosimetrists to use for such quantifications.

that the dose that Franke ascribed to the radiation was the most likely cause of (Santiago's) cancer." Plaintiffs distinguished the Franke's radiation dosimetry calculation from Sawyer's dose-response relationship assessment, arguing that Sawyer's assessment based on the amount of thorium remaining in the ependymal tissue satisfied the Court's requirement for the dose-response assessment: "What McLain requires... and Mosaic requires is a dose-response relationship. What was the person exposed to, and is it reasonable that their response to that was a disease that we see before us?"

The court struck Sawyer's opinion as follows:

> Plaintiffs do not dispute that Dr. Sawyer did not perform a dose-response calculation. At the hearing, Plaintiffs argued that Dr. Sawyer relied upon Mr. Bernd Franke's dose-response calculation. A review of Mr. Franke's reports shows that this is not the case. (See Doc 604-3, 604-4, 604-5, 604-14, 604-21.) Moreover, the Court rejects Plaintiffs' justifications or explanations as to why Dr. Sawyer did not have to perform a dose-response calculation. Because the Court concludes that a dose-response calculation is required by Eleventh Circuit Court of Appeals precedent, Dr. Sawyer's failure to perform the

dose-response calculation requires the Court to strike him as an expert. (Pet. App. 15a)

D. Attempt to Correct Patent Error and Order Denying Motion for Reconsideration

Plaintiffs attempted to correct the plan mistakes in the Court order including that Franke used "spine to dose the brain" without any basis, pointing to the record citations for the fact that Franke used Central Nervous System tissue to dose a central nervous cancer as directed by various regulations and published methodologies. Petitioner also attempted to correct the patent error that they made any admission that Sawyer relied on Franke for dose and clarifying that Sawyer performed his own dose-response assessment using the exact amount of thorium measured in Cynthia's tissues.

The court denied reconsideration, stating that none of the arguments arose to a motion for reconsideration and insisting that "Plaintiffs acknowledge that Dr. Sawyer did not provide an exact dose or rely on anyone else's dose because he is not a dosimetrist, and this is not a personal injury radiation case." (Pet. App. 21a-26a)

IV. Ruling Precluding Petitioner's Transport Expert

As noted above, this was a putative class action.

The Petitioners originally sought to remedy the diminution in property value caused to the entire neighborhood included in the cancer cluster. In support of their motion to for certification of that class, Petitioners proffered the opinions of d. Brian Moore, P.G, L.S.P, a Licensed Site Professional with 25 years of site remediation experience opined that gaps in Pratt & Whitney's remediation records indicated an incomplete investigation of soils removed from former radioactive materials (RAM) burial sites, coupled with an improper soil remediation process using local soil recyclers and fill transporters, was a likely source of the RAM contamination Petitioners had isolated in both Acreage fill and P&W waste sites. (Pet. App. 84a)

The court then precluded Moore's testimony for sue at trial, finding he was not previously disclosed "*as* a standard of care opinion," that he did not set forth a standard of care opinion in his reports, and that the transport issue could be evaluated without the aid of industry expertise. (Pet. App. 19a)

V. The Close of Trial and the Verdict

The jury found that Pratt & Whitney failed to exercise reasonable care in the use and disposal of RAM at its Palm Beach County facility. (Pet. App. 33a)

But they did not find that "as a result of Pratt & Whitney's failure to use reasonable care, radioactive materials from Pratt & Whitney's facility were transported to locations in the Acreage." (Pet. App.

34a)

Judgment was entered upon that verdict. (Pet. App. 38a)

Petitioners appealed both the rulings regarding expert admissibility, arguing that arbitrarily eliminating their experts as to transport and as to cancer causation significantly squelched their ability to overcome Pratt & Whitney's main line of defense, which was that it did nothing wrong "in the Acreage" and that "the very notion that P&W caused a cluster in the Acreage was "preposterous." In addition, Petitioners appealed the rulings which incorporated a special interrogatory requiring proof of negligent transport as it misstates their burden and is inconsistent with the court's preclusion of Moore as unnecessary. (Pet. App. 49-50a)

VI. The Eleventh Circuit's Per Curium opinion.

The Eleventh Circuit's per curium opinion includes a review of the record essentially begins and ends with the fact that the Court conducted a two-day hearing to address the Daubert motions:

> Beginning with the expert testimony challenges, the record demonstrates that the district court conducted a comprehensive two-day hearing to address the various motions under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579

> (1993). Our review of the record demonstrates that the district court acted well within the "considerable leeway" we afford trial courts' expert testimony decisions—whether in excluding the testimony of Brian Moore, Bernd Franke, and Dr. William Sawyer, along with permitting the testimony of Dr. Duane Mitchell. See C*hapman v. Procter & Gamble Distrib., LLC,* 766 F.3d 1296, 1304–05 (11th Cir. 2014) (quotation marks omitted). Given the district court's thorough familiarity with the case's evidentiary circumstances, we see no reason to disturb its expert testimony rulings.
>
> (Pet. App. 3a-4a)

REASON FOR GRANTING THE WRIT

At first blush, the orders are clearly erroneous. The lone rationale for excluding Petitioners' dose calculation and dose assessment are admissions that Petitioners insist, and the record reveals, neither they nor their experts made. The trial court expressly refused to question to authority of the Respondent's neurooncologist and then admitted his testimony in a summary order admitting all three challenged Defense experts without ever even describing their opinions. In fact, none of the court's

orders describe the scope of any experts' opinion. Finally, the court precluded a remediation and transport opinion as undisclosed, even though the only paper before the court was the disclosure of that opinion through report and testimony, and that it was unnecessary. The arguments and special interrogatories fashioned by the court and defense counsel clearly state otherwise.

In short, the orders make no sense.

And so, at first blush, this petition seems to present this court where the asserted error consists of only of erroneous factual findings, which are rarely granted. For two reasons, however, this petition should be granted: First the circumstance of this case alone is compelling. Petitioners still await some express rationale citing to more than erroneously construed admissions on their part for the preclusion of a causation opinion based upon the tissue of decedent in a cancer cluster. A pediatric cancer cluster that included their own children and decimated the literal and figurative value of their home. Second, when a Circuit court summarily approves orders that are required to demonstrate a sound rationale for excluding scientific opinions as unsound, it demonstrates a problem that goes beyond the facts. Here, the Eleventh Circuit has replaced a review for an abuse of discretion with a nominal review for process.

I. The Abuse of Discretion standard requires an express rationale for excluding and including experts.

The Eleventh Circuit's task was not to determine if the trial court engaged in a Daubert assessment, but whether that assessment was accurate. And in order to do that, the Court must examine whether the trial court's means of assessment were appropriate:

The trial-court's discretion in choosing the manner of testing expert reliability…is not discretion to abandon the gatekeeping function. I think it worth adding that it is not discretion to perform the function inadequately. Rather, it is discretion to choose among reasonable means of excluding expertise that is fausse and science that is junky. Though, as the Court makes clear today, the *Daubert* factors are not holy writ, in a particular case the failure to apply one or another of them may be unreasonable, and hence an abuse of discretion. *Kumho Tire Co., Ltd. v. Carmichael*, 119 S.Ct. 1167, 1179, 526 U.S. 137, 159 (1999), (J. Scalia, concurring).

In *Kumho*, a defending manufacturer moved to exclude the testimony of grounds that the engineer's methodology failed Rule 702's reliability requirement. As requested by the motion, the Court

performed a "Daubert-type reliability 'gatekeeper'" assessment, even though the testimony was more "technical," rather than "scientific." See *Carmichael v. Samyang Tires, Inc.*, 923 F.Supp. 1514, 1521–1522 (S.D.Ala.1996). The Eleventh determined that the exclusion was erroneous because *Daubert* did not apply to such testimony.

This Court disagreed, finding that Rule 702 does not include "a schematism that segregates expertise by type while mapping certain kinds of questions to certain kinds of experts. Life and the legal cases that it generates are too complex to warrant so definitive a match."

In *Kumho,* the district court's methodology in applying the Daubert-type assessment was described as follows:

> The court then examined Carlson's methodology in light of the reliability-related factors that Daubert mentioned, such as a theory's testability, whether it "has been a subject of peer review or publication," the "known or potential rate of error," and the "degree of acceptance ... within the relevant scientific community." 923 F.Supp., at 1520 (citing Daubert, 509 U.S., at 589–595, 113 S.Ct. 2786). The District Court found that all those factors argued against the reliability of Carlson's

> methods, and it granted the motion to exclude the testimony (as well as the defendants' accompanying motion for summary judgment).

Nothing like that happened here. Here, the orders themselves betray no reasonable means of excluding or admitting testimony. And perhaps because the orders themselves do not describe the reasonable means used by the trial court's Daubert procedure in this case, neither does the Circuit Court's review.

II. The Circuit Court's affirmation of the exclusion of Petitioner's Dose assessment replaces the versatility of the Daubert assessment with a rigid requirement that a dose reconstruction standard applicable in pharmaceutical cases apply in environmental cases.

If the simple fact that the dose used by Petitioner's toxicologist, Sawyer, was obtained from tissue rather than extrapolated intake data makes this case distinct from the requirements set forth in *McClain v. Metabolife Int'l, Inc.*, 401 F.3d 1233, 1239 (11th Cir.2005) and *Chapman v. Procter & Gamble Distrib.*, LLC, 766 F.3d 1296, 1304–05 (11th Cir. 2014), then the rigid application of those requirements, as the lone generally accepted methodologies which creates a reliable dose response

assessment runs afoul of *Daubert* itself.

In *Daubert v. Merrell Dow Pharmaceuticals, Inc.,* 509 U.S. 579, 113 S.Ct. 2786, 125 L.Ed.2d 469 (1993), this Court examined the complex and clinical issue of cancer causation science, ultimately setting forth a means to allow trial court's to consider whether testimony based upon novel scientific methodology may be as reliable as testimony based upon generally accepted methodologies. It should be liberating, and it should make scientists of the judiciary in one common sense way—in order to consider whether an expert's opinion is based upon reliable, accurate, and objectively reviewable methodology, the courts need to issue orders setting forth a reliable, objectively reviewable assessment of those methods.

Historically, the Eleventh Circuit has heeded the mandate from this Court, and not only has it examined whether trial courts choose reasonable means to measure the reliability of expert testimony, but in the instance where the specific causation of cancer is the issue before the Court, the Circuit has dedicated a significant amount of precedent to setting forth how that issue is to be examined.

The Eleventh Circuit affirmation asserts that the trial court's opinions were within the leeway afforded by *Chapman v. Procter & Gamble Distrib., LLC,* 766 F.3d 1296, 1304–05 (11th Cir. 2014). In that case, the Eleventh Circuit precluded the opinions of treating expert because his conclusion that the claimant's multiple myeloma cancer was caused by the temporal

use of a denture creams was based on a differential diagnosis that did not meet reliability standards because it did not account for symptoms that the claimant had both before and after her exposure to the cream or other risk factors present in her medical and genetic history. In that case, the Eleventh Circuit again illustrated the importance of the dose-response relationship assessment in opining as to cancer cluster causation in toxic torts, citing to *McClain v. Metabolife Int'l, Inc.,* 401 F.3d 1233, 1239 (11th Cir.2005) and reiterating that 'the relationship between dose and effect (dose-response relationship) is the hallmark of basic toxicology,' " and " 'is the single most important factor to consider in evaluating whether an alleged exposure caused a specific adverse effect.'

And while the Circuit has stated that it "(has) never required an expert to "give precise numbers about a dose-response relationship" see W*illiams v. Mosaic Fertilizer,* LLC, 889 F.3d 1239, 1248 (11th Cir. 2018) citing *McClain v. Metabolife Int'l, Inc*., 401 F.3d 1233, 1237 (11th Cir. 2005) at N.6., petitioner's experts provided precisely the sort of analysis this Circuit expects, demonstrating how, using the generally accepted techniques in their field, the carcinogen at issue caused one specific cancer and this cancer cluster.

The methodologies described in those opinions are set forth in the work by Michael D. Green et al., Reference *Guide on Epidemiology, in* REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 392

(Federal Judicial Center, 2d ed.2000). Nothing in that work supports a ruling that Sawyer's reliance on tissue data rather than extrapolated data is novel.

As explained above, Sawyer's opinion met all of the requirements for a specific dose-response assessment: He discussed the general causation between low dose environmental exposure and increased risk of brain cancer, which was established by another unchallenged expert Arie Perry. He identified the disease at issue and its connection to the toxin at issue, thorium 230. He assessed the amount a victim was exposed to as evidenced by her tissues and compared that toxic evidence of dose to the tissue samples of exposed and unexposed cohorts, finding it to be significantly elevated as to both. He described the pathway from exposure to deposition in the body including how it gets to the CSF tissues where it was found and how it goes from the ependymal tissue of the spinal cord to the adjacent brain ventricle where the caner originated and the timing of her disease and exposure. He performed a differential diagnosis on both that victim and the cluster at large.

The only thing Sawyer did not do was obtain his data from extrapolating from the environment and using tissue data instead. Because unlike pharmaceutical cases, where dose is reconstructed from known dosing protocols, this is an environmental case where exposure is best discerned from the tissue rather than an environment tested some decade after exposure occurs.

CONCLUSION

Radiation dosimetrists use central nervous system tissues to calculate dose to the brain. They do this using coefficient linked to target organs every day. It is as apparent as the dose report that is tagged onto the findings of any garden variety CT-scan. Toxicologists use the amount of a toxin in a decedent's tissue to determine cause of death. These practices are used every day, everywhere.

But the trial-court determined, without citing to any method itself for casting these generally accepted techniques, that they would not be used in the trial of this significant case alleging that rogue use of nuclear materials causes a pediatric brain cancer cluster.

And while stripping Petitioner of its ability to explain such science to the jury, the trial court allowed a neurooncologist to offer opinions Petitioner's argued were contradicted by the very sources he relied upon. The court expressly refused to consider those arguments or read those authorities, and the Eleventh Circuit failed to consider that omission.

As further evidence of the overwhelming arbitrary nature of the expert admissibility assessment in this case, the trial court precluded an opinion it deemed was unnecessary and a matter of common sense when in fact it included practices and procedures in a robust mediation with which the jury would be completely unfamiliar. Considering the

opinion as unnecessary defies the common sense reading of the interrogatories it adopted and upon which Petitioners lost their case.

Worse, the Eleventh Circuit rubber-stamped orders which cast aside opinions that are based upon the careful applied methodologies that the experts at issue claim are in keeping with the generally accepted methods of their respective field and which cast those methods and opinions aside as unreliable without any justification other than to site to illusive admissions of inadequacy the trial court's orders state were made by the experts and the Petitioners that simply were not made.

The petition for a writ of certiorari should be granted.

Respectfully re-submitted with Appendix correction as directed by the Clerk of the Court, September

Mara Ritchie Poncy Hatfield

Bar No. 322545

Date: November 22, 2024

APPENDICES

TABLE OF APPENDICES

APPENDIX A

[DO NOT PUBLISH]

IN THE UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

No. 22-13024

RICHARD COTROMANO,
BETHANY COTROMANO,
FRANK DECARLO,
PAULETTE DECARLO,
GREGORY DUNSFORD, et al.,

Plaintiffs-Appellants,

BILL FEATHERSTON, et al.,

Plaintiffs,

JOSEPH ADINOLFE, et al.,

Consol. Plaintiffs,

versus

UNITED TECHNOLOGIES CORPORATION, PRATT AND WHITNEY GROUP, et al.,

Defendants

RTX CORPORATION, dba PRATT & WHITNEY

Defendant-Appellee.

Date of Entry: April 24, 2024

Opinion of the Court

Appeal from the United States District Court
for the Southern District of Florida

D.C. Docket No. 9:13-cv-80928-KAM

Before WILSON, LUCK, and LAGOA, Circuit Judges.

PER CURIAM:

This appeal concerns one of many toxic tort cases stemming from a property known as "The Acreage" in Palm Beach County, Florida. Defendant-Appellee Raytheon Technologies Corporation, d/b/a Pratt & Whitney (P&W) operates an industrial facility five miles north of The Acreage. Plaintiffs-Appellants include various property owners who reside in The Acreage. In 2009, the Florida Department of Health (FDOH) declared a cancer cluster in The Acreage. After these findings received attention from news outlets and realtor associations alike, Plaintiffs-Appellants sued P&W and sought compensation for diminution of property value resulting from stigmatization. Plaintiffs-Appellants alleged that P&W's improper remediation and disposal of radioactive materials caused the cancer cluster, and the resulting designation by the FDOH uniformly stigmatized The Acreage.

On appeal, Plaintiffs-Appellants argue the following:

I. The district court abused its discretion in excluding the testimony of various experts put forward by Plain-tiffs-Appellants.

II. The district court abused its discretion in allowing certain P&W expert testimony.

III. The district court abused its discretion in its phrasing of special jury interrogatories.

IV. The district court abused its discretion in denying class certification.

After careful review of the briefs and record, and with the benefit of oral argument, we find no reversible error.

Beginning with the expert testimony challenges, the record demonstrates that the district court conducted a comprehensive two-day hearing to address the various motions under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). Our review of the record demonstrates that the district court acted well within the "considerable leeway" we afford trial courts' expert testimony decisions—whether in excluding the testimony of Brian Moore, Bernd Franke, and Dr. William Sawyer, along with permitting the testimony of Dr. Duane Mitchell. *See Chapman v. Procter & Gamble Distrib., LLC*, 766 F.3d 1296, 1304–05 (11th Cir. 2014) (quotation marks omitted). Given the district court's thorough familiarity with the case's evidentiary

circumstances, we see no reason to dis-turb its expert testimony rulings.

Nor do we find reversible error as to either the special interrogatories or class certification. A review of the record demonstrates that the district court methodically handled the parties' objections, and the final verdict form and instructions, taken together, comport with both Florida law and this case's factual posture. *See Farley v. Nationwide Mut. Ins. Co.*, 197 F.3d 1322, 1329 (11th Cir. 1999); *Busby v. City of Orlando*, 931 F.2d 764, 776 (11th Cir. 1991) (per curiam). We cannot say that the court abused its discretion in its phrasing of the special interrogatories. And because Plaintiffs-Appellants' other challenges fail, we need not reach the merits of the class certification claim. *See Williams v. Wallis*, 734 F.2d 1434, 1441 (11th Cir. 1984).

Accordingly, we affirm the well-reasoned decisions by the district court.

AFFIRMED.

APPENDIX B

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO.: 9:13 cv 80928 MARRA
(Consolidated Action: Lead Case)

RICHARD COTROMANO, et al on behalf fo themselves and all others similarly situated,

Plaintiffs,

vs.
RAYTHEON TECHNOLOGIES CORPORATION, Pratt & Whitney Group, A Connecticut Corporation,

Defendant.

Date of Entry: March 25, 2021

ORDER
(Denying Plaintiffs' Daubert Motions)

This cause is before the Court upon Plaintiff's Motion to Strike the Opinions of Defendant's Expert John Frazier, Ph.D. as Unreliable pursuant to Daubert (DE 603); Plaintiff's Motion to Strike the Opinions of Defendant's Causation Expert Duane A. Mitchell, MD, Ph.D. as Unreliable pursuant to Daubert (DE 605) and Plaintiff's Motion to Strike the Opinions of Defendant's Expert M. Laurentius Marais, Ph.D.,

as Unreliable, Irrelevant, and Beyond the Scope of His Expertise pursuant to Daubert (DE 607). The Motions are fully briefed and ripe for review. The Court held a hearing on the motions on February 12 and 23, 2021. The Court has carefully considered the Motions and the arguments of counsel and is otherwise fully advised in the premises.

Rule 702 of the Federal Rules of Evidence controls the admission of expert testimony. The rule provides that a qualified expert may testify in the form of opinions or otherwise if:

> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
> (b) the testimony is based on sufficient facts or data;
> (c) the testimony is the product of reliable principles and methods; and
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Civ. P. 702.

The Court acts as a "gatekeeper" to make sure the admissibility of expert testimony is consistent with Rule 702 of the Federal Rules of Civil Procedure. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 589 n.7 (1993); United States v.

Frazier, 387 F.3d 1244, 1260 (11th Cir. 2004). There is a "rigorous three-part inquiry" to be used in determining the admissibility of expert testimony under Rule 702. Frazier, 387 F.3d at 1260. First, the expert must be qualified to offer his opinion. Id. Second, the expert's opinions must be sufficiently reliable. Id. Lastly, the expert's testimony must assist the trier of fact to understand the evidence or determine a fact in issue. Id.

After careful review, the Court denies these motions. To the extent the motions challenge the qualifications of Defendant's experts, the Court finds that they are qualified to give expert opinions on the topics for which they are designated. To the extent they are challenging the opinions, the Court finds that these challenges go to the credibility, and not to the admissibility, of the opinions. See Rosenfeld v. Oceania Cruises, Inc., 654 F.3d 1190, 1193 (11th Cir. 2011) ("it is not the role of the district court to make ultimate conclusions as to the persuasiveness of the proffered evidence"); Banta Properties, Inc. v. Arch Specialty Ins. Co., No. 10-61485-CIV, 2011 WL 13096476, at *2 (S.D. Fla. Dec. 22, 2011) ("[i]n the court's role as a gatekeeper, however, it must be careful to rule only on the admissibility of expert testimony, not its weight or credibility").

Accordingly, it is hereby **ORDERED AND ADJUDGED** as follows:

1) Plaintiff's Motion to Strike the Opinions of Defendant's Expert John Frazier, Ph.D. as Unreliable pursuant to Daubert (DE 603) is

DENIED.

2) Plaintiff's Motion to Strike the Opinions of Defendant's Causation Expert Duane A. Mitchell, MD, Ph.D. as Unreliable pursuant to Daubert (DE 605) is **DENIED**.

3) Plaintiff's Motion to Strike the Opinions of Defendant's Expert M. Laurentius Marais, Ph.D., as Unreliable, Irrelevant, and Beyond the Scope of His Expertise pursuant to Daubert (DE 607) is **DENIED**.

DONE AND ORDERED in Chambers at West Palm Beach, Palm Beach County, Florida, this 25th day of March, 2021.

/s Kenneth. A Marra
KENNETH A. MARRA
United States District Judge

APPENDIX C

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO.: 9:13 cv 80928 MARRA
(Consolidated Action: Lead Case)

RICHARD COTROMANO, et al on behalf fo themselves and all others similarly situated,

Plaintiffs,

vs.
RAYTHEON TECHNOLOGIES CORPORATION, Pratt & Whitney Group, A Connecticut Corporation,

Defendant.

Date of Entry: March 25, 2021

ORDER
(Granting Defendant's Daubert Motion as to Bernd Franke)

This cause is before the Court upon Defendant's Daubert Motion to Exclude the Testimony of Bernd Franke (DE 600). The Motion is fully briefed and ripe for review. The Court held a hearing on the motion on February 12 and 23, 2021. The Court has carefully considered the Motion and the arguments of counsel and is otherwise fully advised in the premises.

Rule 702 of the Federal Rules of Evidence controls the admission of expert testimony. The rule provides that a qualified expert may testify in the form of opinions or otherwise if:

> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
> (b) the testimony is based on sufficient facts or data;
> (c) the testimony is the product of reliable principles and methods; and
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Civ. P. 702.

The Court acts as a "gatekeeper" to make sure the admissibility of expert testimony is consistent with Rule 702 of the Federal Rules of Civil Procedure. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 589 n.7 (1993); United States v. Frazier, 387 F.3d 1244, 1260 (11th Cir. 2004). There is a "rigorous three-part inquiry" to be used in determining the admissibility of expert testimony under Rule 702. Frazier, 387 F.3d at 1260. First, the expert must be qualified to offer his opinion. Id. Second, the expert's opinions must be sufficiently reliable. Id. Lastly, the expert's testimony must assist the trier of fact to understand the evidence or determine a fact in issue. Id.

The Eleventh Circuit has explained that there are two types of toxic tort cases: "[T]hose cases in which the medical community generally recognizes the toxicity of the drug or chemical at issue and those cases in which the medical community does not generally recognize the agent as both toxic and causing the injury the plaintiff alleges." McClain v. Metabolife Intern., Inc., 401 F.3d 1233, 1241 (11th Cir. 2005). "When analyzing an expert's methodology in toxic tort cases, the court should pay careful attention to the expert's testimony about the dose-response relationship." Id. Essentially, dose-response is "the hallmark of basic toxicology." Id. at 1242. A dose-response assessment estimates scientifically "the dose or level of exposure at which [the substance at issue] causes harm." Id. at 1241. It is the "single most important factor to consider in evaluating whether an alleged exposure caused a specific adverse effect." Chapman v. Procter & Gamble Distrib., LLC, 766 F.3d 1296, 1307 (11th Cir. 2014).

Mr. Franke's dose-response analysis centers on his assumption that a dose of toxins to the spine would be the same as a dose of toxins to the brain. A review of Mr. Franke's deposition (DE 600-3 at p.54)[1] reveals that he has no evidence to support that assumption. Because Mr. Franke has no scientifically reliable or supportable basis to conclude that a dose of toxins to the

[1] The page number refers to the actual deposition transcript, not the page number on CM/ECF.

spine will be the same as a dose to the brain, he has no scientifically reliable basis to measure the dose exposure to the brain in this case. Thus, Mr. Franke is unable to opine, to a reasonable degree of scientific certainty, that the dose exposure of toxins in this case was sufficient to cause brain cancer. Because Mr. Franke's opinion is not based on scientifically reliable or supportable data to meet the requirements for the dose-response relationship, the Court must strike his testimony pursuant to Daubert.

Accordingly, it is hereby **ORDERED AND ADJUDGED** that Defendant's Daubert Motion to Exclude the Testimony of Bernd Franke (DE 600) is **GRANTED.**

DONE AND ORDERED in Chambers at West Palm Beach, Palm Beach County, Florida, this 25th day of March, 2021.

/s Kenneth. A Marra
KENNETH A. MARRA
United States District Judge

APPENDIX D

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO.: 9:13 cv 80928 MARRA
(Consolidated Action: Lead Case)

RICHARD COTROMANO, et al on behalf fo themselves and all others similarly situated,

Plaintiffs,

vs.
RAYTHEON TECHNOLOGIES CORPORATION, Pratt & Whitney Group, A Connecticut Corporation,

Defendant.

Date of Entry: March 25, 2021

ORDER
(Granting Defendant's Daubert Motion as to William Sawyer)

This cause is before the Court upon Defendant's Daubert Motion to Exclude the Testimony of William Sawyer (DE 604). The Motion is fully briefed and ripe for review. The Court held a hearing on the motion on February 12 and 23, 2021. The Court has carefully considered the Motion and the arguments of counsel and is otherwise fully advised in the premises.

Rule 702 of the Federal Rules of Evidence controls the admission of expert testimony. The rule provides that a qualified expert may testify in the form of opinions or otherwise if:

> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
> (b) the testimony is based on sufficient facts or data;
> (c) the testimony is the product of reliable principles and methods; and
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Civ. P. 702.

The Court acts as a "gatekeeper" to make sure the admissibility of expert testimony is consistent with Rule 702 of the Federal Rules of Civil Procedure. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 589 n.7 (1993); United States v. Frazier, 387 F.3d 1244, 1260 (11th Cir. 2004). There is a "rigorous three-part inquiry" to be used in determining the admissibility of expert testimony under Rule 702. Frazier, 387 F.3d at 1260. First, the expert must be qualified to offer his opinion. Id. Second, the expert's opinions must be sufficiently reliable. Id. Lastly, the expert's testimony must assist the trier of fact to understand the evidence or determine a fact in issue. Id.

The Eleventh Circuit has explained that there are two types of toxic tort cases: "[T]hose cases in which the medical community generally recognizes the toxicity of the drug or chemical at issue and those cases in which the medical community does not generally recognize the agent as both toxic and causing the injury the plaintiff alleges." McClain v. Metabolife Intern., Inc., 401 F.3d 1233, 1241 (11th Cir. 2005). "When analyzing an expert's methodology in toxic tort cases, the court should pay careful attention to the expert's testimony about the dose-response relationship." Id. Essentially, dose-response is "the hallmark of basic toxicology." Id. at 1242. A dose-response assessment estimates scientifically "the dose or level of exposure at which [the substance at issue] causes harm." Id. at 1241. It is the "single most important factor to consider in evaluating whether an alleged exposure caused a specific adverse effect." Chapman v. Procter & Gamble Distrib., LLC, 766 F.3d 1296, 1307 (11th Cir. 2014).

Plaintiffs do not dispute that Dr. Sawyer did not perform a dose-response calculation. At the hearing, Plaintiffs' argued that Dr. Sawyer relied upon Mr. Bernd Franke's dose-response calculation. A review of Mr. Franke's reports shows that this is not the case. (See DE 604-3, 604-4, 604-5, 604-14, 604-21.) Moreover, the Court rejects Plaintiffs' justifications or explanations as to why Dr. Sawyer did not have to perform a dose-response calculation. Because the Court concludes that a dose-response calculation is required by Eleventh Circuit Court of Appeals precedent, Dr. Sawyer's failure to perform the dose-response calculation requires the Court to

strike him as an expert.[1]

Accordingly, it is hereby **ORDERED AND ADJUDGED** that Defendant's Daubert Motion to Exclude the Testimony of William Sawyer (DE 604) is **GRANTED.**

DONE AND ORDERED in Chambers at West Palm Beach, Palm Beach County, Florida, this 25th day of March, 2021.

/s Kenneth. A Marra
KENNETH A. MARRA
United States District Judge

[1] 1 The Court is also striking Mr. Franke as an expert, which provides additional grounds to strike Dr. Sawyer.

APPENDIX E

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO.: 9:13 cv 80928 MARRA
(Consolidated Action: Lead Case)

RICHARD COTROMANO, et al on behalf fo themselves and all others similarly situated,

Plaintiffs,

vs.
RAYTHEON TECHNOLOGIES CORPORATION, Pratt & Whitney Group, A Connecticut Corporation,

Defendant.

Date of Entry: March 25, 2021

ORDER
(Granting Defendant's Daubert Motion as to Brian D. Moore)

This cause is before the Court upon Defendant's Daubert Motion to Exclude the Testimony of William Sawyer (DE 602). The Motion is fully briefed and ripe for review. The Court held a hearing on the motion on February 12 and 23, 2021. The Court has carefully considered the Motion and the arguments of counsel and is otherwise fully advised in the premises.

Rule 702 of the Federal Rules of Evidence controls the admission of expert testimony. The rule provides that a qualified expert may testify in the form of opinions or otherwise if:

> (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
> (b) the testimony is based on sufficient facts or data;
> (c) the testimony is the product of reliable principles and methods; and
> (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Civ. P. 702.

The Court acts as a "gatekeeper" to make sure the admissibility of expert testimony is consistent with Rule 702 of the Federal Rules of Civil Procedure. Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 589 n.7 (1993); United States v. Frazier, 387 F.3d 1244, 1260 (11th Cir. 2004). There is a "rigorous three-part inquiry" to be used in determining the admissibility of expert testimony under Rule 702. Frazier, 387 F.3d at 1260. First, the expert must be qualified to offer his opinion. Id. Second, the expert's opinions must be sufficiently reliable. Id. Lastly, the expert's testimony must assist the trier of fact to understand the evidence or determine a fact in issue. Id.

Even before the Court engages in a Daubert analysis, the Court must first address a threshold problem. To the extent Plaintiffs seek to use Mr. Moore as a "standard of care" expert, Plaintiffs did not properly disclose him as this type of expert. A review of Mr. Moore's reports shows that he did not set forth his opinions on the standard of care and the basis for those opinions in his reports. See Mitchell v. Ford Motor Co., 318 F. App'x 821, 825 (11th Cir. 2009) (affirming the district court's exclusion of an expert opinion that was untimely disclosed).

Next, the Court addresses whether Mr. Moore can express an expert opinion that the contaminated fill went from the Pratt & Whitney location to the Acreage. The Court finds that he cannot. Such a conclusion can be instead reached by the jury based on any direct or circumstantial evidence upon which Plaintiffs rely.

Lastly, with respect to Mr. Moore's opinions on groundwater or air transport of contaminants, those subjects are beyond Mr. Moore's expertise and he failed to describe a methodology to support his opinions. See McClain v. Metabolife Int'l, Inc., 401 F.3d 1233, 1255 (11th Cir. 2005) (finding error when district court admitted testimony of experts in toxic tort case that did not use a reliable methodology); Williams v. Michelin N. Am., Inc., 381 F. Supp. 2d 1351, 1362 (M.D. Fla. 2005) (excluding expert opinion that is beyond the scope of the expert's expertise).

Based on this reasoning, it is hereby

ORDERED AND ADJUDGED that Defendant's Daubert Motion to Exclude the Testimony of Brian D. Moore (DE 602) is **GRANTED.**

DONE AND ORDERED in Chambers at West Palm Beach, Palm Beach County, Florida, this 25th day of March, 2021.

/s Kenneth. A Marra
KENNETH A. MARRA
United States District Judge

APPENDIX F

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO.: 9:13 cv 80928 MARRA
(Consolidated Action: Lead Case)

RICHARD COTROMANO, et al on behalf of themselves and all others similarly situated,

Plaintiffs,

vs.
RAYTHEON TECHNOLOGIES CORPORATION, Pratt & Whitney Group, A Connecticut Corporation,

Defendant.

Date of Entry: June 2, 2021

ORDER DENYING PLAINTIFFS' MOTION FOR RECONSIDERATION[1]

This cause is before the Court upon Plaintiffs' Motion for Reconsideration of DE 641 and DE 644 Disqualifying Testimony of Bernd Franke and William B. Sawyer (DE 649). The Motion is fully

[1] The Court presumes familiarity with its prior Orders.

briefed and ripe for review. The Court has carefully considered the Motion and is otherwise fully advised in the premises.

Plaintiffs move for reconsideration of the Court's Daubert rulings striking Dr. Sawyer and Mr. Franke. Plaintiffs contend that the Court misunderstood essential facts about ependymoma and posit that the Court struck Dr. Sawyer, a toxicologist, for not being a dosimetrist and struck Mr. Franke, a nuclear dosimetrist, for not being a toxicologist. Plaintiffs relied upon Mr. Franke to provide the dose and for Dr. Sawyer to explain how the toxin traveled.

According to Plaintiffs, with respect to Mr. Franke, he testified that he used central nervous system tissue to dose a central nervous system cancer and organ and this is scientifically reliable. The point of his dose calculation was to demonstrate what caused a brain tumor, not to demonstrate radiation to the brain. Plaintiffs complain that the Court never stated why the dose itself could not be used to demonstrate that Defendant's contamination caused an exposure in excess of the Price Anderson dose limits.

With respect to Dr. Sawyer, Plaintiffs state that it would have been more accurate for them to have stated that they were relying on Mr. Franke's opinion as to dose and not that Dr. Sawyer relied on Mr. Franke. Plaintiffs acknowledge that Dr. Sawyer did not provide an exact dose or rely on anyone else's dose because he is not a dosimetrist,

and this is not a personal injury radiation case. Plaintiffs claim the Court erred by not delving into why the response assessment does not provide a reliable groundwork for Dr. Sawyer's opinion. Furthermore, Plaintiffs claim that they rely on Dr. Ari Perry for general causation, which Dr. Sawyer relied upon, and that Dr. Sawyer demonstrated that the individuals at issue were exposed to a sufficient amount of the substance in question to elicit the health effect in question. Plaintiffs point out that Dr. Sawyer used the latency effect to find a relationship between the exposure and the disease. He also ruled out other causes of cancer.

Defendant responds that Plaintiffs have not met the standard for reconsideration because they rehash previous arguments and demand the Court rethink its decision. Defendant points out that Plaintiffs admitted during oral argument that Dr. Sawyer had not taken the dose-response relationship into account. Defendants also claim that Dr. Sawyer did not acknowledge any dose-response relationship. With respect to Mr. Franke, Defendant points out that Mr. Franke only offered one dose and it was unreliable.

In reply, Plaintiffs state that Dr. Sawyer offered a toxicology dose but did not "reconstruct" the toxicology dose because he did not have to when the dose was directly measured by the analysis of Cynthia's tissues. Dr. Sawyer did not offer a radiation dose. Instead, Dr. Sawyer took the dose afforded by the tissue and Mr. Franke took the radiation reading obtained from the tissue and

used it to calculate the dose to the brain. Plaintiffs contend that the Court neglected published protocols that allowed Mr. Franke to use the dose of the central nervous system to the brain and misunderstood that Dr. Sawyer was not providing any dose nor performing a dose-response assessment. Rather, he looked at the relationship between the dose of thorium in Cynthia's spine and the tumor in her brain. Lastly, Plaintiffs contend that the dose is relevant to the stigma question as well.

Courts have set forth three major grounds justifying reconsideration: "(1) an intervening change in controlling law; (2) the availability of new evidence and (3) the need to correct clear error or prevent manifest injustice." Williams v. Cruise Ships Catering and Serv. Int'l, N.V., 320 F. Supp. 2d 1347, 1357-58 (S.D. Fla. 2004).

Furthermore, in reviewing a motion to reconsider, the Court "will not alter a prior decision absent a showing of 'clear and obvious error' where 'the interests of justice' demand correction." Prudential Securities, Inc. v. Emerson, 919 F. Supp. 415, 417 (M.D. Fla. 1996) (quoting American Home Assurance, Co. v. Glenn Estess & Assoc. Inc., 763 F.2d 1237, 1239 n.2 (11th Cir. 1985)). A motion for reconsideration should not be used to reiterate arguments already made or to ask the Court to "rethink what the Court ... already thought through." Z.K. Marine, Inc. v. M/V Archigetis, 808 F. Supp. 1561, 1563 (S.D. Fla. 1992) (quoting Above the Belt, Inc. v. Mel Bohannan Roofing, Inc., 99

F.R.D. 99, 101 (E.D. Va. 1983)). Nor should a motion for reconsideration be used to raise arguments that should have been made initially. See O'Neal v. Kennamer, 958 F.2d 1044, 1047 (11th Cir. 1992); Prudential, 919 F. Supp. at 417. Denial of a motion for reconsideration is "especially soundly exercised when the party has failed to articulate any reason for the failure to raise an issue at an earlier stage in the litigation." Lussier v. Dugger, 904 F.2d 661, 667 (11th Cir. 1990). Finally, "reconsideration of a previous order is 'an extraordinary remedy, to be employed sparingly.'" Mannings v School Bd. Of Hillsborough County, 149 F.R.D. 235 (M.D. Fla. 1993).

Here, Plaintiffs reiterate prior arguments in asking the Court to reconsider its ruling. The Court has already considered and rejected those arguments and there is no basis to revisit them. Specifically, the Court excluded Dr. Sawyer because he failed to conduct a dose-response analysis, which the Court found to be required under controlling Eleventh Circuit precedent. With respect to Mr. Franke, the Court rejected the underlying assumption behind Mr. Franke's opinion; namely, that a measured dose of toxins to the spine can be used to determine the dose exposure to the brain, as not being scientifically supported.

For these reasons, it is hereby **ORDERED AND ADJUDGED** that Plaintiffs' Motion for Reconsideration of DE 641 and DE 644 Disqualifying Testimony of Bernd Franke and William B. Sawyer (DE 649) is **DENIED.**

DONE AND ORDERED in Chambers at West Palm Beach, Palm Beach County, Florida, this 2nd day of June, 2021.

/s Kenneth. A Marra

KENNETH A. MARRA
United States District Judge

APPENDIX G

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO.: 9:13 cv 80928 MARRA
(Consolidated Action: Lead Case)

RICHARD COTROMANO, et al on behalf fo themselves and all others similarly situated,

Plaintiffs,

vs.
RAYTHEON TECHNOLOGIES CORPORATION, Pratt & Whitney Group, A Connecticut Corporation,

Defendant.

Date of Entry: June 3, 2022

ORDER[1]

This cause is before the Court upon the parties' bench briefs (DE 733, 734, 758) and the parties' supplemental briefs (DE 760, 761). The Court has carefully considered the parties' submissions and is otherwise fully advised in the premises.

The parties agreed to file bench briefs prior to

[1] The Court presumes familiarity with its prior Orders.

trial on the applicability of the Price Anderson Act ("PAA") to Plaintiffs' claims. Among its arguments, Defendant contends that Plaintiffs' claims are preempted by the PAA because the claims "turn on showing [Defendant] caused bodily harm (i.e., cancer) through the release of radioactive materials into the environment." (DE 733-1 at 2.)[2] In contrast, Plaintiffs argue that the PAA does not apply because a property damage claim based on stigma does not meet the criteria of a nuclear incident, which is required for the PAA to come into play.

After considering these arguments, the Court asked for further clarification regarding which claims remain pending for trial. Plaintiffs informed the Court that they are proceeding under the Second Amended Complaint (DE 72) which includes a negligence claim, a claim for strict liability under Chapter 376 and a PAA claim for nuclear incident.[3] (DE 760 at 2.) Defendant's supplemental brief states that the only remaining claim is the PAA claim because Plaintiffs have

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[2] The page number refers to the brief's page number and not the CM/ECF page number.

[3] Plaintiffs state that one of these claims "is pled in the alternative" (DE 760 at 3) but does not identify the alternative claim. Based on the briefing of the parties, the Court assumes the PAA claim is the alternative claim.

abandoned the theories underpinning the state law claims of negligence and strict liability. Alternatively, Defendant states that even if Plaintiffs had not abandoned their state law claims, the state law claims are preempted by the PAA.

With respect to the pending claims, the Court agrees with Plaintiffs that all three claims in the Second Amended Complaint remain pending. As Plaintiffs correctly point out, none of those claims have been dismissed or eliminated by a dispositive motion. The issue before the Court then is whether these state law claims of negligence and strict liability are preempted by the PAA. Given that this case concerns the diminution in property value due to the stigma surrounding the cancer cluster, the Court looks to Cook v. Rockwell Int'l Corp., 790 F.3d 1088, 1090 (10th Cir. 2015) (Gorsuch, J.) for guidance.

In Cook, the Tenth Circuit held that the PAA does not preempt state law nuisance claims. At trial, the Cook plaintiffs prevailed on their PAA and state law public nuisance claims. Id. at 1090. On appeal, the Tenth Circuit remanded the case based on the jury instructions for the PAA claim. Id. at 1090-91. At that point, the plaintiffs abandoned their PAA claim and sought judgment on the state nuisance claim alone. Id. at 1091. The district court, however, ruled that the PAA preempted the state law claims, even where the plaintiffs failed to prove a "nuclear incident." Id. at 1092. In analyzing the history and text of the PAA, the Tenth Circuit found that Congress anticipated

the existence of "lesser nuclear occurrences" that would not constitute a "nuclear incident." Id. at 1095. In those cases, the Tenth Circuit held that a plaintiff can still recover under state law for a lesser nuclear occurrence. Id. at 1096.

Previously, in the Santiago case (DE 407 case no. 10-cv-80883), the Court explained that bodily injury claims fell under the PAA whereas injuries such as reduced property values due to radioactive waste on property are injuries not cognizable under the PAA. See also Cook, 790 F.3d at 1090. Although Defendant attempts to characterize Plaintiffs' claims as bodily injuries, the Court rejects that characterization. While it is alleged the presence of radioactive material in the affected area led to bodily injuries, the damages in this case relate solely to the diminution of Plaintiffs' property values due to the stigma of a cancer cluster. Thus, the Court rejects Defendant's argument that this is a bodily injury case where the PAA applies to Plaintiffs' claims based on state law.

Accordingly, it is hereby **ORDERED AND ADJUDGED** that the parties resubmit proposed jury instructions consistent with this ruling.

DONE AND ORDERED in Chambers at West Palm Beach, Palm Beach County, Florida, this 2nd day of June, 2022.

/s Kenneth. A Marra

KENNETH A. MARRA
United States District Judge

APPENDIX H

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO.: 9:13 cv 80928 MARRA
(Consolidated Action: Lead Case)

RICHARD COTROMANO, BETHANY COTROMANO, FRANK DECARLO, PAULETTE DECARLO, GREGORY DUNSFORD, JENNIFER DUNSFORD, JOYCE FEATHERSTON,

Plaintiffs,

vs.
RAYTHEON TECHNOLOGIES CORPORATION, Pratt & Whitney Group, A Connecticut Corporation,

Defendants.

Date of Entry: July 26, 2022

VERDICT

We, the jury, unanimously find the following by a preponderance of the evidence:

Chapter 376 Claim

QUESTION 1: Did Plaintiffs prove, by a preponderance of the evidence, that a discharge or other condition of pollution from Pratt & Whitney

prohibited by the Florida Department of Environmental Protection was released into or upon the Acreage?

Answer: Yes_____ No _X____

If your answer to Question 1 is “YES' proceed to Question 2. If your answer to Question one is NO" skip Question 2 and proceed to Question 4.

QUESTION Did any of the Plaintiffs prove, by a preponderance of the evidence, that the prohibited discharge from Pratt& Whitney caused the cancer cluster resulting in a diminution of the value of their property?

Answer: Yes _____ No_____

If your answer to Question 2 is “YES," you go to Question 3. If your answer to Question 2 is “NO" skip Question 3 and go to Question 4.

QUESTION 3: For each Plaintiff what is the amount of damages, if any, that you find resulted from the prohibited discharge in the Acreage?

Richard and Bethany Cotromano $_____

Frank and Paulette DeCarlo $_____

Gregory and Jennifer Dunsford $_____

Joyce Featherston $_____

Proceed to Question4.

Negligence Claim

QUESTION 4: Did Plaintiffs prove, by a preponderance of the evidence, that Pratt & Whitney failed to exercise reasonable care in the use and disposal of radioactive materials at its Palm Beach County facility?

Answer: Yes _X___ No_____

If your answer to Question 5 is “YES' proceed to Question 2. If your answer to Question one is NO," date and sign this form.

QUESTION 5: Did Plaintiffs prove, by a preponderance of the evidence, that as a result of Pratt& Whitney's failure to use reasonable care, radioactive materials from Pratt & Whitney's facility were transported to locations in the Acreage?

Answer: Yes_____ No _X___

QUESTION 6: Did Plaintiffs prove, by a preponderance of the evidence, that radioactive contamination from Pratt & Whitney caused the cancer cluster that was designated in the Acreage by the Florida Department of Hea1th?

Answer: Yes_____ No ___

If your answer to Question 6 is “YES," proceed to

Question 7. If your answer to Question 6 is ç NO," date and sign this form.

QUESTION 7: Did any of the Plaintiffs prove, by a preponderance of the evidence, that the designation of a cancer cluster in the Acreage caused by Pratt & Whitney resulted in damages to Plaintiffs?

Answer: Yes_____ No ___

If your answer to Question 7 is “YES," proceed to Question 8. If your answer to Question 7 is “NO,” then date and sign the form .

QUESTION 8: For each Plaintiff, what is the amount of damages, if any, that you find resulted from Pratt& Whitney causing the cancer cluster?

Richard and Bethany Cotromano $_____

Frank and Paulette DeCarlo $_____

Gregory and Jennifer Dunsford $_____

Joyce Featherston $_____

If you awarded any damages to any of the Plaintiffs in Question 8, then answer Question 9,

QUESTION 9:: Under the circumstances of this case, state whether you find by clear and convincing evidence that punitive damages are warranted against Pratt & Whitney:

If your answer to Question 9 is “YES," what is the total amount of punitive damages, if any, which

you find should be assessed against Pratt& Whitney?

$ _____

NOTE TO JURORS: If you awarded damages to any Plaintiff in the answers to Questions 3 and 8, you should know that the amounts awarded will not be added together in a judgment entered against Pratt& Whitney. Any Plaintiff awarded damages will only be compensated once for the same injury.

SO SAY WE ALL.

Date /s 7/26/2022

/S REDACTED REDACTED

Foreperson's Signature Foreperson Print Name

APPENDIX I

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF FLORIDA

CASE NO.: 9:13 cv 80928 MARRA
(Consolidated Action: Lead Case)

RICHARD COTROMANO, BETHANY COTROMANO, FRANK DECARLO, PAULETTE DECARLO, GREGORY DUNSFORD, JENNIFER DUNSFORD, JOYCE FEATHERSTON,

Plaintiffs,

vs.
RAYTHEON TECHNOLOGIES CORPORATION, Pratt & Whitney Group, A Connecticut Corporation,

Defendants.

Date of Entry: August 5, 2022

ORDER DIRECTING ENTRY OF JUDGMENT PURSUANT TO RULE 54(b) FEDERAL RULE OF CIVIL PROCEDURE

Finding there is no just reason for delay in entering judgment pursuant to Rule 54(b) of the Federal Rules of Civil Procedure, Judgment is hereby entered in favor of Defendant Raytheon Technologies Corporation, Pratt & Whitney Group and against Plaintiffs Richard Cotromano, Bethany

Cotromano, Frank DeCarlo, Paulette DeCarlo, Gregory Dunsford, Jennifer Dunsford and Joyce Featherston, and Plaintiffs shall take nothing from Defendant in this action.

DONE AND ORDERED in Chambers at West Palm Beach, Palm Beach County, Florida, this 4th day of August, 2022.

/s Kenneth A. Marra

KENNETH A. MARRA

United States District Judge

APPENDIX J

IN THE UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

No. 22-13024

RICHARD COTROMANO, et al.,

Plaintiffs Appellants,

BILL FEATHERSTON, et al.,

Plaintiffs,

JOSEPH ADINOLFE, et al.,

Consol Plaintiffs,

Versus

UNITED TECHNOLOGIES CORPORATION, PRATT AND WHITNEY GROUP, et al.,

Defendants

RTX CORPORATION, dba PRATT & WHITNEY

Defendant-Apellee.

Appeal from the United States District Court
for the Southern District of Florida

D.C. Docket No. 9:13-cv-80928-KAM

Date of Entry: June 11, 2024

ON PETITION(S) FOR REHEARING AND PETITION(S) FOR REHEARING EN BANC

Before WILSON, LUCK, and LAGOA, Circuit Judges.

The Petion for reheating En Bank is DENIED, no judge in regulate active service on the Court having requested that the Court be polled on rehearing en banc. FRAP 35. The Petition for Panel rehearing also is DENIED. FRAP 40.

APPENDIX K

IN THE UNITED STATES COURT OF APPEALS FOR THE ELEVENTH CIRCUIT

No. 22-13024 - JJ

RICHARD COTROMANO, et al., all on behalf of themselves and all others similarly situated,

Plaintiffs-Plaintiffs,

vs.

RAYTHEON TECHNOLOGIES CORPORATION, Pratt & Whitney Group, A Connecticut Corporation,

Defendant-Appellee.

District Court Docket No.:
9:13-cv-80928-KAM

Appeal from the United States District Court
For the Southern District of Florida, West Palm Beach Division

Date of Entry: May 9, 2024

PLAINTIFFS-APPELLANTS' PETITION FOR REHEARING EN BANC AND PANEL REHEARING

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STATEMENT PURSUANT TO
11th Cir. R. 35-5(c)

I express a belief, based on a reasoned and studied professional judgment, that the panel decision is contrary to the following decisions of the Supreme Court of the United States and the precedents of this Circuit and that consideration by the full court is necessary to secure and maintain uniformity of decisions in this Court:

- *Adinolfe v. United Techs. Corp.,* 786 F.3d 1161 (11th Cir. 2014),which is a related consolidated case pending below.
- *Busby v. City of Orlando*, 931 F.2d 764, 727 (11th Cir. 1991) and
- *Central Alabama Fair Housing Center v. Lowder Realty Company*, 236 F.3d 629 (11th Cir. 2000) regarding jury instructions argued to fundamentally contradict *Adinolfe*.
- *Carrizosa v. Chiquita Brands Int'l*, Inc., 47 F.4th 1278, 1320 (11th Cir. 2022) regarding the admission of a remediation professional's opinion which is also proffered in related personal injury actions.
- *Daubert v. Merrell Dow Pharms., Inc.,*509 U.S. 579 (1993) and *McClain v. Metabolife Intrn, Inc.*, 401 F.3d 1233 (11th Cir. 2005) regarding the requirement that trial courts review the dose assessments submitted in toxic tort cases.

I also express a belief, based on a reasoned and studied professional judgment, that this appeal involves the following questions of exceptional importance:

1. Should claims asserting environmental stigma resulting from a defendant's negligent onsite waste be subjected to additional special interrogatories regarding fault for the transport of mishandled waste?
2. Should testimony regarding remediation practices and procedures be assessed for whether it is the sort of "social science expert testimony that can give the jury a view of the evidence well beyond their everyday experience."
3. Can a Circuit Court cogently perform a review of summary orders related to expert testimony under the abuse of discretion review when neither the orders nor the court's record statements express any assessment of the methodologies at hand?
4. Should a dose assessment based upon a dose taken from biological evidence be precluded simply because the dose therein was taken from postmortem tissue rather than reconstructed from an environment surveyed decades after exposure.

TABLE OF AUTHORITIES

Cases

Statutes

Rules

ISSUES MERITING EN BANC CONSIDERATION

When the law expressly negates the burden of proving offsite misconduct in pollutive torts, may interrogatories suggesting such an additional burden exists be excused simply because they are consistent with the polluter's express theory of defense?

Should a toxicological dose assessment and a radiation dose calculation be ignored simply because the underlying dose includes the type of biological evidence customarily relied upon in that expert's field of expertise rather than the type of dose reconstruction data courts often find in pharmacological cases?

Does the abuse of discretion standard of review permit a district court to issue summary orders on expert admissibility; or, must the trial court set forth the careful analysis required by this Court so that it may be reviewed?

COURSE OF PROCEEDINGS AND DISPOSITION OF THE CASE

Plaintiffs allege that P&W caused a stigmatizing cancer cluster associated with low-dose ionizing radiation. The jury found that P&W failed to exercise reasonable care in its use and disposal of radioactive materials on its campus. Doc. 822 at 2, Question 4. Before the jury could consider whether that radioactive material went on to cause the stigma, Plaintiffs had to separately establish "by a preponderance of evidence, that as a result of P&W's failure to exercise reasonable care, radioactive material was transported to the Acreage." The jury found this was not demonstrated. Doc. 822 at 3, Question 5.

Plaintiffs argued against the special interrogatory and how the final interrogatory instructions framed liability in the charge conferences below. Doc. 767-1, Jury Instructions included in Appendix at App. 34-10 at 76[1] and Charge conference App. 34-10, at 65.[2]

Prior to the trial, the Court entered orders which excluded Plaintiffs' experts on soil transport and remediation and on radiation dosimetry and toxicology while permitting all P&W's challenged experts to provide testimony. Doc. 643-647.

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[1]See also p. 59-61 regarding the reasoning for a concurring cause instruction, amd p. 47-67 regarding Chapter 376 claims,

[2] Especially 171-173, App. 34-10, at 176-196 (Appendix p. 2073-2093, especially 2082-2084).

Plaintiffs appealed the jury verdict form and the expert determinations as serial abuses of discretion. After argument, the panel released a per curium opinion summarily citing applicable precedent and affirming the rulings.

FACTS NECESSARY TO ARGUMENT OF THE ISSUES

At the close of trial, P&W argued that since "no one can claim that P&W Whitney's records on this (remediation), even today, 20 years later, are somehow not reasonably comprehensive," the very notion that P&W caused a cluster in the Acreage was "preposterous." Doc. 822, at 99, App. 34-11, at 2304.

P&W further claimed Plaintiffs' burden required them to prove that "Pratt & Whitney did something to put something in The Acreage, that we somehow caused it to be transported to The Acreage." Doc. 822, at 95.

ARGUMENT

I. THE PANEL OVERLOOKED EXPRESS MISSTATEMENTS OF LAW IN THE VERDICT FORM AND THE CORRESPONDING JURY CONFUSION DEMONSTRATED BY P&W'S DEFENSE.

Plaintiffs' appeal takes up issues regarding the phrasing of special interrogatories below (as to the negligence and statutory liability claims).

As to negligence, the jury answered Question 4 affirmatively, finding that P&W mishandled radioactive materials on its campus. Question 5, however, erroneously required more evidence of wrongdoing before the jury could proceed to causation:

Did Plaintiffs prove, by a preponderance of evidence, that *as a result of P&W's failure to exercise reasonable care*, radioactive materials were transported to locations in the Acreage?

Doc 822 at 3, Question5, emphasis added.

This is how that interrogatory was explained to the jury by P&W:

So I would like to turn to one more topic before we break, and that is what I have on the board here as "Transport." Plaintiffs have to prove -- if they want to establish that Pratt & Whitney caused contamination in The Acreage, that hat caused the cancer cluster, they have to prove that Pratt & Whitney did something to put something in The Acreage, that we somehow caused it to be

transported to The Acreage. Not the mere possibility of it, but the fact that it happened. It's their burden to prove this.

Doc. 822, at 95.

Plaintiffs had originally objected to the use of any special interrogatory regarding "transport" as extraneous, confusing, and erroneous in their response to P&W's proposed instructions. App. 34-10 at 76. When the court included a special interrogatory verdict form in the draft reviewed at the final charge request, Plaintiffs did not repeat their objections to the interrogatory (which originally excluded the italicized portion above) at the final charge conference.

The requirement that the materials be "released" into the Acreage (rather than "found" in the Acreage) for liability under Section 376.313 liability injected a burden of proof into the claims that is contradicted by Florida law as set forth in *Adinolfe*.[3] Plaintiffs repeatedly objected to this as detailed in the statement on page 2 infra. The trial court also declined the addition of a concurring cause instruction, even though it is clearly required under Florida law and Plaintiffs objected. Doc 828 at 4-6, App. 34-12 at 15-17, (Appendix 2308-10).

Plaintiffs were not required to repeatedly object or hound the court regarding the same legal error to which they had already objected. See *Central Alabama Fair Housing Center v. Lowder*

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[3] Plaintiffs' Brief Doc. 30 at p. 40 and as objected to in the Statements above.

Realty Company, 236 F.3d 629 (11th Cir. 2000): When a party makes earlier objections to a jury charge that would create a false condition precedent, counsel need not make renewed objection to special interrogatories.

However, Plaintiffs expressly renewed the objection to the interrogatory when P&W asserted the additional standard of care phrase "*as a result of P&W's failure to exercise reasonable care"* to the interrogatory, noting it was superfluous and already covered by the causation element in Question 6. Doc 828 at 40, App. 34-12 at 51, (Appendix 2344). The court reserved but eventually included the interrogatory and phrase.

In affirming on this issue, the Panel's Opinion states as follows.

> …the final verdict form and instructions, taken together, comport with both Florida law and this case's factual posture. See *Farley v. Nationwide Mut. Ins. Co.*, 197 F.3d 1322, 1329 (11th Cir. 1999); *Busby v. City of Orlando*, 931 F.2d 764, 776 (11th Cir. 1991) (per curiam). We cannot say that the court abused its discretion in its phrasing of the special interrogatories.
>
> Op. at 4.

A. The incorporation of a secondary finding of breach of care as to transport was objected to below and is not the sort of scrivener's error at issue in *Farley*.

In *Farley v. Nationwide Mut. Ins. Co.*, 197 F.3d 1322, 1329 (11th Cir. 1999), a verdict form was alleged to contain a "scrivener's error:" the term "qualified disability" stated in the verdict form should have read "qualified individual with a disability." But, the jury instructions correctly defined the terms and Nationwide did not object to the phrase prior to deliberation. Thus, this Court did not disturb the verdict, restating the two exceptions found in Rule 51, meant to provide courts with opportunity to correct errors before a jury deliberates:

> We have recognized only two exceptions to this rule: first, where a party has made its position clear to the court previously and further objection would be futile; and second, where it is necessary to "correct a fundamental error or prevent a miscarriage of justice."

Id. at 1329.

This case includes both exceptions and presents entirely different circumstances than *Farley*. Not only is the phrase at issue here alleged to wrongfully misstate Plaintiff's burden, as opposed to being a "mere scrivener's error" as explained below, but Plaintiffs objected to the use of any special interrogatory on transport **from the outset** in the instructions filed under Rule 51(a) and when the phrase was added at the conference. Thus, waiver is not an issue here and the error is plain.

B. **The interrogatory is fundamentally erroneous because instructions**

wrongfully overburdened Plaintiffs' case.

A fundamental error is one which is manifestly unjust. See again *Central Alabama Fair Housing Center v. Lowder Realty Company*, 236 F.3d 629 (11th Cir. 2000). This error reshaped Plaintiffs' burden. To prove liability for negligence in the environmental context, plaintiffs need demonstrate only duty, breach, causation and damage. *Curd v. Mosaic Fertilizer,* LLC, 39 So.3d 1216 (Fla, 2010). Question 5 defies the cradle to grave liability long recognized by this Court and Florida law.

In *Adinolfe v. United Techs. Corp.*, 768 F.3d 1161 (11th Cir. 2014), this Court noted that it was error for the underlying court to dismiss a claim that did not allege that P&W's pollution exceeded regulatory levels at the home of every claimant. Both Florida's negligence and statutory causes of action for environmental harm require a claimant to prove that the defendant's onsite negligence or prohibited discharge foreseeably caused offsite harm.

C. The panel mistakenly believed the interrogatory followed Plaintiff's theory of the case when it only followed P&W's erroneous theory of defense.

At oral argument, the Panel suggested that the jury may have assumed that Question Five merely asked whether radioactive materials were indeed located in the Acreage (as in "transported somehow" to the Acreage) which would be in keeping with a theory that P&W caused a cluster in the Acreage.

This is a hazardous guess. Ignoring the phrase "as a result of P&W's failure to exercise reasonable care" reduces the interrogatory back to precisely what the trial court first proposed before P&W insisted upon the insertion of the phrase finding fault. Second, it is more likely that the jury believed the interrogatory called for an additional finding of fault because that is precisely how P&W interpreted the interrogatory in its closing as noted above.

Moreover, the error is not excused simply because a jury *might* not have been confused, the issue is whether they *may have been misled*. As this Court has stated, "where there is uncertainty as to whether a jury misled," the erroneous verdict form must be reversed. See *Central Alabama Fair Housing Center v. Lowder Realty Company*, 236 F.3d 629 (11th Cir. 2000) citing to *Busby v. City of Orlando*, 931 F.2d 764, 727 (11th Cir. 1991).

II. THE PANEL'S RELIANCE ON AN ABUSE OF DISCRETION AFFIRMS SUMMARY ORDERS THAT PLAINLY CONTRADICT THIS CIRCUIT'S PRECEDENT AS TO EACH EXPERT

The Panel opinion summarily affirms the totality of the district court's expert rulings in this case as follows:

> Our review of the record demonstrates that the district court acted well within the "considerable leeway" we afford trial courts' expert testimony decisions—whether in excluding the

> testimony of Brian Moore, Bernd Franke, and Dr. William Sawyer, along with permitting the testimony of Dr. Duane Mitchell. See *Chapman v. Procter & Gamble Distrib.*, LLC, 766 F.3d 1296, 1304–05 (11th Cir. 2014) (quotation marks omitted). Given the district court's thorough familiarity with the case's evidentiary circumstances, we see no reason to disturb its expert testimony rulings.

I. Excluding testimony of a soil remediation expert contradicts this precedent on professional standard of care and likelihood opinions.

The order excluding the professional opinions of Brian Moore, P.G, L.S.P, a Licensed Site Professional does not exclude them under *Daubert,* but instead eliminates the two opinions at issue in this case as follows:

> A review of Mr. Moore's reports shows that he did not set forth his opinions on the standard of care and the basis for those opinions in his reports. *See Mitchell v. Ford Motor Co.*, 318 F. App'x 821, 825 (11th Cir. 2009) (affirming the district court's exclusion of an expert opinion that was untimely disclosed). Next, the Court addresses whether Mr. Moore can express an expert opinion that the contaminated

> fill went from the Pratt & Whitney location to the Acreage. The Court finds that he cannot. Such a conclusion can be instead reached by the jury based on any direct or circumstantial evidence upon which Plaintiffs rely. Doc 643, at 2.

True, Moore did not use the phrase "standard of care," but after reviewing all records—which he summarized multiple times—and applying his 25 years of expertise performing and certifying remediations, he stated that P&Ws remediation were "incomplete," "inappropriate," "lacking in control," and 'inadequate."

In other words, the only reason "no one could tell" the jury how P&W's remediation records were incomplete, as P&W insisted was required at trial, was because the court precluded the opinion as something the jury could determine for themselves based upon P&W's motion to preclude him.

The court precluded these disclosed opinions on the illogical ground that Moore was not disclosed "as a standard of care opinion." Here, the citation to "*Mitchell v. Ford Motor Co.,* 318 F. App'x 821, 825 (11th Cir. 2009) is inapposite. There, the expert never provided the foundations of his opinions before the *Daubert* hearing. *Id.* at 823. In *Mitchell*, the court excluded **new opinions,** here, **no new opinions were offered**.

As to whether the opinion necessarily needed to be "necessary," the trial court simply failed to consider that "(w)here appropriate, social science expert testimony can give "the jury a view of the evidence well beyond their everyday experience." *Carrizosa v. Chiquita Brands Int'l*, Inc., 47 F.4th 1278, 1320 (11th Cir. 2022), and the panel never approaches this issue.

Moreover, the district court abused its discretion because it failed to consider the expert's complete record in the case. *Carrizosa* at 1320 (11th Cir. 2022), failure to consider "the full universe of information on which [the expert] relied" or "the evidence supporting [the expert's] opinion" is an abuse of discretion. In *Carrizosa,* an expert on terrorist behavior's causation opinion concluded that certain deaths were attributable to the terrorists funded by Chiquita. The order precluding his testimony, entered by this same trial court shortly before the orders at issue here, arbitrarily excluded the additional factors the witness considered including the modus operandi of such institutions, the history of the groups at issue, and the accounts of witnesses. These are precisely the same sort of sources relied upon by Moore's analogous likelihood of soil diversion opinion.

J. The decisions regarding the medical experts betrays the trial court's expressed unwillingness to perform the assessment required in *McClain v. Metabolife Intrn, Inc*., 401 F.3d 1233 (11th Cir. 2005).

Plaintiffs disclosed two opinions regarding the radioactive thorium isolated in the post-mortem ependymal tissue of one of the victims; and, how the

dose therein exceeded regulatory thresholds and was the most likely cause of her ependymoma—a "central nervous system cancer originating from the ependymal cells that line the spinal cord and supportive brain structures called the ventricles and create and distribute cerebral spinal fluid." (Doc 509 at 4, as explained in App. Doc. 30 at 38.) This was purposed to demonstrate not only that P&W radioactive materials caused the cancer cluster but it was present in the tissues of Acreage cancer victims.

It is important to note that a ventricular ependymoma, while a "brain cancer," does originate "in the brain" but originates from the ependymal cells in the ventricles and that the ventricles are located beneath the brain, as admitted by P&W's expert Duane Mitchell, P&W's disclosed neurosurgeon. Doc. 605-02 at 23, Mitchell report as explained in App. Doc. 30 at 38. The fact that the ventricles are not part of the "the brain" but are a fluid circulating structure tethered to the spinal cord is best depicted in the image from Mitchell's first report, copied into Plaintiff's Motion to Strike his opinions:

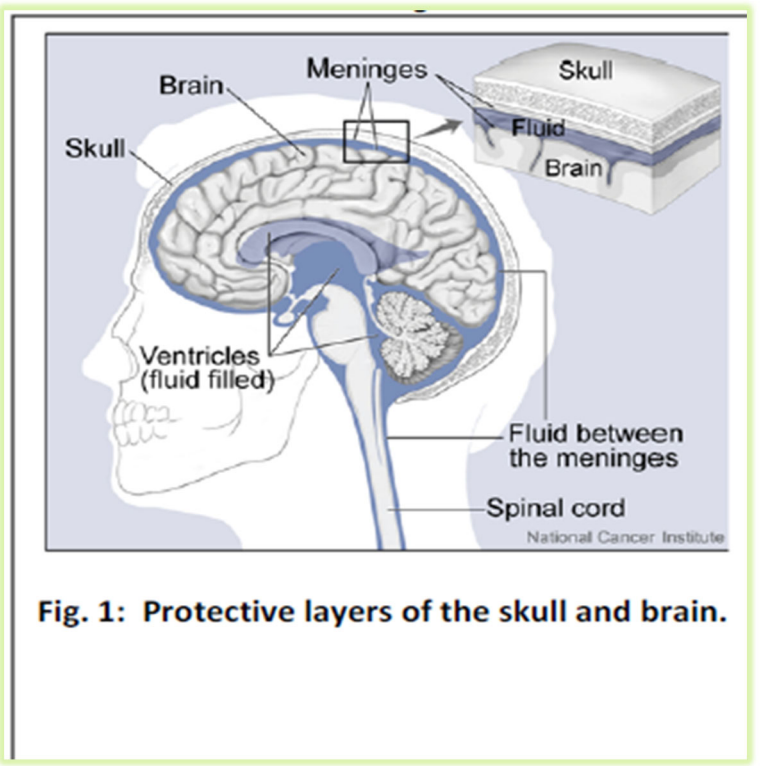

Fig. 1: Protective layers of the skull and brain.

Doc. 605 at 16, App. 34-7 at 228 (Appendix 1498), from Mitchell's report dated May 3, 2016, Doc. 604-13.

As discussed below, Plaintiffs sought the exclusion of Mitchell as a qualified but dangerous expert expounding fallacy. For example, in his report, Mitchell claimed that there was no means for the thorium found in the decedent's tissue to cause a "brain cancer" because it would not cross the blood brain barrier. In deposition he was reminded that the tumor here was an ependymal tumor and that the thorium was found in the ependymal tissue. He

then qualified that opinion to include that "even if a substance made its way into cerebrospinal fluid, 'distribution throughout brain tissue is actually very, very limited.'" App. 36, Appellee's brief, at 35 citing Mitchell's testimony at. DE 605-4 at 24:12-13.

This is exactly how P&W defends Mitchell's opinion in this appeal. The crooning of such an irrelevant fact demonstrates why Mitchell's opinion should have been excluded. No one claims anyone's brain tissue is "permeated with radioactive materials" and no expert has ever explained why such a fact would need to be demonstrated. Even high-dose radiation therapy avoids extensive permeation of brain tissue with radioactive materials.

Yet, this false perception, that in order to demonstrate any cause for a cluster of glioma cancers, P&W's radioactive waste needed to "extensively permeate" the brain itself erroneously overwhelmed the court's deliberation in this case as demonstrated below.

1. <u>The exclusion of the radiation dosimetry relied on P&W's unsubstantiated colloquialism that "spine does not go to brain."</u>

Dosimetrist Bernd Franke provided three opinions: the amount of thorium in the diseased spinal cord was significantly increased, the dose to the surrounding tissue was significant, and a calculation using dose coefficients supplied by the International Commission on Radiological

Protection[4] for diseased spinal cord tissue yielded an effective radiation that exceeded regulatory guidelines. Doc. 644-2-3. As Franke and the Plaintiffs explained, the regulations stated Franke must describe the last piece, the regulatory dose, as dose to "the brain."

The court struck Franke's entire opinion on the rationale that there was "no scientifically reliable or supportable basis to conclude that "a dose of toxins to the spine will be the same as a dose to the brain," and thus, "he has no scientifically reliable basis to measure the dose exposure to the brain in this case," citing to a single page of Franke's deposition in support and without addressing Franke's CNS dose or background comparison. Doc 641 at 2-3. n. The Court substituted an anecdotal understanding of anatomy in place of the dictates of codified regulations and disregarded the fact that Franke's methodology was "empirically testable." Even if this were an instance of "garbage in, garbage out," that would not warrant preclusion. See *Quiet Tech. DC-8, Inc. v. Hurel-Dubois UK Ltd*., 326 F.3d 1333, (11th Cir. 2003).

2. Plaintiffs' dose assessment was excluded based solely on the unsupported contention that Plaintiffs conceded the

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[4] The ICRP publishes Database of Dose Coefficients for Workers and Members of the Public for radiation dosimetrists to use for such quantifications.

dose assessment did not include a dose.

The trial court asked whether the toxicologist, Dr. Sawyer, relied on Franke's dose in his opinions. Plaintiffs responded "No." "Dr. Sawyer did not say that the dose that Franke ascribed to the radiation was the most likely cause of (Santiago's) cancer." Instead, Sawyer's assessment was based on the actual amount of thorium remaining in the ependymal tissue. In the following eight pages of transcript, Plaintiffs summarized a dose assessment satisfying the requirements set forth in *McClain* and in *Chapman*. Doc. 678-02 at 116:14-123:15.

The court struck Sawyer's opinion as follows:

At the hearing, Plaintiffs argued that Dr. Sawyer relied upon Mr. Bernd Franke's dose-response calculation. A review of Mr. Franke's reports shows that this is not the case. (See Doc 604-3, 604-4, 604-5, 604-14, 604-21.) Moreover, the Court rejects Plaintiffs' justifications or explanations as to why Dr. Sawyer did not have to perform a dose-response calculation. Because the Court concludes that a dose-response calculation is required by Eleventh Circuit Court of Appeals precedent, Dr. Sawyer's failure to perform the dose-response calculation requires the Court to strike him as an expert.

Plaintiffs corrected the patently erroneous inference that Sawyer relied on Franke for dose before the transcript was even made available. Doc 649. The court next denied the motion for

reconsideration, stating that "Plaintiffs acknowledge that Dr. Sawyer did not provide an exact dose or rely on anyone else's dose because he is not a dosimetrist, and this is not a personal injury radiation case." Doc. 655-4. Plaintiffs make no such admission and the dose assessment they keep defending should be reviewed.

3. P&W's specific causation opinion was never assessed under McClain or any toxic tort caselaw because the Court was overwhelmed by the surgeon's qualifications.

Plaintiffs appealed the admission of fallacies heralded by P&W's specific causation expert, Dwayne Mitchell. In addition to the fallacy that a radioactive contaminant must extensively permeate brain tissue to cause a glioma cancer, Mitchell claimed that there is no correlation between low-dose radiation exposure and brain cancer when that correlation is noted throughout the literature that even he cited, even if only to be the disagreed with therein.

The court remarked upon the complexity of the matter:

> I don't really understand all of the medicine that you keep referring to…Again, is it my job to conclude that this expert who knows a lot more about it than I do used the -- didn't cite the proper study? Or am I supposed to read this Chernobyl study

and decide whether he misread it?

Doc. 673-01 at 127.:

In response, Plaintiffs noted that the inclination to take the expert's word for it was the precise problem:

> Dr. Mitchell is an expert and, of course, you should be able to take what he has to say at face value. And the jury is going to take what he has to say at face value…
>
> …because he is this expert and because he's relying on articles that he knows say something different than what they say, or he's relying on articles that he's not read entirely, that makes him unreliable.
>
> Doc. 673-03 at 128:14-129:11

In one order, citing inapposite caselaw, the court denied all three of the Plaintiffs motions on P&W experts:

> To the extent (Plaintiffs) are challenging the opinions, the Court finds that these challenges go to the credibility, and not to the admissibility, of the opinions. See *Rosenfeld v. Oceania Cruises, Inc.*, 654 F.3d 1190, 1193 (11th Cir. 2011) ("it is not the role of the district court to make ultimate conclusions as to the persuasiveness of the proffered

> evidence*"); Banta Properties, Inc. v. Arch Specialty Ins. Co.,* No. 10-61485-CIV, 2011 WL 13096476, at *2 (S.D. Fla. Dec. 22, 2011).
>
> Doc. 646 at 2.

Simply none of these orders contain the careful assessment required in a toxic tort case.

CONCLUSION

While this Court affords the "considerable leeway" for the exercise of discretion in its duty to act as the gatekeeper for the admission of expert testimony, Op.3, that discretion "is not discretion to perform the function inadequately. Rather, it is discretion to choose among *reasonable* means of excluding expertise that is *fausse* and science that is junky" as is noted by the concurrence of J. Scalia in *Daubert v. Merrell Dow Pharms., Inc.,*509 U.S. 579 (1993). There is simply no way to assess whether any such assessment was done here because the orders themselves do not evince the application of no such reasonable means.

These parents deserve a well-articulated order explaining why their experts were precluded and why they were required to prove *how* P&W *wrongfully* transported the radioactive materials to the Acreage when the law makes no such demand.

Respectfully submitted May 9, 2024

/*s*/ Mara R. P. Hatfield

Mara R. P. Hatfield
Florida Bar No.: 37053
SEARCY DENNEY SCAROLA BARNHART & SHIPLEY, P.A.
2139 Palm Beach Lakes Boulevard
West Palm Beach, Florida 3340
Phone: (561) 686-630
Fax: (561) 383-9539
hatfieldteam@searcylaw.com
Counsel for Plaintiffs-Appellants

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMIT, TYPEFACE REQUIREMENTS, AND TYPE-STYLE REQUIREMENTS

This Petition for Rehearing En Banc and Panel Rehearing, filed as a single document, complies with the type-volume limitations of Fed. R. App. P.

35(b)(2)(A) and (B) as the brief contains 3899 words, excluding those parts exempted by 11th Cir. Local R. 35-1.

This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) as this brief has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Times New Roman font.

/s Mara R. P. Hatfield
Mara R. P. Hatfield
Florida Bar No.: 37053
SEARCY DENNEY SCAROLA BARNHART & SHIPLEY, P.A.

2139 Palm Beach Lakes Boulevard
West Palm Beach, Florida 3340
Phone: (561) 686-630
Fax: (561) 383-9539
_hatfieldteam@searcylaw.com
Counsel for Plaintiffs-Appellants

CERTIFICATE OF SERVICE

I hereby certify that on May 9, 2024 copies of the brief were dispatched for delivery to the Clerk's Office of the United States Court of Appeals for the Eleventh Circuit by third-party commercial carrier for overnight delivery at the following address:

David J. Smith Clerk of Court
U.S. Court of Appeals for the 11th Circuit 56 Forsyth St., N.W.
Atlanta, Georgia 30303

On this same date, a copy of the brief was served on the following by CM/ECF or in some other authorized manner for those counsel or parties who are not authorized to receive electronic Notices of Electronic Filing:

/s/ Mara R. P. Hatfield
Mara R. P. Hatfield
Florida Bar No.: 37053
SEARCY DENNEY SCAROLA BARNHART & SHIPLEY, P.A.
2139 Palm Beach Lakes Boulevard
West Palm Beach, Florida 3340
Phone: (561) 686-630
Fax: (561) 383-9539
_hatfieldteam@searcylaw.com
Counsel for Plaintiffs-Appellants

APPENDIX L

UNITED STATES COURT OF APPEALS
FOR THE ELEVENTH CIRCUIT
Case No. 22-13024-JJ

RICHARD COTROMANO, et al., all on behalf of themselves and all others similarly situated,
Plaintiffs-Plaintiffs,
vs.

RAYTHEON TECHNOLOGIES CORPORATION, Pratt & Whitney Group, A Connecticut Corporation,
Defendant-Appellee.
_____/

District Court Docket No.:
9:13-cv-80928-KAM

Appeal from the United States District Court
For the Southern District of Florida,
West Palm Beach Division

PRINCIPLE BRIEF OF PLAINTIFFS
Date of Entry: April 24, 2023

SEARCY DENNEY SCAROLA BARNHART & SHIPLEY

John Scarola
Florida Bar No. 169440
jsx@searcylaw.com
Mara R. P. Hatfield
Florida Bar No. 37053
mrh@searcylaw.com
2139 Palm Beach Lakes Boulevard
West Palm Beach, Florida 33409
Telephone: (561) 686-6300

Attorneys for Plaintiffs-Plaintiffs Richard Cotromano, Bethany Cotromano,
Frank DeCarlo, Paulette DeCarlo, Gregg Dunsford, Jennifer Dunsford, and
Joyce Featherston

CERTIFICATE OF INTERESTED PERSONS AND CORPORATE DISCLOSURE STATEMENT

In compliance with Local Rule 26.1-1, Plaintiffs certify that the following is a complete list of the trial judges, all attorneys, persons, associations of persons, firms, partnerships, or corporations that have an interest in the outcome of the particular case or appeal, including subsidiaries, conglomerates, affiliates and parent corporations, including any publicly held corporation that owns 10% or more of the party's stock, and other identifiable legal entities related to a party.

All persons who, on August 24, 2009, owned residential property within the neighborhood in Palm Beach County, Florida known as "the Acreage." The denial of certification of the claims alleged by these Plaintiffs is an issue in this appeal
Adinolfe, Joseph
Consolidated Litigant, separate claims
Bartlit Beck, LLP
Appellee's Counsel
Cifrodella, Thomas
Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Cotromano, Bethany
Appellant
Cotromano, Richard
Appellant
Craig, Debora
Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case
Craig, Raymond
Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case
Creed & Gowdy, P.A.
Consolidated Litigant's Counsel
DeCarlo, Kristina M.
Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case.
DeCarlo, Frank
Appellant
DeCarlo, Paulette
Appellant
Dunsford, Gregory
Appellant
Dunsford, Jennifer
Appellant
Ekstrand, Alyson
Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case.
Ekstrand, Guy
Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability

and expert disclosures at issue in this case.

Featherston, Joyce

Appellant

Florez, Fedra M.

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Gallagher, Sean W., Esq.

Appellee Counsel

Gayahpersad, Reynold

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Gayahpersad, Teri

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Gdanski, Jonathan R., Esq.

Consolidated Litigant's Counsel

Genck, Jill M.

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Genck, Jonathan C.

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Gowdy, Bryan S., Esq.

Consolidated Litigant's Counsel

Groden, Alexander L., Esq.

Appellee Counsel

Guarin, Carolina

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability

and expert disclosures at issue in this case
Gunster Yoakley & Stewart, P.A.
Appellee Counsel
Haberman, Jeffrey L., Esq.
Consolidated Litigant's Counsel
Hammer, Steven J., Esq.
Consolidated Litigant's Counsel
Hatfield, Mara R.P., Esq.
Appellant Counsel
Latham, Darren R., Esq.
Appellant Counsel
Law Offices of Craig R. Zobel, P.A.
Consolidated Litigant's Counsel
Law Offices of Steven J. Hammer, P.A.
Consolidated Litigant's Counsel
Lozada, Ida
Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case;
Lozada, Jesus
Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case
MacNally, Andrew C., Esq.
Appellee Counsel
Marra, Honorable Kenneth A.
Trial Judge
McElroy, Daniel R., Esq.
Appellee Counsel
Patrie, Kimberly
Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case
Peart, Roderick

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Peart, Yvette

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Raytheon Technologies Corporation (Stock Ticker: NYSE: RTX) Formerly known as United Technologies Corporation

Appellee

Scarola, John, Esq.

Appellant Counsel

Schlesinger Law Offices, P.A.

Consolidated Litigant's Counsel

Schlesinger, Scott P., Esq.

Consolidated Litigant's Counsel

Schwinghammer, Jr., Gregory J., Esq.

Appellee Counsel

Searcy Denney Scarola Barnhart & Shipley, P.A.

Appellant Counsel

Stoica, Patricia

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Thibodeau, Luz

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Thibodeau, Steven

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Tvenstrup, Kevin R.

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Wise, Ronald G., Deceased, Estate of

Related Litigant. This person is a Plaintiff in a litigation relying in part on the theories of liability and expert disclosures at issue in this case

Zobel, Craig R., Esq.

Consolidated Litigant's Counsel

STATEMENT REGARDING ORAL ARGUMENT

This is a complex toxic-tort including significant community-wide issues warranting oral argument. Appellants, hereinafter "Plaintiffs," are parents of members of a cancer cluster declared by The Florida Department of Health (FDOH) due to a significantly elevated incidence of pediatric brain and CNS cancers in The Acreage, an incorporated community of West Palm Beach, Florida. The FDOH noted that "ionizing radiation is the primary known environmental risk factor" for such an increase. (Doc. 906-08 pg 9 and 17.) The jury found that Defendant Pratt & Whitney (P&W) failed to exercise reasonable care in its handling and disposal of radioactive material (RAM) on its West Palm Beach campus, but they did not find P&W liable for the stigma. (Doc 816.) This appeal argues that several arbitrary Daubert rulings led to this causal disconnect and that the Daubert errors were compounded by a flawed verdict form. Plaintiffs also assert that the case should have been certified as a class action to assure Acreage-wide relief for the diminution in the Acreage community's property

value caused by the Acreage cancer cluster stigma.

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JURISDICTIONAL STATEMENT

District Court Jurisdiction

P&W removed the case to District Court pursuant to 42 USC § 2210(n)(2), the Price Anderson Act (PAA), and 28 U.S.C. § 1332(d), Class Action Fairness Act diversity. (Doc. 1). Plaintiffs sought remand, arguing that CAFA did not apply and that the PAA applies to claims it indemnifies under 42 USC § 2210. (Doc 14). The court disagreed as to the scope of the PAA. (Doc 61). Plaintiffs amended the complaint to add PAA liability. (Doc 69.) Later, the court found that the PAA does not include property diminution claims as set forth in Cook v. Rockwell Intern. Corp., 790 F.3d 1088, 1096 (10th Cir. 2015) ("Cook II"). (Doc 762).

Appellate Jurisdiction

The court certified judgment under Rule 56 on August 5, 2022. The Notice of Appeal was timely filed on September 6. (Doc. 899). This Court determined jurisdiction for the appeal existed on March 13, 2023.

STATEMENT OF THE ISSUES

Plaintiffs present these issues for review:

a. Whether the Daubert exclusion of Plaintiffs' proffered experts was based upon erroneous findings of fact and incorrect legal standards while the blanket admission of P&W's responsive opinions lacked "careful scrutiny," and caused a biased presentation of environmental and biological transport?

b. Whether the special interrogatory verdict erroneously required a finding of offsite misconduct supported by expert opinion testimony?

c. Whether the denial of class certification was based upon first, an erroneous finding that the Acreage community was not an ascertainable class, and second, an arbitrary assessment of the cancer cluster stigma claim these Plaintiffs raised on behalf of all Acreage property owners?

STATEMENT OF THE CASE

A. Course of proceedings.

1. Initial Filing and Consolidation

Plaintiffs filed this action in 2013, seeking compensation for diminution of property value resulting from a stigmatizing Florida Department of Health (DOH)-declared pediatric brain cancer cluster in the Acreage neighborhood. They alleged that P&W's mishandling of radioactive material (RAM) uniformly stigmatized all Acreage property. (Doc 1-2.)

This cancer cluster claim was consolidated with a prior contamination stigma claim under Rule 42 for pretrial only after that claim was remanded in Adinolfe v. United Techs. Corp., 768 F.3d 1161, 1175 (11th Cir. 2014). (Doc 227).

2. Motion to Certify the Claims and Order Denying

Noting that "(i)n ruling on a class certification motion, a court should assess whether certification is appropriate on a claim-by-claim basis," the parties jointly moved for certification. (Doc 265 pg 29). Plaintiffs focused on P&W's soil contamination, citing Marco Kaltofen, PhD, PE's opinion that RAM (including cesium-137, strontium-90, and others) and other industrial contaminants used in P&W operations remained at the P&W campus and were present at the cluster victims' homes and in the fill-product used by neighboring homes which had received fill from P&W's soil transporters. (Doc 265 pg 23 and Doc 258-4 pg 14). Kaltofen explained

during cross-examination that finding such nuclear material on the P&W campus did not suggest local detonation of a nuclear device:

Q To get Cesium-137 or Strontium-90 from something other than a sealed source, you would need to have nuclear fission, wouldn't you?

A You would.

Q So that would mean having a nuclear reactor or a bomb,
wouldn't it?

A Those are two ways, yes.

Q So is it the case, sir, that if we set aside the closed sources that you knew were there, for you to have Cesium -- for you hypothesize that there was Cesium-137 at Pratt & Whitney or Strontium-90 at Pratt & Whitney that was put into the environment by Pratt & Whitney, you would have to assume that they had a nuclear reactor or detonated a bomb.

A No.

(Doc 400 pg 114:22-115:10).

Four additional experts supported the Cancer Cluster stigma claim:

a. Ari Perry, MD, world-renowned consulting neuropathologist, confirmed that that the pediatric brain cancers were glial-type cancers associated with exposure to "low-level ionizing radiation," pointing to the seminal Ron et al study of a community exposed to scalp radiation treatment for

ringworm which experienced gliomas at a rate of 2.6 times background. (Doc 363-7, pg 2-4).

b. Richard Smith, Ph.D., opined that the malignant female brain cancers occurring from 2004-2009 was an increase 7.88 times above the expectation for that period. The resulting p-value was .00004. (Doc 363-9 pg 7), which Smith explained means that the probability of that incidence number occurring in the Acreage by random chance is one in twenty-five thousand as determined. (Doc. 404-6 pg 21-22).

c. John Kilpatrick, Mass Appraisal Expert, compared sales in the Acreage to "control" neighborhoods to quantify the Acreage-wide stigma. Before the cluster, the Acreage property values averaged 8.35% lower than comparable neighborhoods. After, the Acreage prices averaged 28.49% lower—a stigma-related discount of over 20%. (Doc 363-15 pg 2 at ¶¶4-8, pg 11-12).

d. Brian Moore, P.G, L.S.P, a Licensed Site Professional with 25 years of site remediation experience opined that gaps in P&W's remediation records indicated an incomplete investigation of soils removed from former RAM burial sites, coupled with an improper soil remediation process using local soil recyclers and fill transporters, was a likely source of the RAM contamination Kaltofen isolated in both Acreage fill and P&W waste sites. (Doc 363-5.) His review included a summary of hundreds of pages of internal and public records on the remediation, testimony, records regarding the Acreage development and building history. P&W moved to strike Moore's declaration as "undisclosed." (Doc 379 pg 3.) Appellant conceded

that the affidavit's opinion on industry standards relied on recently obtained records. (Doc 385 pg 7-8) Moore explained his expertise to the court and summarized an opinion based on industry standards and what he perceived to be an incomplete remediation by P&W. (Doc 400 pg 49:01-51:02, 53:18-54:13, 55:19-61:15; and 63:19-69:04.)

After a five-day hearing including the cross examination and redirect of all experts, written summations and proposed findings and conclusions were filed. (Doc 425-428.) The Court denied the motion for certification as to all claims, characterizing all claims as proximity-to-contamination claims, in summary, as follows:

[Plaintiffs] claim their properties are either contaminated, at risk of future contamination, or in proximity to contaminated property as a result of Pratt & Whitney's environmental abuses, and that they have suffered a loss of use and enjoyment of their property, as well as a diminution in property values, as a result.

(Doc 438 pg 2 (emphasis added).)

3. Plaintiffs' Pre-Trial Disclosures and Dispositive Motions.

a. Plaintiffs' expert disclosures including Moore, Sawyer, and Franke.

For trial, plaintiffs disclosed nine experts. (Doc 487)

Kilpatrick updated the sale trend analysis (STA) applying the discount rate applicable for the annual quarter during which each plaintiff sold their property, except for DeCarlo for whom he applied a loss of use figure. (Doc 496 pg 1-10).

The Court would later strike the entire opinions of three experts:

Brian Moore, LSP, updated his original class certification affidavit summarizing facts he had discerned from manifests, contemporaneous emails, Florida agency records regarding P&W and its contractors, subsequent testimony of employees and owners of the contracting companies, and public records regarding the build-out of the Acreage. (Doc 550-89 pg 6-11, 33-41).

William Sawyer, PhD, D-ABFM, chief toxicologist disclosed reports regarding the specific causation of the cluster and three Acreage brain-CNS cancers including Cynthia's Santiago 2009 ependymoma diagnosis, for which he provided a dose-assessment relating the amount of thorium (Th-230) isolated from Cynthia's post-mortem ependymal tissues to her disease, finding that the amount of thorium discernible in her post-mortem tissue documented an exposure that most likely caused her cancer. (Doc 550-77).

Dosimetrist Bernd Franke provided three opinions, first comparing the amount of thorium in Cynthia's central nervous system tissue to background numbers suggesting an excessive exposure; second, calculating the radiation dose to her central nervous system tissues; and lastly, using coefficients supplied by the International Commission on Radiological Protection for brain tissue, to provide an effective radiation dose and dose models illustrating a single intake of Th-230 via inhalation type S4 with a particle size (AMAD) of 1 µm and alternatively via the ingestion of soil in the environment. (Doc 600-05, 600-06, 600-07).

b. P&W filed a motion to strike Kilpatrick and moved for early summary judgment.

In June 2019, P&W moved to strike Kilpatrick's updated STA relying on the rationale set forth in the order denying certification. P&W also moved for summary judgment, claiming that no other experts supported Plaintiffs' case. Doc 496 and 498. In response, Plaintiffs specifically noted Moore's unrebutted opinion as to P&W's remediation practices. (Doc 509 pg 3). Following a hearing, the Court denied P&W's motions to strike Kilpatrick's revised STA opinion as applied to the individual properties. (Doc 553-554).

c. Plaintiffs' January 2020 Dispositive Motion.

Plaintiffs moved for summary judgment against the PAA defenses (as summarized in the Jurisdictional Statement) and on liability (Doc. 550-Doc 552), arguing the unrebutted testimony of Brian Moore established that P&W breached the standard of care for remediation practice. (Doc 552 pg 9). P&W responded that Moore's testimony merely endorsed Plaintiffs' "trucking theory." (Doc. 559 pg 14-16).

4. P&W's evolving expert disclosures.

P&W filed motions relying on expert opinions that it had not disclosed in this case, (Doc. 544-545; Doc 545; Doc 548-549), which Plaintiffs moved to strike. (Doc 555). Performing a Rule 37 analysis, the court denied the motion in part, allowing P&W to amend disclosures including the opinions attached to its Daubert motions, but allowed Appellants' time to move to strike those opinions or to revamp their motions for summary judgment if needed. (Doc 590).

One of P&W's disclosed experts is subject to this appeal: Dwayne Mitchell, MD, a neurosurgeon administering the clinical trial program for the University of Florida. He responded to the general and specific causation opinions of Perry and Sawyer, opining essentially that the diagnoses were too disparate in type to share a common pathway, and that no linkage between the Santiago's cancer development and an environmental exposure in the Acreage could be established within a degree of medical certainty. (605-02 pg 25-26).

5. The Daubert Hearing and Orders

P&W moved to strike Franke, Smith, Moore, Sawyer, and Kaltofen. Plaintiffs moved to strike P&W's neurosurgeon (Mitchell), statistician (Marais), and Certified Health Physicist (Frazier). The Daubert hearings extended over two days. (Doc 664, 665)

a. Moore.

P&W argued that allowing Moore's opinion would impermissibly subject P&W's testimony about its own remediation efforts to doubt. Plaintiffs responded that P&W's argument would effectively abolish professional standard of care opinions. After the court noted that Moore's reports effectively included a "standard of care" opinion, P&W suggested that defending Moore as a "standard of care" expert was a "new argument" but that also in their briefs the Plaintiffs failed to put citation numbers to standard of care testimony and that there was none. (Doc 664-01 pg 38 to 42). The court required Plaintiffs to submit a narrative of Moore's disclosures and P&W to respond. (Doc 637 and 638).

The court then precluded Moore's testimony,

finding he was not previously disclosed "as a standard of care opinion," that he did not set forth a standard of care opinion in his reports, and that the transport issue could be evaluated without the aid of industry expertise. (Doc 643 pg 2).

b. Franke.

The court struck Franke on the rationale that there was "no scientifically reliable or supportable basis to conclude that "a dose of toxins to the spine will be the same as a dose to the brain," and thus, "he has no scientifically reliable basis to measure the dose exposure to the brain in this case," citing to a single page of Franke's deposition in support and without addressing Franke's CNS dose or background comparison. (Doc 641 pg 2-3).

c. Sawyer.

At the hearing, the Court asked whether Sawyer's specific causation opinion relied on Franke's dose; Plaintiffs responded Sawyer only notes Franke's dose in his deposition and that there was no such reliance, including that "Dr. Sawyer did not say that the dose that Franke ascribed to the radiation was the most likely cause of (Santiago's) cancer." Plaintiffs distinguished Franke's radiation dosimetry calculation from Sawyer's dose-response relationship assessment, arguing that Sawyer's assessment based on the amount of thorium remaining in the ependymal tissue satisfied the Court's requirement for the dose-response assessment: "What McLain requires... and Mosaic requires is a dose-response relationship. What was the person exposed to, and is it reasonable that their response to that was a disease that we see before us?" (Doc 664 pg 116:14-123:15).

The court struck Sawyer's opinion as follows:

Plaintiffs do not dispute that Dr. Sawyer did not perform a dose-response calculation. At the hearing, Plaintiffs argued that Dr. Sawyer relied upon Mr. Bernd Franke's dose-response calculation. A review of Mr. Franke's reports shows that this is not the case. (See Doc 604-3, 604-4, 604-5, 604-14, 604-21.) Moreover, the Court rejects Plaintiffs' justifications or explanations as to why Dr. Sawyer did not have to perform a dose-response calculation. Because the Court concludes that a dose-response calculation is required by Eleventh Circuit Court of Appeals precedent, Dr. Sawyer's failure to perform the dose-response calculation requires the Court to strike him as an expert.

Doc. 644 2-3.

d. Denial of Motion for Reconsideration regarding Moore and Franke.

Plaintiffs attempted to correct any erroneous admission that Sawyer relied on Franke for dose and clarifying that Sawyer performed his own dose-response assessment using the amount of thorium measured in Cynthia's tissues. Doc 649, 653.

The court denied reconsideration, stating that "Plaintiffs acknowledge that Dr. Sawyer did not provide an exact dose or rely on anyone else's dose because he is not a dosimetrist, and this is not a personal injury radiation case." Doc 655 pg 4.

e. Denial of Plaintiffs' motions to strike or limit Mitchell.

Plaintiffs argued that Mitchells' "no correlation" of low-dose radiation and brain cancer opinion overlooked several well-regarded epidemiological

studies concluding that a correlation existed—including generally accepted theories of radiation and glioma causation. The court remarked upon the complexity of the matter:

I don't really understand all of the medicine that you keep referring to, and but beyond that, I mean, you say, well, there's the study and he should have cited it and he didn't. And there's this Chernobyl study and you misread it or he says it's the opposite of what he said. Again, is it my job to conclude that this expert who knows a lot more about it than I do used the -- didn't cite the proper study? Or am I supposed to read this Chernobyl study and decide whether he misread it? I'm having trouble trying to understand how I'm supposed to decide who's right and who's wrong here, and it seems like those are the arguments that you're making is why he's wrong, and because he's wrong, he should be excluded. I don't know how I'm supposed to decide that he's right or wrong on the merits of his opinions versus whether he's doing something improper in terms of from a methodological standpoint. I'm -- I'm sorry, if I'm not making myself clear but that's kind of the problem I'm having to follow up your argument.

Doc. 665 pg 126:18-127:13:

In response, Plaintiffs noted that the inclination to take the expert's word for it was the precise hazard at issue:

Dr. Mitchell is an expert and, of course, you should be able to take what he has to say at face value. And the jury is going to take what he has to say at face value…

…because he is this expert and because he's

relying on articles that he knows say something different than what they say, or he's relying on articles that he's not read entirely, that makes him unreliable.

If he only cited to articles that say what he wants them to say and our guy only cited to articles that our guy wanted them to say, that would be a battle of the experts. But Dr. Mitchell is citing to articles that say something very different than what he said that they say. And that makes him unreliable. You can't as an expert say I've reviewed X, Y and Z documents and then show that you actually did not review those documents.

(Doc. 665 pg 127:14-128:11).

In one order, the court denied all three of the Plaintiffs motions to strike P&W's experts including Mitchell with a single explanation:

To the extent (Plaintiffs) are challenging the opinions, the Court finds that these challenges go to the credibility, and not to the admissibility, of the opinions.

(Doc. 646 pg 2).

6. The Verdict Form

Plaintiffs proposed a simple verdict form, with a single question for liability and causation on each claim before assessing damages:

As to Florida Statute Strict Liability Claim.

1. Did Pratt & Whitney violate Chapter 376 and was such violation a legal cause of damage to the Plaintiffs?

As to Negligence Claim

2. Was there negligence on the part of Pratt & Whitney which was a legal cause of damage to the Plaintiffs?

(Doc. 767-1 pg 55-56).

P&W requested a special interrogatory verdict form, including a separate finding of transport on the negligence claim, to which Plaintiffs objected. (Doc. 767-1 pg 61-63).

Plaintiffs also opposed any verdict interrogatory that limited the scope of Chapter 376, Florida Statutes liability, arguing the Chapter 376 claim does not need to allege or prove contamination on an offsite property as Section 376.313 remedies damages caused by any violations of Section 378.308 (a)-(c), prohibiting discharges, failures to obtain permits or to comply with regulations and law, and knowingly making false statements, representations, or certifications. (Doc 767-01 pg 30–40).

Plaintiffs requested a concurring cause instruction stating that to be a legal cause, the negligence or unlawful condition of pollution did not need to be the only cause. (Doc. 767-01 at 42). The Court declined the addition of a concurring cause instruction. Acreage. (Doc 828 at 4).

The Court did not take up the jury questions or verdict form until the close of evidence, advising counsel after jury selection and before opening to refrain from any preliminary reference to instructions. (Doc. 778 pg 241:09-242:03).

The first half of the charge conference occurred after the close of evidence. (Doc 804 162-210.) As to Chapter 376, Plaintiffs again argued that the scope

was broader than discharges and did not necessitate the finding of unlawful offsite activity, citing Curd v. Mosaic Fertilizer, LLC, 39 So.3d 1216 (Fla., 2010). (Doc. 804 pg 164-168).

At the charge conference the following day, the Court, citing the decision in Adinolfe v. United Techs. Corp., 768 F.3d 1161, 1175 (11th Cir. 2014), proposed a verdict form that removed any reference to a violation of regulations or the statute.

P&W and Plaintiffs noted that that the cause of action does require demonstrating some violation of the act. Plaintiffs maintained their objection to any requirement that liability include an unlawful release into the Acreage. (Doc 828 pg 24-26).

Before reaching causation on the Chapter 376 claim, the Verdict form at trial asked as follows:

QUESTION 1: Did Plaintiffs prove, by a preponderance of the evidence, that a discharge or other condition of pollution from Pratt & Whitney prohibited by the Florida Department of Environmental Protection was released into or upon the Acreage?

(Doc. 816 pg 1.)

As to negligence, the Court proposed a verdict form using two interrogatories on liability before inquiring into causation, patterned after P&W's negligence questions 1 and 3, which were as follows:

QUESTION 1: Did Plaintiffs prove, by a preponderance of the evidence, that Pratt & Whitney failed to exercise reasonable care in the use and disposal of radioactive materials at its Jupiter facility?

QUESTION 3: Did Plaintiffs prove, by a preponderance of the evidence, that radioactive

materials traveled by ground or surface water to locations in the Acreage from Pratt's facility?

(Doc. 767-01 pg 62.)

At the charge conference, P&W requested that the second prong, the "transport" prong, include the phrase "as a result of P&Ws failure to use reasonable care" language, claiming it was necessary to tie P&W's misconduct to transport and the Plaintiffs objected to the inclusion as entirely unnecessary. The Court reserved its ruling until providing a revised version sometime later. (Doc. 828 pg 39-40.)

At trial, before reaching the issue of causation, the verdict form read as follows on the Negligence claim, adding in P&W's request for a secondary assertion of reasonable care:

QUESTION 4: Did Plaintiffs prove, by a preponderance of the evidence, that Pratt & Whitney failed to exercise reasonable care in the use and disposal of radioactive materials at its Palm Beach County facility?

QUESTION 5: Did Plaintiffs prove, by a preponderance of the evidence, that as a result of Pratt & Whitney's failure to use reasonable care, radioactive materials from Pratt & Whitney's facility were transported to locations in the Acreage?

(Doc. 816 pg 2, emphasis added.)

At closing, P&W argued that since "(n)o one can claim that P&W Whitney's records on (remediation), even today, 20 years later, are somehow not reasonably comprehensive," Plaintiffs entire case amounts to an implausible or "absurd theory" and a

"preposterous accusation" that defied "common sense." Moreover, since there was no toxicologist opining on how RAM in soil can cause a brain cancer, the evidence of RAM in Acreage victim tissues was also unavailing. (Doc 822 pg 99:05-25).

7. The Verdict

The jury found that Pratt & Whitney failed to exercise reasonable care in the use and disposal of RAM at its Palm Beach County facility. (Doc 816 pg 2).

But they did not find that "as a result of Pratt & Whitney's failure to use reasonable care, radioactive materials from Pratt & Whitney's facility was transported to locations in the Acreage." (Doc 816 pg 2, emphasis added.) They did not find that a discharge or other condition of pollution from P&W prohibited by the Florida Department of Environmental Protection was released into or upon the Acreage. (Doc 816 pg 1).

Judgment was entered upon that verdict.

B. Relevant Facts.

P&W's Florida Research Development Center (FRDC) campus hosted classified projects such as the FRDC-JTN-11, a conceptual portable nuclear reactor powered engine. (Doc. 905-01—905-04.) A related project at the Connecticut Airplane Nuclear Engineering Laboratory, CANEL, would later require decontamination of nuclear materials including cobalt-60, cesium-137, and thoriated nickel parts by a P&W contractor called RCA, which performed a complete assessment of P&W's Connecticut structures for Nuclear Regulatory

Commission decommissioning. (Doc 810-10 pg 1—2).

In 1965, P&W buried "radioactive materials" in a scrapyard and the FRDC campus. (Doc. 905-05.) During a 1980's governmental investigation of the site as a potential Superfund site, P&W management was "deliberately vague" about the presence of buried RAM, labeling them as "other materials." (Doc 784 pg 55 and 126-128). As late as 2000, P&W was disposing of RAM including thorium powders, and uranium powders. (Doc-905-54 pg 1, 53-54) using the Connecticut contractor RSA. RSA refused to take the materials P&W listed as "unknowns" and never performed the radiological assessment of the FRDC campus like it had in Connecticut. Doc 810-05.

P&W sent fuel laden soil from the FRDC campus for incineration to a local soil recycling company, Magnum, because the contamination was above Florida regulatory standards for certain contaminants. (Doc 810-12 pg 14-15). P&W testified that it never tested the soil for RAM as part of the remediation. (Doc 810-12 pg 13, 22, 39). The remediation included the transport of over 10,000 tons of benzopyrene soil to Magnum in Pompano Beach and 50,000 tons of PCB contaminated soil to Alabama. (Doc 905-50, 11-12), erroneously identifying Magnum's recycling center as located in a different county. A transporter, Tru Trucking would remove the soil after it was excavated and stockpiled, for example on October 12, 2000. (Doc 905-46 pg 5, 20-35).

Tru-trucking, headquartered in the Acreage, was the main fill provider for an Acreage developer in August through November 2000 when Tru

Trucking filed liens on Acreage homes. (Doc 810-08 pg 18-23).

The latency for pediatric brain cancer is from one to eight years from suspected contamination to diagnosis. (Doc 906-8 pg 5).

Plaintiffs DeCarlo and Dunsford met in February 2008 as their children were admitted for surgery at Miami Children's Hospital to remove rare glioma type central nervous system (CNS) tumors and then discovered other Acreage families experiencing the same crisis. (Doc 783 118:17-123:25, Doc 799 0:11-132:18).

In August 2009, the FDOH published the Acreage Cancer Review, finding brain and CNS tumors had occurred at a statistically significant increased rate among Acreage children. (Doc 906-8 pg 14 to 15). The Review expressly recognized that the primary contaminant associated with such an increase was ionizing radiation. (Doc 906-8 pg 9 and 17).

The FDOH based that causal connection on the seminal study of children treated with radiotherapy for ringworm. (Doc. 799 pg 141.) That study, the Ron et. al. study, examined a population of roughly 10,900 children who were exposed to "relatively low dose of radiation" in their childhood. The 7 gliomas experienced in that cohort was 2.7 times the expected occurrence rate (background), an increase concluded to be causally associated with that low-dose treatment. (Doc 608 pg 1 and Doc 799, 41:15-43:16.)

In 2010, the FDOH confirmed that the Acreage incidence of 4 brain cancers from 2005-2007 was 3.8 times the background. There was another in 2004.

(Doc. 905-58 pg 7-8). FDOH then confirmed that the 2008 diagnoses already equaled the number of the 2005-2007 increased incidence and that, yet another confirmed child diagnosis occurred in 2009. (Doc 905-73, pg 2 and Doc 905-74, pg 1-2). The pediatric population of 10,332 children. (Doc 906-08 pg 25).

While investigating the cluster, state agencies found contaminants above Florida clean-up levels in places, but did not find evidence of substantial spills, dumping, or area wide contamination. (Doc 906-01 pg 1). One of the contaminants found at excessive levels in case homes was benzopyrene. (Doc 906-01 pg 23). FDEP disclosed that benzopyrene was among the contaminants undergoing remediation at P&W but did not disclose the burial of RAM in P&W soil or P&W's use of soil recycling companies and transporters in Loxahatchee, Florida. (Doc 905-59).

FDEP had preexisting concerns about recycled fill use in the Acreage but did not investigate the defunct soil recycling facility used by P&W nor did it analyze recycling center product for radioactive contamination. (Doc 810-09 pg 11 and 14).

C. Standard of Review

Orders excluding or admitting expert testimony, the phrasing of special jury interrogatories, and the denial of class certification are all reviewed for abuse of discretion. U.S. v. Alabama Power Co., 730 F.3d 1278 (11th Cir. 2013), Cordoba v. DIRECTV, LLC., 942 F.3d 1259, 1267 (11th Cir. 2019). Central Alabama Fair Housing Center v. Lowder Realty Co., 236 F.3d 629, 635 (11th Cir. 2000).

SUMMARY OF ARGUMENT

Plaintiffs allege that the Acreage cancer cluster was caused by P&W's RAM and that a resulting stigma diminished the value of the Acreage properties. The jury found that P&W failed to exercise reasonable care in its handling and disposal of RAM but did not find P&W liable for any transport or release of RAM into the Acreage. (Doc. 816 pg 1-2).

Plaintiffs argue two abuses of discretion led to this result.

First, the Daubert decisions were arbitrary. When eliminating three of Plaintiffs' experts, the court applied an incorrect standard and made erroneous findings of fact. When admitting one of P&W's experts, the court improperly relied upon the expert's qualifications and disregarded challenges to his methodology.

Second, the use of special verdict interrogatories, requiring an additional finding of fault as to transport and unlawfulness as to the release into the Acreage, injected a burden of proof into the claims that is contradicted by Florida law regarding ecological toxic torts as set forth in Adinolfe v. United Techs. Corp., 768 F.3d 1161 (11th Cir. 2014).

Finally, the denial of class certification was arbitrary and should be reversed.

ARGUMENT

I. The District Court Abused Its Discretion in Excluding the Testimony of Plaintiffs' Expert Witnesses

A ruling regarding expert admissibility is an abuse of discretion if it (i) applies an incorrect legal

standard, (ii) follows improper procedures, or (iii) makes clearly erroneous findings of fact. Alabama Power Co., 730 F.3d at 1282. When only a portion of an expert's testimony warrants exclusion, "wholesale exclusion" is also an abuse of discretion. Id. at 1280.

A court must act as a "gatekeeper" and assess whether each proffered opinion is consistent with the requirements of the Federal Rules of Evidence. See Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 589 n.7 (1993); United States v. Frazier, 387 F.3d 1244, 1260 (11th Cir. 2004).

A. The District Court abused its discretion in excluding the testimony of Plaintiffs' Soil Remediation and Transport Expert, Brian Moore

Moore disclosed a 2018 report re-summarizing the facts elicited at the Certification hearing that supported his opinions. (Doc 550-89, pg 8-10, ¶9(a)-(p)). He listed failures in remediation standards, most critically explaining that P&W's "process utilized to pre-characterize soils for off-site thermal treatment from an area where residual radioactive materials had been interred indicates that only cursory inspection activities were performed which relied upon incomplete screening methods in lieu of appropriate analytical testing techniques to prevent uncontrolled removal/handling of radioactive materials." And, that "transportation and disposal documentation of record indicate planning and manifesting mechanisms employed during remediation of soil contamination at the UTC Site were also inadequate given an inability to reconcile the same." (Doc 550-89 pg 11).

1. Finding that Moore did not set forth his

opinions on the standard of care ignored his testimony and used the wrong legal standard.

A court should not apply the "exacting analysis," used to assess reliability, to the qualifications of an expert who opines on industry standards. See Moore v. Intuitive Surgical, Inc., 995 F.3d 839, 852 (11th Cir. 2021).

Moreover, when determining whether the expert's opinion has been disclosed, a district court abuses its discretion if it fails to consider the expert's complete record in the case. See Carrizosa v. Chiquita Brands Int'l, Inc., 47 F.4th 1278, 1320 (11th Cir. 2022) (failure to consider "the full universe of information on which [the expert] relied" or "the evidence supporting [the expert's] opinion").

Moore's reports clearly contradict the finding that "[a] review of Mr. Moore's reports shows that he did not set forth his opinions on the standard of care and the basis for those opinions in his reports" (Doc 643, pg 2, emphasis added). True, Moore did not use the phrase "standard of care," but after reviewing all the records—which he summarized multiple times—and applying his 25 years of expertise performing and certifying remediations, he stated that P&Ws remediation was "incomplete," "inappropriate," "lacking in control," and 'inadequate."

If there were any doubt that his report included an opinion as to the standard of care, and the several deviations from that standard that he details as red-flags, the testimony Moore provided in his deposition and to the court at the certification hearing clarified the nature of his opinion.

The citation to "Mitchell v. Ford Motor Co., 318

F. App'x 821, 825 (11th Cir. 2009) is inapposite as that case affirmed the exclusion of an expert who never provided the foundations of his opinions during his deposition and otherwise before the Daubert hearing. Id. at 823. In Mitchell, the court excluded new opinions, here, no new opinions were offered.

2. Finding that Plaintiffs had not disclosed Moore as a standard of care expert was clearly erroneous.

As to standard of care, the court found that Plaintiffs did not properly disclose Moore as "this type of expert," while, the same day, denying Plaintiffs' long-pending motion for summary judgment on liability—which argued that Moore's objective expert standard of care opinion was unrebutted. In denying that motion, the court noted that it had stricken Moore's opinion, rendering that argument moot. But that motion described Moore as a "standard of care" expert, and predated P&W's delayed disclosures and Daubert motions in this case.

This fact highlights the court's failure to address any of the Rule 37 factors that should have been assessed if Moore's opinion had been disclosed beyond the deadline, the same factors the court assessed when allowing P&W that late disclosure of all its experts. (Doc. 590). Clearly, finding Plaintiffs failed to disclose Moore as a standard of care expert was erroneous.

3. Finding Moore's transport opinion would not assist the jury was arbitrary.

The court granted P&W's motion to preclude Moore's transport opinion as conclusory or unnecessary on the rationale that "(s)uch a conclusion can be instead reached by the jury based on any direct or circumstantial evidence upon which Plaintiffs rely." (Doc 643, pg 2).

Rule 702 does not preclude expert testimony merely because a jury is capable of reaching some conclusion on an issue without it; the rule asks whether an expert's testimony is "likely to assist the trier of fact." And the Supreme Court has held that standard is met by expert testimony that "concerns matters beyond the understanding of the average lay person and logically advances a material aspect of the proponent's case." Daubert, 509 U.S. at 591; see also Frazier, 387 F.3d at 1262–63.

This Court has recently confirmed the admissibility of expert testimony on industry practices and procedures. Rivera v. Ring, 810 F. App'x 859, 863–64 (11th Cir. 2020), affirmed the admission of testimony from a police practices and procedures expert whose knowledge regarding the use of force would assist in determining whether an officer's use of canine assistance followed procedure.

And the Court recently affirmed the validity of "soft-science expert testimony," which "cannot have the exactness of hard science methodologies," Carrizosa, 47 F.4th at 1317 (rejecting a determination that an expert's use of geographic, temporal, and witness recollection testimony was "simply far too speculative, standing alone, to permit a reasonable juror to conclude, more likely than not, that the death of any decedent was linked

to an AUC operation")

Such experts may opine on their review of records and data. For instance, by "simply collect[ing] historical crime war statistics" as a basis for deducing an AUC connection to the victims' deaths. Id. at 1317.

It is true that the circumstantial evidence included things that may be familiar to some jurors: manifests that were filled out and faxed back months after completion, testimony regarding changing routes of transport, missing invoices, and how the trucks were only weighed in but not weighed out. But how those pieces fit together—and the significance those deviations have from routing industrial standards have on the efficacy of controlling industrial waste are not within the common understanding of layperson. If laypersons could determine the proper means of transporting and safely remediating contaminated soils, educated and trained remediation professionals such as Moore would not exist.

4. The preclusion significantly harmed Plaintiffs case.

Here, the harm could not have been clearer. The jury found that Plaintiffs did not prove, "by a preponderance of the evidence, that as a result of Pratt & Whitney's failure to use reasonable care, RAM from Pratt & Whitney's facility were transported "to locations in the Acreage." That finding was made only after P&W—who asked the Court to strike the transport opinion as unnecessary, then requested and was granted a special interrogatory as to transport, and then requested and was granted a modification of the

interrogatory requiring the transport issue be related to a separate breach of care—explained the burden of proving the claim to the jury as follows:

No one can claim that Pratt & Whitney's records on this, even today, 20 years later, are somehow not reasonably comprehensive.

And what the evidence shows is that somebody from Pratt & Whitney certified what was being shipped out. The trucker here, somebody from Tru Trucking, certified that they were taking the soil to Magnum without offloading or subtracting from it in any way or delaying delivery. And then someone from Magnum, in this case Donna Johnson, certifies the receipt of the soil at Magnum. And all of this was done to keep a record so that people and companies involved in this project could get paid. For plaintiffs' theory to be true, all of these certifications would have to be false, and a bunch of honest, hardworking people, with absolutely no motive to do so, would need to have committed a huge fraud and be lying about it now to cover it up.

(Doc 822 pg 99:9-25, emphasis added.

Moore's excluded opinions describe the consequences of the simple negligence he observed in those very procedures P&W counsel described and directly refutes the assertion that the diversion of contaminated soil for use as fill would require conspiracy to commit a "a huge fraud."

B. The District Court abused its discretion in excluding the testimony of the Plaintiffs' radiation dosimetrist and toxicologist and admitting P&W's neurosurgeon.

The gatekeeping function requires an exacting analysis of an expert's reliability, relevancy, and

"intellectual rigor" required by Fed. R. Evid. 702. Frazier, 387 F.3d at 1260 (quoting Kumho Tire Co., Ltd.v. Carmichael, 526 U.S. 137, 152 (1999)). Because "expert testimony may be assigned talismanic significance in the eyes of lay jurors," careful consideration under Daubert "cannot be overstated." Id. at 1260, 1263.

1. The District Court abused its discretion in excluding the testimony of Plaintiffs' dosimetrist, Bernd Franke

As P&W's expert neurosurgeon Mitchell agrees, Cynthia's disease was an ependymoma central nervous system tumor arising from the cells that line the ventricles and passageways in the brain and spinal cord. Ependymal cells are glial cells which make cerebrospinal fluid (CSF). (Doc 605-02 pg 23.)

Franke's dose opinions demonstrated that the level of thorium in her diseased CNS tissues was significant because it was significantly above background. Franke also provided an calculation for CNS and then an effective dose for the brain as the coefficients for such doses do not include "CNS" as a target organ.

Dosimetrist Franke repeatedly opines that he used tissue from Cynthia's central nervous system tissue to dose a central nervous system cancer: "The equivalent dose for the spinal cord tissue from the concentration found in spinal cord tissue at the time of death is calculated to be 0.23 rem per year." He further opined that this is a reliable methodology under the circumstances, and that when the disease is a CNS brain tumor, it is also acceptable to use CNS tissue to determine an effective dose to the

brain. (Doc 600-03 42:9-13, 53:2-25, 105:4-13, 108:14-21).

P&W asserted two oblique points regarding Franke's secondary brain dose calculation and his assertion that the CNS tissue could be used to dose the brain. First, that their own dosimetrist, John Frazier, "explained that the dose guidance publication that Franke relied upon "describes the brain and spinal cord as 'separate and distinct' including that they 'receive blood via separate vascular systems—the brain from common carotid arteries and the spinal cord from vertebral arteries arising from subclavian arteries.'" Second, that its expert, Mitchell "testified that animal experiments demonstrate thorium distributes unevenly within the brain (much less across the central nervous system) such that you could not estimate the dose to the brain by looking at tissues from the spine. (Doc 600 pg 4).

But neither Frazier nor Mitchell could testify that the dose which caused Cynthia's CNS cancer had to provide a dose to the brain—because her cancer originated in CNS tissues at the ventricles, supporting structures of the brain and not the brain tissue itself. In other words, none of P&W's scientific opposition to Franke's technique mattered, even if reliable (which it was not).

Frazier had never heard the word ependymoma before reading it "somewhere in the case." He did not know if the cancer at issue was in Santiago's brain or spinal column, and, as to whether ependymoma or all brain cancers were actually CNS cancers, he could offer no opinion. (Doc 603 pg 2-4 and Doc 623 3-6, Doc 603-9, pg 145:11-146:8).

Plaintiffs further cited technical document ORAU-OTIB-0005 on dose reconstruction which provides guidance under the Energy Employees Occupational Illness Compensation Program Act of 2000. The organs or tissues for which doses must be estimated are those that are delineated by the specified ICD-10 code that is received from the U.S. Department of Labor (DOL). When assessing a diagnosed metastatic CNS cancer such as Santiago's, the target organ Franke is directed to name is the brain. (Doc 610 pg 8 and Doc 653 pg 5).

At the hearing the Court noted that P&W's argument sounded like a battle of experts. P&W responded that the argument boiled down to whether Franke supported his assumption that "spine equals brain." (Doc 664 pg 160:10-161:20). The order precluding Franke's opinion, based on one line of testimony in Franke's deposition, and in contradiction to Franke's complete testimony, agreed with the science as explained by P&W's counsel:

Mr. Franke's dose-response analysis centers on his assumption that a dose of toxins to the spine would be the same as a dose of toxins to the brain. A review of Mr. Franke's deposition (DE 600-3 pg p.54) reveals that he has no evidence to support that assumption. *** Thus, Mr. Franke is unable to opine, to a reasonable degree of scientific certainty, that the dose exposure of toxins in this case was sufficient to cause brain cancer. Because Mr. Franke's opinion is not based on scientifically reliable or supportable data to meet the requirements for the dose-response relationship, the Court must strike his testimony pursuant to

Daubert.

(Doc. 641 pg 2.)

The summary dismissal of Franke's opinion based upon one statement and disregard of the CNS dose stated in his report and remainder of his testimony, as cited by Plaintiffs (that he used CNS tissues to diagnose a CNS-system cancer), misrepresents the scope of Franke's opinion and overlooks the established scientific basis for naming the brain as the target organ when measuring a dose provided by CNS tissues.

The faulty suggestion within P&W's argument, and the order approving it, is that no effective dose may be derived from CNS tissues simply because there is no coefficient for any CNS organ either than the brain. The exclusion is an abuse of discretion failing to consider "the full universe of information on which [the expert] relied" or "the evidence supporting [the] opinion," Carrizosa, 47 F.4th at 1320.

The wholesale exclusion of Franke's opinion overlooks the opinions of both Plaintiffs' toxicologist and P&W's neurosurgeon describing Cynthia's cancer as originating in the CNS. Failing to consider Franke's reports, testimony, and the proffered regulations regarding that correlation and, instead treating as dispositive a cherry-picked statement from P&W's examination at page 54 of his deposition.

At page 53, Franke had confirmed that he first calculated a dose for the CNS from the spinal cord. Next, as dose coefficients are not available for the CNS, he used brain coefficients as it is part of the CNS system. (Doc 600-03 pg 53.) The subsequent

testimony cited by the order includes only when Franke was asked if he was relying on any studies of radiation in spinal cord and brain tissue that shows that they are the same amount and he replied that he looked for any such studies and did not find them. (Doc 600-03 pg 54). That acknowledgement does not mean that using CNS tissue to first dose the CNS and then to derive an effective dose using brain tissue coefficients, is without support—since he testified that this is how the industry treats CNS tissue and P&W cited no study to discredit the accepted use of spinal column tissue in a metastatic CNS cancer patient.

2. The District Court erred in excluding Sawyer's dose-response assessment, which it ignored because it erroneously assumed that Sawyer did not work with a specific dose.

This Court explained a four-step process to determine causation of a specific disease:

First, "the toxic substance in question must have been demonstrated to cause the type of illness or disease in question." . . . This focuses on general causation . . .. Second, "the individual must have been exposed to a sufficient amount of the substance in question to elicit the health effect in question." This requires not simply proof of exposure to the substance, but proof of enough exposure to cause the plaintiff's specific illness. This focuses on the issue of individual causation. . .. Third, "the chronological relationship between exposure and effect must be biologically plausible." . . . Fourth, and finally, "the likelihood that the chemical caused the disease or illness in an individual should be considered in the

context of other known causes."

McClain v. Metabolife Intern, Inc., 401 F.3d 1233 (11th Cir. 2005).

Sawyer's opinion met each of these requirements.

Identifies the disease and the alleged carcinogen:

Cynthia's ependymoma was diagnosed at age 13. Sawyer summarized her cancer through the final ependymal tumors at her lower spine. She lived in the Acreage from when she was 4 months old until death in October 2016. Doc 509-07 pg 2-3. He first described ependymoma as "a central nervous system cancer originating from the ependymal cells that line the spinal cord and supportive brain structures called the ventricles and create and distribute cerebral spinal fluid (CSF)." (Doc 509 pg 4.)

General causation:

Sawyer notes the established environmental risk for central nervous system cancers is ionizing radiation, and then discusses how alpha radiation causes cancer by mutating the DNA of nearby cells. Of the four sources of radiation known to be carcinogenic, "thorium dioxide decay by alpha emission is one," citing the 2016 Report on Carcinogens published by the U.S. Department of Health and that "alpha emitting radioactive materials emit subatomic particles carrying energy as they are ejected by the atoms of the thoria." He discussed the seminal Ron et. al. study on ionizing radiation and brain cancer noted above where relatively low-dose radiation was used in one skin treatment session. (Doc 509-07 pg 5-7).

Amount.

Cynthia's spinal ependymal tumor was resected upon death, and Sawyer confirmed that the tissue excised included intradural and extradural ependymal tumor tissue. (Doc 509-07 pg 19).

He compared the amount in Cynthia's spinal ependymal tissue with a separate amount found in her adjacent vertebra tissue and found them to be in biologically plausible ratios, reinforcing the 90% to 95% certainty numbers the laboratory assigned them. (Doc 509-07 pg 23).

He compared the amount and circumstances of the thorium found in her spinal cord with the amount of thorium injected into patients who received thoratrast, now banned, and were later diagnosed with cancers in adjacent tissues. He noted that to draw a complete correlation, the thorium had to be at or near the system where the cancer originates and had to be suspected of being introduced to the system within a reasonable latency period. Both were true here: First, thorium was found in the diseased ependymal tissues of her spine and her original tumor was a located in the ependymal tissues of her third ventricle—the cord and ventricles together circulate and create CSF. Second, Cynthia was diagnosed with ependymoma brain cancer in 2009, she moved to the Acreage in 1996. (The exposure was considered to have occurred as a result of the P&W remediation of 1999-2001.) One year latency or more is considered appropriate for children. (Doc 509-07 pg 26-30).

Sawyer compared the separate amount found in Cynthia's spinal vertebra to similarly exposed populations (uranium miners inhaling uranium dust), demonstrating that Cynthia's levels were in

considerable excess of that exposed cohort, which he opines suggests exposure via inhalation to thorium dust particles. (Doc 509-07 pg 22-23).

Pathway and Timing

He studied and described multiple pathways for the thorium to have entered her body including through inhalation to deposition into the spinal vertebra and cord, including ependymal tissues of the cerebral nervous system system-brain barrier (CNS-Brain barrier), accounting for the size of thorium particles generally and the size of a separate thorium particle found independently on the original 2009 ventricular ependymoma cancer diagnostic slide. (509-07 pg 24-25).

He reviewed the likely sources of thoria in her environment including the thorium particles used by P&W processes and considered that data in concert with the increased incidence of brain cancer incidence found by NIOSH at its facility. (Doc 509-07 pg 7-9). He reviewed Kaltofen's reporting on the presence of thorium-230 and its parent uranium at the facility and in the Acreage residential soils. Doc (509-07 pg 9-13).

He explains the mechanism of carcinogenicity by radiation and how radioactive materials cause cell damage, carcinogenesis and tumor progression through the decay and spread of free radicals emanating from the materials themselves. (Doc 509-07 pg 13-16).

He notes that while thorium can only cause brain cancer by passing the brain barriers, it is thought to do so when small particles of thoria are released from larger thoria from the free radical activity he described earlier. This is substantiated

by studies finding thoria in brain tissue. (Doc 509-07 pg 25).

He defended the pathways he examined against the response of Dr. Mitchell, who opined that thorium would not transgress the blood brain barrier and cause an ependymoma. Sawyer opined that Mitchell did not account for the alpha-radio-decay but treated thoria which was found in the ependymal tissues as a molecular toxin only ignoring the CSF-brain barrier mechanism entirely despite the fact that the thoria was found in that barrier system. (Doc 604-21).

Differential Assessment

Sawyer assessed other causes in determining that the thorium retained in her CNS tissue was the likely cause of her ependymoma disease. Aside from sporadic idiopathic cancers, only ionizing radiation and genetic predisposition were known causes of her cancer. Her medical history included only episodes reinforcing his pathway model (she had meningitis the year before diagnosis), there was no genetic disposition for the disease, and Cynthia was known to be one of a cluster significantly unlikely to occur randomly. (Doc 509-07 35-39).

Here, the court simply evaded analysis of Sawyer's dose assessment because it misunderstood the dose that Sawyer used—first erroneously understanding that he relied on Franke and then erroneously finding that Sawyer did not rely on any dose at all:

The court's initial order as to Sawyer was only this:

Plaintiffs do not dispute that Dr. Sawyer did not perform a dose-response calculation. At the hearing,

Plaintiffs argued that Dr. Sawyer relied upon Mr. Bernd Franke's dose-response calculation. A review of Mr. Franke's reports shows that this is not the case. (See Doc 604-3, 604-4, 604-5, 604-14, 604-21.) Moreover, the Court rejects Plaintiffs' justifications or explanations as to why Dr. Sawyer did not have to perform a dose-response calculation. Because the Court concludes that a dose-response calculation is required by Eleventh Circuit Court of Appeals precedent, Dr. Sawyer's failure to perform the dose-response calculation requires the Court to strike him as an expert.

(DE 644 2-3).

The district court's misapprehension of the respective domains of dosimetry and toxicology imposed an unwarranted Catch-22 for Plaintiffs' experts: the court rejected the dose calculation of a dosimetrist, Franke, finding that his opinion did not "meet the requirements for the dose-response relationship," (Doc 641 pg 2) and then rejected the dose-response relationship assessment of a toxicologist, Sawyer, because the court believed that this Court requires a "dose response calculation." (Doc 644 pg 2).

Plaintiffs moved for reconsideration emphasizing again that Sawyer did not rely on Franke's dose and that Franke did not rely on Sawyer—Plaintiffs relied on the two opinions as each explains and verifies the other. (Doc 649 at 3).

The Court denied the motion stating that no new grounds were stated for reconsideration and that "Specifically, the Court excluded Dr. Sawyer because he failed to conduct a dose-response

analysis, which the Court found to be required under controlling Eleventh Circuit precedent." (Doc 655-4). In fact, the court never assessed that dose-response assessment but excluded Sawyer because he did not provide a "dose-response calculation," a requirement that does not exist.

While this Court has stated that it "(has) never required an expert to "give precise numbers about a dose-response relationship," see Williams v. Mosaic Fertilizer, LLC, 889 F.3d 1239, 1248 (11th Cir. 2018) (citing McClain, 401 F.3d at 1237, n.6), Sawyer indeed provided precisely the sort of analysis this Court expects: he put forth "reliable groundwork for determining the dose-response relationship." Id. at 1241 (emphasis added).

Essentially, Sawyer performed the exact dose assessment described above and that this Court most recently described Pinares, 2013 WL 2661521, (C.A.11 (Fla.), March 28, 2023) at *2, a related case where the same trial court excluded a dose-response assessment after examining it in detail.

The Pinares case alleges that exposure to a host of contaminants including bromodichloromethane, chloroform, and methylene chloride, all classified as reasonably anticipated human carcinogens, found on the Pinares and other Acreage properties emanated from groundwater pollution known to exist on the P&W property 8 miles away. Pinares alleged it caused her renal cell carcinoma. Id. This Court summarized the trial court's five-page exclusion of the Pinares expert as follows:

Specifically, the district court reasoned that Dr. Wylie: (1) failed to show whether "the alleged carcinogens were present" in the Pinareses' water

before Mrs. Pinares's diagnosis and "how long they were present"; (2) overlooked "the effects of the body in metabolizing or eliminating chemicals before any toxic effect t[ook] hold"; (3) relied on an invalid "one-hit model" of causation; (4) provided no evidence to support his calculation of Mrs. Pinares's exposure to the contaminants; and (5) failed to "isolate" Mrs. Pinares's "exposure to each of the various chemicals separately, which [wa]s necessary to analyze the potential cancer causing likelihood of each compound."

Id. at 3.

Sawyer's opinion on how the amount of ionizing thorium in Cynthia' ependymal tissues was causally related to her ependymoma disease had none of those defects attributed to Wylie's opinion.

Wylie relied on an invalid "one-hit model" of causation and hypothetical that any amount of exposure to suspected carcinogens is too much, while Sawyer cited the NLT dose model, generally accepted for radiation and the basis of the entire field of dosimetry, and then instead of limiting his reliance to that theory, did a full-blown dose-response assessment.

While Wylie overlooked "the effects of the body in metabolizing or eliminating chemicals before any toxic effect" occurs, Sawyer explained how the thorium dust is absorbed through inhalation and moves via free radicals within the cerebral-spinal-fluid-brain barrier by the very cells that create CSF, the ependymal cells, where the exact amount he relies upon as the effective dose was found. The dose he works with is what is left in the CNS after all of that pre-absorption. And he supports this pathway

with studies on exposed populations and with a discussion of the free radical expression of thorium generated alpha emitting radiation, classified as a known carcinogen.

While Wylie "provided no evidence to support his calculation of Mrs. Pinares's exposure to the contaminants," Sawyer rigorously reviewed the amounts of thorium reported by the laboratories, with the reported uncertainties, and by comparing the cord and vertebral tissues where the materials was found and finding that the proportionate levels of uptake made biological sense.

While Wyle "failed to "isolate" Mrs. Pinares's "exposure to each of the various chemicals separately" and "analyz[e] the potential cancer-causing likelihood of each compound," Sawyer dealt with only one material—the nuclear material he demonstrated was found in Cynthia's spinal cord and vertebra at levels high above exposed populations.

But the primary significance of the opinion in Pinares rests in a comparison of the detailed analysis that the court conducted in rejecting the Wylie dose assessment, and that this Court approved in Pinares, and the analysis of Sawyer's dose assessment in this case. Here, the order never assesses Sawyer's dose-assessment and, instead, rejects it summarily based on the erroneous understanding that it has to include a "dose-relationship reconstruction" and then upon the flawed finding that a dose-response relationship assessment for a CNS ependymal cancer could not be based upon materials found in the decedent's CNS ependymal tissue.

3. The Court erred in denying plaintiffs' motions to preclude or to limit P&W's Mitchell

The testimony of even a well-qualified expert is unreliable if he "neither testifie[s] to the collective view of his scientific discipline nor explain[s] the grounds for his differences." Allison v. McGhan Med. Corp., 184 F.3d 1300, 1314 (11th Cir. 1999). Such a lack of reliability in an extensively experienced expert cannot be overlooked. Frazier, 387 F.3d at 1261, (citing Quiet Tech. DC-8, Inc. v. Hurel-Dubois UK Ltd., 326 F.3d 1333, (11th Cir. 2003)).

And experts opining as to causation, whether it be specific or general, cannot simply ignore which diseases are tied to a certain exposure and which are not. Chapman v. P&G Distrib., LLC, 766 F.3d 1296, 1303-04 (11th Cir. 2014). In Chapman, the plaintiffs' expert failed to show a possible pathway and mechanisms for exposure, instead relying only on alternative pathways without rationally connecting those established pathways to the cancer at issue.

Plaintiffs argued that Mitchell's opinions exhibited the defects noted in Chapman in reverse effect and are replete with half-truths used to support emphatic but false statements. He does not "connect the dots" because he ignores material facts which he later admits he disregarded.

Indeed, Mitchell's expertise made him misinformative rather than helpful. Until confronted with the contrary science, he "neither testified to the collective view of his scientific discipline nor explained the grounds for his differences." Allison, 184 F.3d at 1314.

His opinion, essentially, was that the diagnoses were too disparate in type to share a common pathway, and that no linkage between the Santiago's cancer development and an environmental exposure in the Acreage could be established within a degree of medical certainty. (605-02 pg 25-26).

During deposition however, he demonstrated that his disclosed opinion failed to demonstrate the collective view of his scientific discipline and then he refused to explain the grounds for his differences in any coherent way.

• Mitchell conceded that the cancers in the cluster were all subtypes of the type glioma sharing miotic features and a general association with ionizing radiation. (Doc 605-4 pg 8, Testimony of Duane Mitchel, May 9, 2018, 26:19-27:09, 29:20-30.)

• He did not cite generally accepted studies correlating low-dose radiation to such cancers, such as CT scan exposure with brain and CNS cancers (instead citing only the follow-on studies showing no increase of brain cancer in those who administer such tests). When asked if these studies presented epidemiological evidence expressly concluding a correlation between low-dose exposures and brain cancer, he would not answer the question as he had not read the follow-on studies and would only hypothesize about the difference between low-dose in ct-scan exposure as opposed to inhalation exposures. (Doc. 605-04 pg 8 and 11 (26:19-27:09, 29:20-3; 36:12-37:02, 40:24-41:15, 80:13-81:18).

• He ignored the general acceptance of the linear no-threshold response even though it was discussed in the articles he and Sawyer cited. When

it was pointed out that the Chernobyl study he relied upon critiqued the widely accepted LNT model, but that he had not even cited the model, he refused to answer whether he would agree that it should be characterized as "generally accepted," instead asking for time to review the study as though he had not himself cited it. When asked if he agreed that the International Committee on Radiation Protection accepted the LNT model as was directly stated in the article he cited, he answered, "I'm not trying to be difficult. I couldn't characterize what they've accepted." (Doc. 604-05 pg 17-18). He then insisted that it was irrelevant to his opinions because dose modeling was not the issue.

• He admitted that if thorium made its way to the cerebral spinal fluid-brain barrier pathway, it could possibly move to the ventricles. (Doc 605-04 pg 15 (54:3- 56:12) pg 21 (80:13-81:18)).

But the court's ruling simply evaded those methodological defects:

To the extent (Plaintiffs) are challenging the opinions, the Court finds that these challenges go to the credibility, and not to the admissibility, of the opinions.

(Doc. 646 pg 2).

4. The preclusion of Franke and Sawyer significantly harmed Plaintiffs' case.

The gatekeeping function requires an exacting analysis of an expert's reliability, relevancy, and "intellectual rigor" required by Fed. R. Evid. 702. Frazier, 387 F.3d at 1260 (quoting Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 152 (1999)). Because "expert testimony may be assigned

talismanic significance in the eyes of lay jurors," careful consideration under Daubert "cannot be overstated." Id. at 1260, 1263.

As additional evidence that RAM was released in the Acreage, Plaintiffs introduced evidence that RAM related to the P&W site was found in tissues of Acreage pediatric brain cancer victims and that low-dose exposure to ionizing radiation could cause the FDOH declared Acreage cancer cluster.

Here, the lopsided rulings on experts left the Plaintiffs, who had the burden of proving a toxic tort at trial, without the ability to assist the jury to understand that complex issue, an issue that even the court struggled with in the Daubert hearing. First, the only talisman that the jury was provided to understand P&W's remediation efforts was the self-serving testimony of its own professionals. Then, as to whether that soil could be the cause of the significant and otherwise unexplained cluster in the Acreage, the jury was afforded only the expertise of P&W experts who admitted to overlooking the substantial support that their experts, now precluded, utilized.

II. The Verdict Form Arbitrarily Doubled the Burden of Proving Negligence, Compounding the Harm.

The phasing of special jury interrogatories is reviewed for abuse of discretion. Central Alabama Fair Housing Center, 236 F.3d at 635, and "reversal is warranted where the interrogatories have 'the potential for confusing or misleading the jury.'" Id. Moreover, "if there is uncertainty as to whether the jury was actually misled," an "erroneous instruction cannot be ruled harmless." Busby v. City of Orlando,

931 F.2d 764, 727 (11th Cir. 1991).

In Adinolfe, this Court reversed a dismissal of a complaint that did not allege contamination exceeding regulatory levels in the Acreage, despite P&W's argument that to be liable for such damage, they had to release contamination offsite in the Acreage. This Court disagreed, noting that if contamination occurs on your property, you may be liable for the downstream effects depending upon the totality of the circumstances:

[W]ith respect to the common-law tort claims, the allegations of the second amended complaints sufficiently set forth a plausible causal chain connecting P & W with the alleged contamination. The complaints link P & W's release of contaminants onto its own property and the adjacent Corbett Wildlife Management Area, the southward migration of these pollutants to The Acreage, the digging of test wells in The Acreage and the subsequent confirmation of the presence of contaminants in groundwater, the discovery of metal drums marked "hazardous waste," and the designation of The Acreage as a cancer cluster. In the aggregate, these assertions give rise to a "reasonable inference that [P & W] is liable for the misconduct alleged."

768 F.3d at 1175 (citing Ashcroft v. Iqbal, 556 U.S. 662, 678, (2009)).

Under Florida law, the elements of both the common law and the statutory claim do not include a "transfer" element but only duty, breach, proximate case between the conduct and resulting injury, and actual loss or damage. Curd v. Mosaic Fertilizer, LLC, 39 So.3d 1216, 1227 (Fla., 2010).

In this case, the jury found that P&W negligently handled and disposed of nuclear materials on its property. The case was then lost not on the issue of whether Plaintiffs showed evidence of transport of that RAM to the Acreage, but whether they showed that P&W's failure to exercise reasonable care in transporting RAM into the Acreage. As to the Chapter 376 claim, Plaintiffs were erroneously required to demonstrate that P&W unlawfully released a discharge or pollutive condition into the Acreage. In a groundwater case, this would be akin to finding P&W not only responsible for contamination on its property, but for the fact that water flows south. P&W contaminated its property. It knew its contaminated soil would be moved south via fill transporters to a local recycling company in the exact manner it would know that the water would flow south. Liability did not require negligence in the transport of contaminated soil since the contamination of the soil with RAM was itself the result of P&W's established negligence.

Here, the first and fifth special jury interrogatory created the potential for confusing or misleading the jury. Considering the separate finding that P&W negligently disposed of RAM on its campus, there is uncertainty as to whether the jury was misled.

By introducing the requirement that the jury find a failure to exercise reasonable care on the negligence claim twice, the District Court essentially invented an element of "negligent transport." That is, the court created the implication that to find that P&W was liable, Plaintiffs had to

prove that P&W failed to exercise reasonable care in the handling of its radioactive (RAM) and then separately, that P&W failed to exercise reasonable care in the transport of RAM. This was a particularly troublesome added burden since the transport was not performed by P&W but by third parties and the Court struck Plaintiffs' expert opinion regarding P&W's obligations to supervise their work and to investigate the means and measures they would use before being selected for the work. The court's failure to provide the concurring cause instruction Plaintiffs requested only aggravated this confusion.

III. The District Court Abused Its Discretion in Denying Plaintiffs' Motion for Class Certification

This Court reviews orders denying class certification for abuse of discretion Cordoba v. DIRECTV, LLC., 942 F.3d 1259, 1267 (11th Cir. 2019). The order denying class certification clearly (A) applied an incorrect legal standard under the heading "ascertainability" and erred in finding that the proposed class was not ascertainable; (B) erred to the extent it found that the class proposed was overbroad; and (C) erred in finding the Rule 23(a) and 23(b)(3) requirements were not met for the Plaintiffs.

Of the factual findings, only three appear to relate to Plaintiff's cancer cluster stigma claim. The errors in legal holdings elaborated below owe, in part, to those three erroneous fact findings:

• that Kilpatrick's STA unreliably failed to account for property variability such as house style and proximity to P&W. (Doc 438 pg 35)

• that without class-wide dose reconstruction data, the misconduct could not be alleged to cover the proposed class area. (Doc 438 pg 22.)

• that area-wide contamination was implausible because for that to be so P&W must have had a nuclear reactor or bomb on site. (Doc 438 pg 10).

A. The District Court applied an incorrect legal standard for determining "ascertainability."

"Ascertainability" is an implied requirement for certification in addition to Rule 23's express requirements. Cherry v. Dometic Corp., 986 F.3d 1296, 1302 (11th Cir. 2021). A proposed class is ascertainable "if it is adequately defined such that its membership is capable of determination," id. pg 1304. Determination of class membership by some "objective" criteria is all that the ascertainability analysis requires. See Rensel v. Centra Tech Inc, 2 F.4th 1359, 1370 (11th Cir. 2021). This enables the court, initially, to assess commonality, numerosity, and typicality under Rule 23(a), Cherry, 986 F.3d at 1303-04, and, post certification, facilitates identifying "the persons (1) entitled to relief, (2) bound by a final judgment, and (3) entitled under Rule 23(c)(2) to the 'best notice practicable' in a Rule 23(b)(3) action," Federal Judicial Center Manual for Complex Litigation § 21.222 (4th ed. 2004). A class being "ascertainable," definitionally, means it is "adequately defined" (such that its membership is capable of determination). Id.

In the seminal precedent for this Court's ascertainability requirement, DeBremaecker v. Short, 433 F.2d 733 (5th Cir. 1970), an unascertainable class is described as being defined

by vague, open-ended, or subjective terms, such as the definition held inadequate in that case: "[a] class made up of 'residents of this State active in the peace movement.'" 433 F.2d at 734 (emphasis added)

By contrast, ascertainability is indisputably met here because—unlike the amorphous "active in the peace movement" criterion rejected in DeBremaeker— Plaintiffs sought to represent a class "including all past and current property owners of residential lots (including vacant and improved properties) in the Acreage within the time frame of August 2009. The designated cancer cluster area consists of 850 Census blocks, which is depicted on page 23 of the Acreage cancer review. (Doc 318 pg 14-15 par. 62b).

In failing to find ascertainability here, the District Court conflated two separate issues, and got both wrong:

"adequately defined and clearly ascertainable" . . . means the class must be defined "by reference to objective criteria," Bussey, . . ., and, as defined, must include a common claim for injury attributable to a common cause (the defendant's conduct). Wal-Mart Stores, Inc. v. Dukes, 564 U.S. 338, 349-50.

DE 438 pg 17 (emphasis added).

While it is true both (i) that ascertainability requires the class to be defined "by reference to objective criteria" and (ii) that, "as defined, [the class must share] a common claim for injury attributable to a common cause (the defendant's conduct)," the "class definition" itself need not refer to the common injury or to the defendant's conduct, at all. But the injury must be applicable to the class as that class is defined. To the extent the order

denied certification because "the injury" was not clear in the class definition, it was erroneous.

B. The District Court erred to the extent it found that the class proposed was overbroad.

A class should not be certified if it would either include "a great many persons" who lacked Article III standing or if it would undermine the interests of unnamed putative class members so severely as to deny them due process. See Johnson v. Georgia Highway Exp., Inc., 417 F.2d 1122, 1126 (5th Cir. 1969) (Godbold, J., concurring); Scott v. Univ. of Del., 601 F.2d 76, 94 (3d Cir. 1979) (Adams, J., concurring) (quoting Judge Godbold's concurrence in Johnson); Hubbard v. Rubbermaid, Inc., 78 F.R.D. 631, 640 (D. Md. 1978) (same). Neither is an issue here.

Holding that "a class should not be certified if it is apparent that it contains a great many persons who have suffered no injury at the hands of the defendant," this Court tied the requirement to avoid overbreadth to Article III standing—the non-named plaintiffs in the putative class must be found to have claims "fairly traceable" to the defendant's conduct. Cordoba, 942 F.3d at 1273-76. Since "a properly defined class will often include uninjured class members, and that is not a problem that precludes class certification," id. at 1275, this principle applies only when it is apparent at the certification determination that many if not most of the putative unnamed class members have not been damaged. Cordoba, for instance, reversed certification of a class of recipients of telemarketing calls allegedly in violation of the Telemarketing Consumer Protection Act, when "it seem[ed] likely the class definition was

overbroad" because it was likely that "many, perhaps most, members of the class" had never asked the telemarketer not to call back. Id. at 1264, 1271–72.

The class proposed here is not overbroad under Cordoba, as it is not apparent that any, let alone "a great many," of the unnamed plaintiffs lack an injury traceable to P&W's alleged misconduct. The stigma is alleged to attach to the Acreage as a whole and diminish the value of all properties within it. The chance that any of those listed in the property appraiser scrolls as owning those properties but did not own them is certainly not an issue for "many if not most" and can be efficiently handled in administering remedy.

C. The District Court erred in finding the Rule 23(a)(2) and 23(b)(3) requirements were not met by failing to distinguish Plaintiffs' claims

Following consolidation under Rule 42(a), the "constituent cases retain their separate identities." Hall v. Hall, 138 S.Ct. 1118, 1131 (2018). The District Court ignored the fundamental distinction between the Adinolfe and Cotromano claims, clearly erring in finding the Cotromano proposed class did not satisfy (1) the commonality requirement of Rule 23(a)(2) and (2) the predominance and superiority requirements of Rule 23(b)(3).

In sum, the court concluded the proposed class to be "overbroad" or "overinclusive," defeating commonality, as follows: (i) no evidence that contamination is uniformly distributed; (ii) a class cannot be defined by proximity to contamination absent exposure or risk evidence; (iii) the proposed class loosely identifies area alleged to suffer

perception of health risk due to proximity; (iv) fear or perception of risk is not an objective criterion by which to ascertain a class; and (v) evidence of exposure and dose levels at discrete locations is required. (Doc 438, at 19–22).

But none of those five impediments to commonality that the court identified undermines the case for certification of the proposed Cotromano class. The fourth —regarding fear or perception of risk—does not affect ascertainability or render the Cotromano claims non-actionable under present Eleventh Circuit and Florida law, as detailed below. And the other four—(i), (ii), (iii), and (v)—inextricably depend on the proximity-to-contamination nature of the Adinolfe claims that distinguish them from the Cotromano claims.

In its opposition to the joint motion to certify, P&W repeated the phrase "arbitrarily drawn lines on a map" seven times. (Doc 320 pg 11, 37, 38; Doc 426-1 pg 19; Doc 427-1 pg 6) P&W argued that the class area, date, and definition were "arbitrary," using that term in its headings. (Doc 320 and Doc 427-1). The ensuing order denying certification does not use the term "arbitrary" specifically, but invokes that concept, under "ascertainability:"

Plaintiffs contend that . . . the class of property owners negatively affected by th[e] "perception" [of an elevated risk to human health] may be captured here by drawing a line around nearby residential neighborhoods and communities loosely defined as "the Acreage."

(Doc 438 pg 21 emphasis added).

The concept of arbitrariness P&W attempted to invoke does not even apply here. P&W's "arbitrarily

drawn lines on a map" quotation originates with Duffin v. Exelon Corp., No. Civ-A-06-C-1382, 2007 WL 845336, *4 (N.D. Ill. Mar. 19, 2007). Duffin held the proposed class boundaries to be arbitrary because "[t]here is simply no correlation between plaintiffs' evidence concerning" contamination and the proposed boundaries. Id. at *4. The court held that there was no evidence to support the plaintiffs' choice of a particular two roads, pond, and river to bound the class area, id. at *2, as opposed to, say, using a different pair of roads for the boundary. In great contrast, the relationship between the Cotromano class boundaries and the evidence is a perfect, one-to-one correlation. Here a governmental agency identified a precisely bounded area as having exhibited significantly elevated cancer risk, and Plaintiffs' experts have opined that P&W caused that elevated risk and that the public designation of it by the government stigmatized the area, diminishing property values.

Finally, the order posits that "engaging in conduct which causes a subjective, unreasonable fear of environmental danger is not actionable." (Doc 438 pg 21 (emphasis added). Under Florida law, a defendant may be liable for the economic harm caused by perception of risk due to its conduct, regardless of whether the perceptions or fears of participants in the economically-relevant market are rational—so long as the defendant's conduct is determined to be the legal cause of that foreseeable perception or fear and, in turn, the ensuing economic harm. See Jennings, 518 So.2d at 895 ("The public's 'fear' as a factor ... may be utilized as a basis for an expert's valuation opinion regardless

whether that fear is objectively reasonable."); Jones v. Trawick, 75 So.2d 785, 788 (Fla. 1954).

In Jones, discussed in this Court's Adinolfe decision, the Florida Supreme Court noted that constructing a proposed cemetery in a primarily-residential area would introduce the subjective disamenities of "constant reminders of death" and "depression of mind" for homeowners, who would "object to the thought of drinking water that had been drawn from a surface so near the dead, no matter how pure the health authorities had stated it to be." Jones, 75 So.2d at 788.

CONCLUSION

Prejudicial errors on the part of the District Court require reversal of the judgment and remand for a new trial (wherein the Appellant's experts are admitted to trial and the verdict form suggested by the Plaintiffs for the negligence claim is used). When remanded, the claims at issue should be certified for class-wide relief so that the Plaintiffs' claims redress the entire class of persons owning property in the 850-census block of the Acreage as of the date of the Acreage Cancer Review.

Dated this 24th day of April, 2023.

Respectfully submitted,

By: /s Mara R. P. Hatfield
Mara R. P. Hatfield
Florida Bar No.: 37053
SEARCY DENNEY SCAROLA BARNHART & SHIPLEY, P.A.
2139 Palm Beach Lakes Boulevard
West Palm Beach, Florida 3340
Phone: (561) 686-630

Fax: (561) 383-9539
_hatfieldteam@searcylaw.com
Counsel for Plaintiffs

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