

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA
SOUTHERN DIVISION

BRENT NIX, et al.,)	
)	
Plaintiffs,)	
)	
v.)	No. 7:17-CV-189-D
)	
THE CHEMOURS COMPANY FC, LLC, et al.,)	
)	
)	
Defendants.)	
ROGER MORTON, et al.,)	
)	
Plaintiffs,)	
)	
v.)	No. 7:17-CV-197-D
)	
THE CHEMOURS COMPANY, et al.,)	
)	
Defendants.)	
VICTORIA CAREY et al.,)	
)	
Plaintiffs,)	
)	
v.)	No. 7:17-CV-201-D
)	
E.I. DU PONT DE NEMOURS AND COMPANY,)	
et al.,)	
)	
Defendants.)	

ORDER

On May 18, 2022, Victoria Carey (“Carey”), Marie Burris (“Burris”), Michael Kiser (“Kiser”), and Brent Nix (“Nix”) (collectively, “plaintiffs”) moved for class certification [D.E. 334] and filed a memorandum of law [D.E. 334-1] and exhibits in support [D.E. 336]. On July 13, 2022, the E.I. Du Pont de Nemours and Company (“DuPont”) and The Chemours Company FC,

LLC (“Chemours”) (collectively, “defendants”) responded in opposition [D.E. 342]. On August 29, 2022, the plaintiffs replied [D.E. 385]. On September 26, 2022, defendants filed a sur-reply in opposition [D.E. 397]. On October 11, 2022, plaintiffs filed a sur-surreply [D.E. 401-1].

On July 13, 2022, defendants moved for partial judgment on the pleadings [D.E. 346] and filed a memorandum of support [D.E. 347]. On August 29, 2022, plaintiffs responded in opposition [D.E. 379]. On September 26, 2022, defendants replied [D.E. 396].

On July 13, 2022, defendants moved to exclude the expert testimony of Dr. David L. Sunding (“Sunding”) [D.E. 348], David L. Duncklee (“Duncklee”) [D.E. 354], R. Bruce Gamble (“Gamble”) [D.E. 356], Dr. Jamie C. DeWitt (“DeWitt”) and Dr. Richard L. DeGrandchamp (“DeGrandchamp”) [D.E. 357], and Dr. Kimberly A. Gray (“Gray”) and Roger W. Griffith (“Griffith”) [D.E. 359] and filed memoranda in support [D.E. 349, 353, 355, 358, 360]. On August 29, 2022, plaintiffs responded in opposition [D.E. 377–78, 381, 383–84]. On September 26, 2022, defendants replied [D.E. 391–95].

On July 13, 2022, defendants moved to stay proceedings [D.E. 361] and filed a memorandum in support [D.E. 362]. On August 29, 2022, plaintiffs responded in opposition [D.E. 380]. On September 26, 2022, defendants replied [D.E. 398]. On March 31, 2023, the court denied defendants’ motion to stay.

On June 26, 2023, the court held that it would not grant certification on plaintiffs’ proposed “Health Study Injunctive and Declaratory Relief Subclass” consisting of “[a]ll Class Members who consent to participate in the epidemiological study.” [D.E. 410-1] 1–2 (quotation omitted). The court also asked the parties to provide an update on possible settlement. See id. at 2–3. On September 13, 2023, the parties engaged in court-hosted mediation with United States Magistrate Judge Gates. See [D.E. 412–419]. The mediation did not resolve the case. See [D.E. 419].

On October 4, 2023, the court denied as moot defendants' motion for partial judgment on the pleadings and denied defendants' motion to exclude testimony of plaintiffs' experts Sunding, Gamble, Gray, and Griffith. The court also granted defendants' motion to exclude the testimony of Duncklee, DeWitt, and DeGrandchamp and granted in part and denied in part plaintiffs' motion for class certification [D.E. 420].

Since the court's order of October 4, 2023, the parties engaged in merits discovery and then supplementary expert discovery. See [D.E. 563] 5. In May 2024, plaintiffs served their supplemental expert reports. In June 2024, defendants served their rebuttal reports. In August 2024, the parties filed the latest round of motions to exclude and dispositive motions, which are the primary focus of this order.

On August 30, 2024, plaintiffs moved to exclude certain supplemental expert opinions of defendants' expert Mark Travers ("Travers") [D.E. 520] and filed a memorandum [D.E. 521], a declaration [D.E. 522], a copy of Travers's deposition [D.E. 523], and a supplemental copy of Travers's report [D.E. 524] in support. On September 19, 2024, plaintiffs filed a corrected memorandum in support [D.E. 563]. On September 27, 2024, defendants responded in opposition [D.E. 565]. On October 18, 2024, plaintiffs replied [D.E. 605].

Also on August 30, 2024, defendants moved to exclude the expert opinions of plaintiffs' experts Gamble [D.E. 526], Duncklee [D.E. 528], DeWitt [D.E. 533, 560], Griffith [D.E. 535], Dr. Robert A. Michaels, Ph.D. ("Michaels") [D.E. 538], Ruth Albright, P.E. ("Albright") [D.E. 541], Robin Smith ("Smith") [D.E. 544], and DeGrandchamp [D.E. 547] and filed memoranda in support [D.E. 527, 529, 534, 536, 539, 542, 545, 548]. On September 27, 2024, plaintiffs responded in opposition to defendants' motions to exclude [D.E. 566, 569, 571, 573, 575, 578, 581, 583]. On October 18, 2024, defendants replied [D.E. 606–13]. The parties' motions to

exclude generated numerous related motions to strike, disregard, supplement, and amend. See, e.g., [D.E. 560, 615, 620, 626].

Also on August 30, 2024, defendants moved for partial summary judgment [D.E. 550] and filed a memorandum [D.E. 551], statement of material facts [D.E. 552], and appendix [D.E. 553] in support. On September 27, 2024, plaintiffs responded in opposition [D.E. 585], and filed a response and counterstatement [D.E. 586] and appendix [D.E. 587] in support. On October 18, 2024, defendants replied [D.E. 614].

On December 18, 2024, defendants moved to decertify the class [D.E. 629] and filed a memorandum in support [D.E. 630]. On January 17, 2025, plaintiffs responded in opposition [D.E. 632]. On February 7, 2025, defendants untimely replied [D.E. 633]. After realizing their error, defendants withdrew their untimely reply and asked the court that defendants be allowed to file their reply out of time [D.E. 634]. Plaintiffs opposed defendants' request to file their reply out of time [D.E. 636]. On July 2, 2025, the court referred defendants' motion to file their reply out of time to Magistrate Judge Robert T. Numbers II [D.E. 643]. On July 3, 2025, Magistrate Judge Numbers denied defendants' motion for extension of time and their request to file their reply out of time [D.E. 644].

This order resolves the parties' various motions to exclude expert opinions [D.E. 520, 526, 528, 533, 535, 538, 541, 544, 547] and related motions [D.E. 560, 615, 620, 626]. Additionally, this order resolves defendants' motions for partial summary judgment [D.E. 550] and for class decertification [D.E. 629]. As explained below, the court denies plaintiffs' motion to exclude Travers, denies defendants' motion to exclude Gamble, denies defendants' motion to exclude Duncklee, grants defendants' motion to exclude DeWitt, denies defendants' motion to exclude Griffith, denies defendants' motion to exclude Michaels, denies defendants' motion to file a

supplemental motion about Albright, denies plaintiffs' motion to strike concerning defendants' Albright reply, denies without prejudice defendants' motion to exclude Albright, grants in part and denies in part defendants' motion to exclude Smith, grants defendants' motion to exclude DeGrandchamp, denies without prejudice defendants' motion for partial summary judgment, and denies without prejudice defendants' motion for class decertification. The parties shall meet and confer in accordance with this order. The court will then schedule a hearing in due course.

I.

The plaintiffs' claims concern defendants' discharge of wastewater allegedly containing perfluorinated compounds ("PFCs"), notably GenX. See Am. Consol. Class Action Compl. [D.E. 132-1] ¶¶ 1–2. PFCs are chemical compounds in which carbon-fluorine bonds replace all of the carbon-hydrogen bonds. Cf. id. at ¶¶ 19–20. PFCs are classified and named based on the length of the carbon chain in the molecule and any functional group attached to the chain. See id. at ¶¶ 20, 23. PFCs degrade slowly under environmental conditions, and plaintiffs allege that some PFCs "persist in the environment for over 2,000 years." Id. at ¶ 23; see id. at ¶¶ 24–25. PFCs, including GenX and perfluorooctanoic acid ("PFOA"), have been manufactured for use in various commercial products. See id. at ¶¶ 1, 19, 26–27; cf. id. at ¶¶ 28–83. In total, plaintiffs allege that defendants discharged 17 different PFCs into the Cape Fear River. See id. at ¶ 87.

Plaintiffs allege that "PFCs are highly toxic to humans" and that "[s]cientists have linked PFCs to kidney cancer, testicular cancer, prostate cancer, ovarian cancer, non-Hodgkin lymphoma, liver disease, ulcerative colitis, thyroid disease, hypercholesterolemia, and pregnancy-induced hypertension, among other illnesses." Id. at ¶ 21. Plaintiffs discuss research concerning the toxicity of PFOA. See id. at ¶¶ 26–32, 34–39, 41, 43–44, 51–52. Plaintiffs also discuss studies of GenX's toxicity. See id. at ¶¶ 60–62, 65, 68–69, 71–75, 78. Plaintiffs allege that the studies

indicate that rodents exposed to GenX developed “liver cell damage that could be a precursor to cancer” and had “a higher incidence of liver tumors, pancreatic tumors, and testicular tumors.” Id. at ¶¶ 65, 69. Although GenX’s toxicity has been studied only in rodents, plaintiffs contend that GenX is chemically similar to PFOA and is toxic to humans. See id. at ¶ 79. Plaintiffs also note that the Environmental Protection Agency (“EPA”) established a lifetime health advisory level for PFOA and a related compound (perfluorooctane sulfonate or “PFOS”) of 70 parts per trillion (“ppt”) in drinking water.¹ See id. at ¶ 22. Relatedly, North Carolina adopted a preliminary health-based goal of 140 ppt for GenX.² Id.; see id. at ¶ 92.

The Fayetteville Works plant is located in Fayetteville, North Carolina, and plaintiffs allege that the Fayetteville plant discharged wastewater into the Cape Fear River. See id. at ¶¶ 2, 14. DuPont constructed the Fayetteville Works plant in the 1970s and owned it until February 1, 2015. See id. at ¶ 14. On February 1, 2015, Chemours acquired the Fayetteville Works plant from DuPont. See id. at ¶ 15. In July 2015, Chemours separated from DuPont. See id.

The Fayetteville Works plant has at least five manufacturing areas dedicated to fluoromonomers/Nafion, polymer processing aid, Butacite, SentryGlas, and polyvinyl fluoride. See id. at ¶ 16. Plaintiffs allege that, from the 1950s until the early 2000s, DuPont “relied heavily on PFOA . . . to make Teflon and other non-stick products.” Id. at ¶ 26. Initially, DuPont purchased PFOA from the 3M Company (“3M”). See id. at ¶¶ 34, 44. Both DuPont and 3M investigated the toxicological properties of PFOA during this time. Plaintiffs allege that DuPont

¹ The EPA did so in 2016. See EPA, Fact Sheet: PFOA & PFOS Drinking Water Health Advisories, 2 (Nov. 2016), https://www.epa.gov/sites/default/files/2016-06/documents/drinkingwaterhealthadvisories_pfoa_pfos_updated_5.31.16.pdf.

² North Carolina did so in 2017. See N.C. Dep’t of Health & Hum. Servs., GenX Information, 2 (Dec. 2019), https://epi.dph.ncdhhs.gov/oe/pfas/GenX_Factsheet_123019-WEB.pdf.

was aware of safety risks associated with PFOA as early as the 1960s, well before DuPont opened the Fayetteville Works plant. See id. at ¶¶ 29–33. Nevertheless, DuPont discharged wastewater containing PFOA and other PFCs into the Cape Fear River and into “unlined biosludge settlement lagoons” that DuPont “knew or should have known . . . would flow into the Cape Fear River.” Id. at ¶¶ 33, 37.

Plaintiffs allege that, by 2000, 3M decided to stop manufacturing PFOA because of PFOA’s toxicity, and DuPont began manufacturing PFOA at the Fayetteville Works plant itself. See id. at ¶¶ 44, 47. Plaintiffs allege that DuPont misrepresented facts to the North Carolina Department of Environmental Quality (“DEQ”) about PFOA in reapplying for its National Pollutant Discharge Elimination System (“NPDES”) permit. See id. at ¶¶ 45–46, 48–50. For example, plaintiffs allege that DuPont represented that it did not discharge wastewater from the Fayetteville Works plant into the Cape Fear River. See id. at ¶ 49. Moreover, plaintiffs allege that DuPont continued to discharge PFOA into the Cape Fear River even after the results of “the first comprehensive study of the effects of PFOA on human health . . . confirmed that PFOA causes cancer and a host of other health problems in humans.” Id. at ¶ 51. Plaintiffs also allege that DuPont did not report numerous PFOA spills that occurred between 2011 and 2013. See id. at ¶ 54.

As the EPA learned of the dangers associated with PFOA, DuPont began to search for a replacement for PFOA. See id. at ¶ 58. DuPont selected GenX as the replacement for PFOA. See id. Plaintiffs allege that DuPont had been discharging GenX into the Cape Fear River since the 1980s. See id. at ¶¶ 55–57. In 2009, DuPont and the EPA “reached a consent order pursuant to the Toxic Substances Control Act” to replace PFOA with GenX. Id. at ¶ 59. DuPont represented that GenX would be safer than PFOA because it would biodegrade more quickly than PFOA. See

id. As part of the consent order, DuPont had to investigate the toxicological properties of GenX and to “recover and capture (destroy) or recycle GenX from all the process wastewater effluent streams and air emissions . . . at an overall efficiency of 99%.” Id. (quotation and alteration omitted).

On March 15, 2010, DuPont submitted a study to the EPA showing that GenX, like PFOA, was not biodegradable. See id. at ¶ 60. In July 2010, DuPont submitted the results from animal studies that showed that rodents exposed to GenX experienced numerous adverse health consequences, including birth defects, liver necrosis, and cellular deformation indicative of liver disease and early-stage cancer. See id. at ¶¶ 61–62. DuPont conducted additional studies, and plaintiffs allege that each study indicated that GenX was likely toxic to humans. See id. at ¶¶ 65–66, 68–75. Despite the studies and the consent order, plaintiffs allege that DuPont and later Chemours continued to discharge GenX into “the Cape Fear River, the groundwater, and the air surrounding the Fayetteville Works plant.” Id. at ¶ 63; see id. at ¶¶ 64, 81, 83.

As part of a study of PFCs in Wilmington’s water supply, Dr. Detlef Knappe (“Knappe”), a professor at North Carolina State University, collected water samples from the Cape Fear River. See id. at ¶ 84. On May 3, 2016, Knappe contacted the Cape Fear Public Utility Authority (“CFPUA”) and told the CFPUA that he detected GenX and other PFCs in the water “at the CFPUA intake” at an average concentration of 631 ppt. Id. On November 10, 2016, Knappe and his co-authors published the results of the study. See id. at ¶ 85. On November 23, 2016, Knappe shared his research with DEQ and numerous “city and county water treatment plants” and noted that “levels of GenX were very high in Wilmington and that none of the newly discovered compounds being discharged by the Chemours plant were being removed by the city’s . . . treatment plant.” Id. at ¶ 86 (quotation omitted); see id. at ¶ 87 (listing the 17 PFCs detected in

the Cape Fear River watershed). In response to Knappe's research, North Carolina set the preliminary health goal for GenX of 140 ppt. See, e.g., id. at ¶ 92.

Knappe's research raised awareness of defendants' practices at the Fayetteville Works plant. Plaintiffs allege that, on June 15, 2017, Chemours admitted to state and local regulators that it had been discharging GenX into the Cape Fear River for approximately four decades. See id. at ¶ 93. On June 19, 2017, DEQ tested water samples from 13 locations along the Cape Fear River in Wilmington and Fayetteville, and DEQ found that "finished water from four water treatments plants had GenX concentrations exceeding the state's [health goal] of 140 ppt." Id. at ¶ 95. On July 10, 2017, DEQ received data from a third-party laboratory in Colorado that detected GenX concentrations exceeding 39,000 ppt in raw water and exceeding 790 ppt in finished water. See id. at ¶ 97. On August 31, 2017, the EPA announced that it had discovered two additional PFCs, byproducts of defendants' manufacturing of Nafion, at concentrations exceeding the EPA's health advisory level of 70 ppt for long-chain PFCs. See id. at ¶ 98. Around the same time, the North Carolina Department of Water Resources ("DWR") tested 14 groundwater-monitoring wells, and DWR detected GenX at high concentrations in 13 of the wells. See id. at ¶ 99. One of the wells was upstream of the Fayetteville Works plant, which plaintiffs allege suggests that defendants discharged GenX and other PFCs into the air. See id. Plaintiffs allege that defendants have discharged GenX into the Cape Fear River and the soil, air, and groundwater surrounding the Fayetteville Works plant since at least 1980. See, e.g., id. at ¶ 1.

On September 5, 2017, DWR filed a notice of intent to suspend Chemours's NPDES permit because "Chemours misrepresented and failed to disclose fully all relevant facts." Id. at ¶ 100 (quotation and alterations omitted). Later that month, Chemours and DEQ tested private wells within a one-mile radius of the Fayetteville Works plant, and DEQ ordered Chemours to supply

bottled drinking water to individuals whose private wells contained GenX at concentrations exceeding the state’s health goal of 140 ppt. See id. at ¶ 103. On November 3, 2017, DEQ inspected the Fayetteville Works plant and learned that Chemours had spilled an unknown quantity of a chemical precursor to GenX in October 2017 and had not disclosed the event. See id. at ¶ 104. On November 16, 2017, DEQ moved to partially suspend Chemours’s NPDES permit. See id. at ¶ 105. DEQ learned of additional pollution, and plaintiffs allege that additional testing indicated that GenX and other PFCs had contaminated both the Cape Fear watershed and the surrounding airshed. See id. at ¶¶ 106–07. For example, investigators found GenX in plants, vegetables, and honey. See id. at ¶¶ 108–09.

Plaintiffs are individuals who reside in counties “that use the Cape Fear River as a primary source of drinking water.” Id. at ¶ 2. In the court’s order of October 4, 2023, the court described in detail plaintiffs’ then-putative classes and sub-classes. See [D.E. 420] 33–62. The court granted in part plaintiffs’ motion for class certification, excluded plaintiffs’ proposed epidemiological subclass, and certified two classes: “(1) a ‘public utility class’ of property owners or renters whose property is serviced by a public water utility servicing Bladen, Brunswick, Cumberland, New Hanover, and Pender Counties that draws water from or obtains water drawn from the Cape Fear River downstream or Fayetteville Works; and (2) a ‘groundwater class’ of property owners or renters whose property receives drinking water from a groundwater source with quantifiable concentrations of any of the Fayetteville Works (“FW PFAS”) as defined in Exhibit A.” Id. at 36. The court, however, reserved the right to decertify or modify the class in light of further developments in the case. See id. at 62; Gen. Tel. Co. of Sw. v. Falcon, 457 U.S. 147, 160 (1982); Williams v. Martorello, 59 F.4th 68, 92 (4th Cir. 2023); Fed. R. Civ. P. 23(c)(1)(C).

II.

Rule 702 of the Federal Rules of Evidence governs the admission of expert testimony. See Fed. R. Evid. 702; Kumho Tire Co. v. Carmichael, 526 U.S. 137, 141–42 (1999); Gen. Elec. Co. v. Joiner, 522 U.S. 136, 142–43 (1997); Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 588 (1993); Engilis v. Monsanto Co., ___ F.4th ___, 2025 WL 2315898, at *3–6 (9th Cir. Aug. 12, 2025); United States v. Forrest, 429 F.3d 73, 80–81 (4th Cir. 2005); Silicon Knights, Inc. v. Epic Games, Inc., No. 5:07-CV-275, 2011 WL 6748518, at *5–6 (E.D.N.C. Dec. 22, 2011) (unpublished). Rule 702 provides:

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.

Fed. R. Evid. 702.³ “In 2023, Rule 702 was amended to clarify that the proponent of expert testimony bears the burden of establishing its admissibility and to emphasize that an expert’s opinion must stay within the bounds of a reliable application of the expert’s basis and methodology.” EcoFactor, Inc. v. Google LLC, 137 F.4th 1333, 1339 (Fed. Cir. 2025); see also

³ Although Rule 702 governs trial testimony, a trial court may conduct a Rule 702 analysis in resolving a summary judgment motion and “exclude expert testimony found wanting from its consideration in ruling on [such a] motion.” Arsanjani v. United States, No. 19-1746, 2023 WL 3231101, at *3 (D.D.C. May 3, 2023) (unpublished) (quotation omitted).

Fed. R. Evid. 702 advisory committee note to 2023 amendment (stating that the 2023 amendment is intended “to emphasize that each expert opinion must stay within the bounds of what can be concluded from a reliable application of the expert’s basis and methodology”). The amendment, however, does not “bar testimony that comports with substantive law requiring opinions to a particular degree of certainty.” Fed. R. Evid. 702 advisory committee note to 2023 amendment; see, e.g., Plantan v. Smith, No. 3:22CV407, 2024 WL 3048648, at *4 n.5 (E.D. Va. June 18, 2024) (unpublished); In re Blackbaud, Inc., Customer Data Breach Litig., No. 3:20-MN-02972, 2024 WL 2155221, at *4 n.5 (D.S.C. May 14, 2024) (unpublished).

Rule 702 “assign[s] to the trial judge the task of ensuring that an expert’s testimony both rests on a reliable foundation and is relevant to the task at hand.” Daubert, 509 U.S. at 597; see Engilis, 2025 WL 2315898, at *3–6; Cooper v. Smith & Nephew, Inc., 259 F.3d 194, 199–203 (4th Cir. 2001). In other words, Rule 702 requires that a trial judge “ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” EcoFactor, 137 F.4th at 1339 (internal quotations omitted) (citation omitted); see Daubert, 509 U.S. at 597–98; Engilis, 2025 WL 2315898, at *3–6. Determining admissibility, which falls within the gatekeeping role of the court, is separate from determining “weight and credibility, which are within the province of the jury in a jury case.” EcoFactor, 137 F.4th at 1339.

The proponent of the expert testimony must establish its admissibility by a preponderance of the evidence. Fed. R. Evid. 702; see Fed. R. Evid. 104(a); Daubert, 509 U.S. at 592 n.10; Engilis, 2025 WL 2315898, at *5–6; Cooper, 259 F.3d at 199; see also Huddleston v. United States, 485 U.S. 681, 687 n.5 (1988); Bourjaily v. United States, 483 U.S. 171, 175 (1987). Expert testimony is appropriate when it “will help the trier of fact to understand the evidence or to determine a fact in issue.” Fed. R. Evid. 702(a). A district court may permit a witness qualified

by knowledge, skill, experience, training, or education to testify and state an opinion where the testimony will help the trier of fact understand the evidence or determine a fact in issue and “([1]) the testimony is based upon sufficient facts or data, ([2]) the testimony is the product of reliable principles and methods; and ([3]) the expert’s opinion reflects a reliable application of the principles and methods to the facts of the case.” Fed. R. Evid. 702(b)–(d). Courts have distilled Rule 702’s requirements into three crucial inquiries: (1) whether the proposed expert witness is qualified; (2) whether the proposed testimony is relevant; and (3) whether the proposed testimony is reliable. See Kumho Tire Co., 526 U.S. at 141; Daubert, 509 U.S. at 589; Engilis, 2025 WL 2315898, at *5–6; Forrest, 429 F.3d at 80. The trial court must perform its special gatekeeping obligation concerning these three requirements. See, e.g., Fed. R. Evid. 702; Kumho Tire Co., 526 U.S. at 147; Engilis, 2025 WL 2315898, at *5–6.

When a party challenges the reliability or relevance of an expert’s testimony, the court must “satisfy itself that the proffered testimony meets the relevant standard as a precondition to admissibility.” Snell v. Reid, No. 22-1869, 2024 WL 2815061, at *3 (4th Cir. June 3, 2024) (per curiam) (unpublished) (quotations omitted); see Engilis, 2025 WL 2315898, at *5–6; Sardis v. Overhead Door Corp., 10 F.4th 268, 282 (4th Cir. 2021). The court must make explicit findings concerning the challenged preconditions of admissibility either by written order or orally on the record. See Snell, 2024 WL 2815061 at *3; Sardis, 10 F.4th 268 at 283; United States v. Smith, 919 F.3d 825, 835–36 (4th Cir. 2019).

As for qualification, an expert may be qualified based on “knowledge, skill, experience, training, or education.” Fed. R. Evid. 702. A court assesses qualifications in reference to the matter to which the witness seeks to testify. See Daubert, 509 U.S. at 591–93; Gladhill v. Gen. Motors Corp., 743 F.2d 1049, 1052 (4th Cir. 1984). The witness need not be the most well-known

or well-qualified witness. See Gladhill, 743 F.2d at 1052. Nonetheless, a witness does not become an expert simply by claiming to be an expert or because some other court permitted the witness to testify as an expert. See, e.g., Thomas J. Kline, Inc. v. Lorillard, Inc., 878 F.2d 791, 799–800 (4th Cir. 1989) (holding that a witness with an MBA was not qualified to provide expert opinion testimony on complex economic antitrust matters about which the witness was not qualified by training, experience, or education); United States v. Bahena, 223 F.3d 797, 809–10 (8th Cir. 2000) (holding that a witness who held himself out to be an expert on voice spectrography lacked the required training, experience, or education). Moreover, expertise in one topic does not qualify a witness to testify about another topic. See, e.g., Engilis, 2025 WL 2315898, at *7–10 (affirming exclusion of oncologist’s opinion on specific causation because the oncologist failed to follow the differential etiology methodology his report purported to employ and failed to reliably rule out obesity as a potential cause of plaintiff’s cancer); Brainchild Surgical Devices, LLC v. GPA Glob. Ltd., 144 F.4th 238, 254 (4th Cir. 2025) (affirming exclusion of expert with experience in international business and contracts to opine on patent renewal services where the expert lacked training or experience with patent renewal services); Kadel v. Folwell, 100 F.4th 122, 158 (4th Cir. 2025) (en banc) (affirming exclusion of medical doctors’ testimony where doctors failed to demonstrate expertise in treating the medical condition at issue in the case), vacated on other grounds by Folwell v. Kadel, 145 S. Ct. 2838 (2025) (mem.); Sardis, 10 F.4th at 288–90, 295 (excluding testimony about an industry standard not sufficiently related to the product at issue and excluding testimony that contradicts standards imposed by governing law); Zellers v. NexTech Ne., LLC, 533 F. App’x 192, 197 (4th Cir. 2013) (per curiam) (unpublished) (affirming exclusion of a neurologist’s testimony about the toxicity of certain chemicals used for refrigeration because the neurologist had no training in toxicology); Cooper, 259 F.3d at 200 (excluding testimony of a

medical doctor who based an opinion on a medical device without conducting tests or studying the medical device); Ancho v. Pentek Corp., 157 F.3d 512, 519 (7th Cir. 1998) (excluding testimony when the expert failed to visit the site of the accident or otherwise familiarize himself with the specific details of the accident at issue).

To be relevant, the proposed expert testimony must be helpful to the trier of fact concerning a claim or defense at issue in the case. See Fed. R. Evid. 702(a); Daubert, 509 U.S. at 591–92; United States v. Lespier, 725 F.3d 437, 449 (4th Cir. 2013); Kopf v. Skyrn, 993 F.2d 374, 377 (4th Cir. 1993); Persinger v. Norfolk & W. Ry., 920 F.2d 1185, 1188 (4th Cir. 1990); Scott v. Sears, Roebuck & Co., 789 F.2d 1052, 1055 (4th Cir. 1986). To be helpful, the proposed expert testimony must fit the facts of the case. See Fed. R. Evid. 702; Silicon Knights, Inc., 2011 WL 6748518, at *6–17. “Fit is not always obvious, and scientific validity for one purpose is not necessarily scientific validity for other, unrelated purposes.” Daubert, 509 U.S. at 591 (quotation omitted). To be helpful to the trier of fact, the proposed expert testimony must be outside the common knowledge or function of the fact finder. See, e.g., Lespier, 725 F.3d at 449 (affirming exclusion of expert testimony on how sleep deprivation affects the reliability of an eye witness to a crime); Persinger, 920 F.2d at 1188 (affirming exclusion of expert testimony about the amount of weight that an individual could safely lift based on an easily-applied industry formula); Gladhill, 743 F.2d at 1052 (affirming decision that a police officer who had investigated 600 car accidents and arrived at the car accident scene immediately after the car accident was qualified to opine concerning the cause of the car accident based on his review of the car accident scene); cf. United States v. Hill, 749 F.3d 1250, 1260 (10th Cir. 2014) (holding that an expert witness cannot testify about whether another witness is credible); Nimely v. City of New York, 414 F.3d 381, 398 (2d Cir. 2005) (same).

“[T]he test of reliability is flexible and the law grants a district court” discretion when it decides reliability. United States v. Wilson, 484 F.3d 267, 274 (4th Cir. 2007) (quotations omitted); see Kumho Tire Co., 526 U.S. at 141–42; Belville v. Ford Motor Co., 919 F.3d 224, 233 (4th Cir. 2019). Reliability focuses on the fit between the expert opinion and the facts of the case. There is not a fit when a large analytical gap exists between the facts of the case and the opinion. See, e.g., Joiner, 522 U.S. at 146–47 (affirming exclusion of testimony where the expert’s opinion was based on irrelevant testing on animals unrelated to the case at issue); Engilis, 2025 WL 2315898, at *7–10 (affirming exclusion of oncologist’s opinion on specific causation because the oncologist failed to follow the differential etiology methodology his report purported to employ and failed to reliably rule out obesity as a potential cause of plaintiff’s cancer); In re Lipitor (Atorvastatin Calcium) Mktg., Sales Pracs. & Prods. Liab. Litig., 892 F.3d 624, 634–35, 644 (4th Cir. 2018) (affirming exclusion of testimony when the expert’s testing contradicted his opinion); Nease v. Ford Motor Co., 848 F.3d 219, 232–33 (4th Cir. 2017) (affirming exclusion of testimony when expert on vehicle safety failed to test his own hypothesis); Cooper, 259 F.3d at 200–01 (affirming exclusion of testimony on what caused a medical injury when the expert’s testing did not provide evidence of causation) Silicon Knights, Inc., 2011 WL 6748518, at *6–17 (excluding expert on damages where the opinions did not fit the facts of the case). The Federal Rules of Evidence do not require “a district court to admit opinion evidence that is connected to existing data only by the ipse dixit of the expert.” Joiner, 522 U.S. at 146; see Small v. WellDyne, Inc., 927 F.3d 169, 177 (4th Cir. 2019) (“Without testing, supporting literature in the pertinent field, peer reviewed publications[,] or some basis to assess the level of reliability, expert opinion testimony can easily, but improperly, devolve into nothing more than proclaiming an opinion is true ‘because I say so.’”); In re Roundup Prods. Liab. Litig., MDL No. 2741, 2023 WL 7928751, at *2–6 (N.D. Cal.

Nov. 15, 2023) (unpublished) (“For an expert to express an opinion that Roundup caused [Non-Hodgkins Lymphoma], that expert must have engaged with the relevant literature enough to assess whether a study is credible, to explain why [he] relied on one study more than another, and to articulate how [he] reached [his] conclusion in the face of conflicting evidence. [The expert in this case] did not do that, so his general causation opinion is excluded.”), aff’d sub nom., Engilis, 2025 WL 2315898.

In determining “whether proffered testimony is sufficiently reliable, the court has broad latitude to consider whatever factors bearing on validity that the court finds to be useful; the particular factors will depend upon the unique circumstances of the expert testimony involved.” Westberry v. Gislaved Gummi AB, 178 F.3d 257, 261 (4th Cir. 1999). Factors that may bear on the reliability of the expert’s testimony include (1) whether a theory or technique can be (and has been) tested, (2) whether the theory or technique has been subjected to peer review and publication, (3) whether a technique has a high known or potential rate of error and whether there are standards controlling its application, and (4) whether the theory or technique enjoys general acceptance within the relevant community. See Kumho Tire Co., 526 U.S. at 149–50; Daubert, 509 U.S. at 593–94; see, e.g., Engilis, 2025 WL 2315898, at *7–10 (affirming exclusion of oncologist’s opinion on specific causation because the oncologist failed to follow the differential etiology methodology his report purported to employ and failed to reliably rule out obesity as a potential cause of plaintiff’s cancer); Sardis, 10 F.4th at 288–90 (holding testimony about product safety unreliable when expert did not test the product); McKiver v. Murphy-Brown, LLC, 980 F.3d 937, 960 (4th Cir. 2020) (holding that a witness’s method for analyzing the origin of swine fecal material was widely used and applied reliably enough to be admitted despite not being subject to peer review); In re Lipitor, 892 F.3d at 644–45 (holding that a medical doctor testifying that Lipitor

caused certain diseases was excludable for not factoring in other risk factors, such as age, body mass index, and family history); Baxter v. Comm’r of Internal Revenue Serv., 910 F.3d 150, 157–58 (4th Cir. 2018) (holding that mere disagreement with an expert’s otherwise reliable methodology is not grounds for exclusion); United States v. Crisp, 324 F.3d 261, 265–69 (4th Cir. 2003) (holding that expert fingerprint analysis was admissible despite defendant’s objections to its general scientific accuracy). “Result-driven analysis, or cherry-picking, undermines principles of the scientific method and is a quintessential example of applying methodologies (valid or otherwise) in an unreliable fashion.” In re Lipitor, 892 F.3d at 634; see EEOC v. Freeman, 778 F.3d 463, 468–69 (4th Cir. 2015) (Agee, J., concurring) (collecting cases).

As for plaintiffs’ claims under North Carolina law, the court must predict how the Supreme Court of North Carolina would rule on any disputed state-law issue. See Twin City Fire Ins. Co. v. Ben Arnold-Sunbelt Beverage Co. of S.C., 433 F.3d 365, 369 (4th Cir. 2005). In doing so, the court must look first to opinions of the Supreme Court of North Carolina. See Stahle v. CTS Corp., 817 F.3d 96, 100 (4th Cir. 2016). If there are no governing opinions from the Supreme Court of North Carolina, this court “may consider lower court opinions, . . . treatises, and the practices of other states.” Twin City Fire Ins. Co., 433 F.3d at 369 (quotation omitted).⁴ In doing so, a federal court “should not create or expand [a] [s]tate’s public policy.” Time Warner Ent.-Advance/Newhouse P’ship v. Carteret-Craven Elec. Membership Corp., 506 F.3d 304, 314 (4th Cir. 2007) (cleaned up); Wade v. Danek Med., Inc., 182 F.3d 281, 286 (4th Cir. 1999). Moreover, in predicting how the highest court of a state would address an issue, this court must “follow the

⁴ North Carolina does not have a mechanism to certify questions of state law to its Supreme Court. See Town of Nags Head v. Toloczko, 728 F.3d 391, 398 (4th Cir. 2013).

decision of an intermediate state appellate court unless there is persuasive data that the highest court would decide differently.” Toloczko, 728 F.3d at 398 (quotation omitted).

A.

On August 30, 2024, plaintiffs moved to exclude certain supplemental expert opinions of defendants’ expert Mark Travers (“Travers”) [D.E. 520] and filed a memorandum [D.E. 521], a declaration [D.E. 522], a copy of Travers’s deposition [D.E. 523], and a supplemental copy of Travers’s report [D.E. 524] in support. On September 19, 2024, plaintiffs filed a corrected memorandum in support [D.E. 563]. On September 27, 2024, defendants responded in opposition [D.E. 565]. On October 18, 2024, plaintiffs replied [D.E. 605]. Plaintiffs move to strike “sections 3.1.6, 3.1.7, and 6.1” of Traver’s 2024 report, which contains Traver’s opinions concerning other potential sources of PFAS chemicals in the Cape Fear River. [D.E. 563] 4.

Travers is a licensed professional geologist, see [D.E. 524] 108, and works as “a Senior Director for Ramboll Americas Engineering Solutions, Inc.” Id. at 10. Travers previously worked as the senior vice president for global practice development at Ramboll and as the global practice leader. See id. at 10. Travers received a Bachelor of Science in Geology from Illinois State University and a Master’s of Science in Engineering from Purdue University. See id. at 108. Additionally, Travers has over 40 years’ experience in applied science, engineering, and waste management and disposal, and has conducted numerous studies of land and water media for chemical contamination resulting from industrial activities. See id. at 108–13. Moreover, Travers has published numerous works on these topics and has served as an expert in other cases. See id. at 113–16.

Travers prepared his 2024 report “to review the remediation that has been conducted at the chemical manufacturing facility called Fayetteville Works . . . in Bladen County, North Carolina

in response to the detection of [PFAS] in surface water, groundwater, and air.” Id. at 10. Additionally, Travers’s 2024 report evaluates “the alleged occurrence of Fayetteville Works PFAS at [p]laintiffs’ properties . . . [and] address[es] technical issues and opinions covered in the expert reports of Albright (2024) and Duncklee (2024).” Id. Sections 3.1.6, 3.1.7, and 6.1 of Travers’s 2024 report contain regional maps and commentaries, marked with the locations of numerous industrial and waste sites. See id. at 23–29, 82–83. The locations marked on the regional maps in sections 3.1.6, 3.1.7, and 6.1 include “(1) various industries where there is a potential for current or historic PFAS use; (2) permitted solid waste landfills and pre-regulatory landfills; (3) Resource Conservation and Recovery Act [(“RCRA”)] hazardous waste sites; and (4) household and septic system sources.” [D.E. 565] 3.

Travers opines that activities and materials at these locations may have contributed to PFAS contamination in the Cape Fear River Basin. Section 3.1.6 is titled “Other Potential Sources of PFAS in the Cape Fear River Basin.” [D.E. 524] 23. In section 3.1.6, Travers opines that “PFAS compounds have been very widely used, and there are likely to be many other sources of PFAS within the Cape Fear River Basin.” Id. Travers cites a study that “identified more than 200 uses in 64 use categories for more than 1,400 individual PFAS,” and he summarizes those use categories in Table 3 of his report. Id. at 23–24; see id. at 25. Additionally, Travers compiled a summary of North American Industry Classification System (“NAICS”) codes “where there is a potential for current or historical PFAS use” and included this summary at Appendix B of his report. Id. at 24; see id. at 117–21. Travers references the NAICS codes and the PFAS use cases, and he identifies several industrial, landfill, and RCRA waste sites. See id. at 117–21. Travers opines that these sources may have contributed to PFAS contamination in the Cape Fear River

Basin. See id. at 24. Travers plotted these sites in Figures 11, 12, and 13 of his report. See id. at 26–27.

Section 3.1.7 is titled “Household and Septic System PFAS Sources.” Id. at 28. In section 3.1.7, Travers opines that numerous household sources may have also contributed to PFAS contamination in the Cape Fear River Basin. See id. at 28–29. Specifically, Travers opines that “[h]ousehold sources of PFAS are numerous, including cosmetics and personal care products; treatments on textiles, upholstery, carpets, and leather; paints, coatings and floor finishes; cleaning agents, automobile and ski waxes, nonstick cookware, paper products including toilet paper, food packaging and other packaging, and more.” Id. at 28. Moreover, Travers opines that “[t]hese sources are expected to contribute to household wastewater discharging to either [publicly owned treatment works] or to residential onsite septic systems.” Id. According to Travers, PFAS from these sources may have then entered subsurface soils and ground water in the Cape Fear River Basin. See id. at 29. Travers cites numerous peer-reviewed articles in support of his opinion. See id. at 28. Section 6.1 is titled “Opinion 1,” and in section 6.1, Travers opines that “[t]he occurrence of PFAS in environmental media in the region surrounding the Fayetteville Works facility is the result of contributions from many sources, including facility sources.” Id. at 82.

Plaintiffs do not dispute Travers’s qualifications to offer expert testimony, and the court finds Travers qualified to render the opinions offered in sections 3.1.6, 3.1.7, and 6.1. Nonetheless, plaintiffs move to exclude Travers’s opinions contained in sections 3.1.6, 3.1.7, and 6.1. See [D.E. 520]. In support, plaintiffs argue Travers’s opinions in sections 3.1.6, 3.1.7, and 6.1 “fail every prong of Rule 702 . . . [because] they are not based on sufficient facts or data; they are not the results of reliable principles or methods, much less an application of such methods to the facts of this case; and . . . they will not help the trier of fact understand the evidence or determine any fact

at issue.” [D.E. 563] 4. Additionally, plaintiffs argue that the prejudicial value of Travers’s opinions in sections 3.1.6, 3.1.7, and 6.1 outweighs their probative value. See id. at 7; Fed. R. Evid. 403. Plaintiffs essentially argue that Travers’s 2024 report contains unfounded speculation concerning other potential sources of PFAS identified in sections 3.1.6, 3.1.7, and 6.1. See [D.E. 563] 7–19.

Plaintiffs also argue that the court should strike Figures 11, 12, and 13 because Travers did not conduct field tests at the industrial, landfill, or RCRA sites plotted on the regional maps in Figures 11, 12, and 13. See id. at 11–16. Plaintiffs contend that the regional maps and potential other sources of PFAS contamination contained in sections 3.1.6, 3.1.7, and 6.1 are speculative because Travers does not know for certain that any of the identified locations contributed to PFAS contamination in the Cape Fear River Basin. See id. Similarly, plaintiffs argue that Travers’s opinion in section 3.1.7 concerning potential household contaminants “is of no aid to the jury in this case.” Id. at 21. Moreover, plaintiffs seek to strike Travers’s opinions in section 6.1, which amounts to a summary of the information contained in section 3.1.6 and 3.1.7. See id. at 21. Plaintiffs cite Travers’s deposition answers as bolstering their argument that Travers did not properly form the opinions in his report. See, e.g., id. at 8–9, 11–18.

Defendants respond that Travers’s “opinions concerning other potential PFAS sources directly impeach [p]laintiffs’ experts’ methodologies—namely, their failure to consider and rule in or out other potential PFAS sources within the region and whether they cause or contributed to [p]laintiffs’ alleged injuries.” [D.E. 565] 4. Defendants argue that Travers’s opinions in sections 3.1.6, 3.1.7, and 6.1 challenge plaintiffs’ causation theory. See id. at 4–7. Moreover, defendants argue Travers’s opinions satisfy Rule 702. See id. at 7–9.

Under North Carolina law, plaintiffs must prove causation by a preponderance of the evidence to prevail on their tort claims at trial. See, e.g., Wall v. Stout, 310 N.C. 184, 201, 311 S.E.2d 571, 581 (1984); Clarke v. Mikhail, 243 N.C. App. 677, 686, 779 S.E.2d 150, 158 (2015). Moreover, “North Carolina law requires a plaintiff in a tort action [to] prove that exposure to a defendant’s product was a substantial factor causing plaintiff’s injury.” Finch v. Covil Corp., 972 F.3d 507, 512 (4th Cir. 2020). Under the substantial factor test, a defendant’s act or omission “is the proximate cause of harm to another if . . . [the] conduct is a substantial factor in bringing about the harm, and . . . there is no rule of law relieving the [defendant] from liability because of the manner in which his negligence has resulted in the harm.” Seraj v. Duberman, 248 N.C. App. 589, 598, 789 S.E.2d 551, 557 (2016) (quoting Restatement (Second) of Torts § 431 (2016)).

The court has reviewed the record, the parties’ arguments, and Travers’s 2024 report. Travers’s opinions concern causation. The opinion rebuts plaintiffs’ theory that defendants were the primary contributors to PFAS contamination in the Cape Fear River Basin. Travers’s opinion regarding potential alternative sources of PFAS contamination will aid the trier of fact in determining whether defendants’ actions were the substantial cause of plaintiffs’ alleged injuries. Moreover, Travers’s opinions in sections 3.1.6, 3.1.7, and 6.1 represent competent comparative evidence that will help the jury determine whether plaintiffs’ have proven by a preponderance that defendants’ acts (and not the intervening acts of another) substantially caused plaintiff’s alleged injuries. See, e.g., Lowe v. Taylor, 196 N.C. 275, 275, 145 S.E. 611, 612 (1928); Connor v. Covil Corp., 996 F.3d 143, 155 (4th Cir. 2021); 360 Mortg. Grp., LLC v. Home Point Fin. Corp., 740 F. App’x. 263, 267–69 (4th Cir. 2018) (unpublished); Clinton v. Brown & Williamson Holdings, Inc., No. 5-CV-9907, 2013 WL 3111122, at *8 n.10 (S.D.N.Y. June 20, 2013) (unpublished) (permitting a defendant “over [p]laintiff’s objection . . . to introduce evidence of other possible

causes of [plaintiff's] injuries . . . in support of [defendant's] argument . . . that other causes were so substantially causative that [defendant's conduct] was not a substantial factor"). The court finds Travers's opinions in sections 3.1.6, 3.1.7, and 6.1 relevant for the purpose offered and rejects plaintiffs' contrary arguments.

As for whether Travers's opinions in sections 3.1.6, 3.1.7, and 6.1 reflect a reliable application of the principles and methods to the facts of the case, Travers relied on peer-reviewed studies, publications from the EPA, the NAICS codes registry, and his knowledge and expertise to identify the potential other sources of PFAS contamination in the Cape Fear River Basin. Moreover, Travers's 2024 report does not purport to establish with specificity the level at which the industrial, landfill, and RCRA sites contributed to the PFAS contamination in the Cape Fear River Basin. Instead, Travers's 2024 report provides many potential sources of PFAS contamination in the Cape Fear River Basin, based on reliable methods and peer-reviewed research. Although Travers did not collect soil or water samples near the sites identified in sections 3.1.6, 3.1.7, and 6.1, defendants do not offer Travers 2024 report for a purpose that would require such testing. Of course, if defendants offered Travers 2024 report to establish specific PFAS contamination values at industrial, landfill, and RCRA sites near the Cape Fear River, then Rule 702 would require Travers to show that he derived those specific PFAS contamination values from reliable testing. Defendants, however, offer Travers 2024 report, in part, to show that many potential sources of PFAS contamination exist along the Cape Fear River Basin. Travers's opinions in sections 3.1.6, 3.1.7, and 6.1 reflect a reliable application of the principles and methods to the facts of the case for the purpose defendants offer them. See Fed. R. Evid. 702.

As for plaintiffs' arguments that Federal Rule of Evidence 403 requires the court to exclude Travers's opinions in sections 3.1.6, 3.1.7, and 6.1 of his 2024 report, the court disagrees. Rule

403 permits a court to “exclude relevant evidence if its probative value is substantially outweighed by a danger of one or more of the following: unfair prejudice, confusing the issues, misleading the jury, undue delay, wasting time, or needlessly presenting cumulative evidence.” Fed. R. Evid. 403; see Sprint/United Mgmt. Co. v. Mendelsohn, 552 U.S. 379, 384 (2008); PBM Prods., LLC v. Mead Johnson & Co., 639 F.3d 111, 124–25 (4th Cir. 2011); United States v. Udeozor, 515 F.3d 260, 264–65 (4th Cir. 2008); Garraghty v. Jordan, 830 F.2d 1295, 1298 (4th Cir. 1987); United States v. Penello, 668 F.2d 789, 790 (4th Cir. 1982) (per curiam). The court has conducted the balancing under Rule 403. The court finds Travers’s opinions in sections 3.1.6, 3.1.7, and 6.1 of his 2024 report to be highly probative, not misleading, and not a waste of time. Thus, the court declines to exclude them under Rule 403. Accordingly, the court rejects plaintiffs’ Rule 403 argument.

The court has reviewed plaintiffs’ motion to exclude, the parties’ arguments, and Travers’s 2024 report. The court finds that Travers’s opinions in sections 3.1.6, 3.1.7, and 6.1 satisfy Rule 702’s requirements for admissibility and should not be excluded under Rule 403. Thus, the court denies plaintiffs’ motion to exclude. See [D.E. 520].

B.

On August 30, 2024, defendants moved to exclude the opinions of plaintiffs’ expert Gamble [D.E. 526] and filed a memorandum [D.E. 527] and exhibits in support [D.E. 532]. On September 27, 2024, plaintiffs responded in opposition [D.E. 581] and filed a declaration in support [D.E. 582]. On October 18, 2024, defendants replied [D.E. 606].

Gamble is “a Senior Managing Director of Ankura Consulting Group, LLC” and has over “[40] years of experience in real estate.” [D.E. 582-2] ¶¶ 1–2. Gamble received a Bachelor of Arts in Mathematics from the College of Wooster and a Master’s of Business Administration from

the Wharton School at the University of Pennsylvania. See id. at ¶ 2. Since 1981, Gamble has performed real estate and finance work. See id. The court has permitted Gamble to offer expert opinions in this case. See [D.E. 420] 24–28. Gamble has submitted two expert reports in the case: (1) an initial report submitted during the class certification stage (“Gamble’s 2021 report”), see [D.E. 336-28], and (2) a supplemental merits-stage report submitted in May 2024 (“Gamble’s 2024 report”). See [D.E. 582-2]. Defendants seek to exclude Gamble’s 2024 report. See [D.E. 526].

Plaintiffs designated Gamble “to testify on the aggregate cost of remediating damages to residential properties caused by” defendants’ alleged PFAS contamination. [D.E. 581] 6. To do so, Gamble relied upon the allegedly necessary means of remediation that plaintiffs’ other experts identified (i.e., installing and maintaining reverse osmosis (“R/O”) filtration systems and replacing hot water heaters in plaintiffs’ homes). See id.; [D.E. 582-2] ¶¶ 6–8, 11–12, 33; cf. [D.E. 527] 9–10. After reviewing the remediation that plaintiffs’ other expert recommended, Gamble “developed a computational methodology to assist the trier of fact in defining the number of affected residential properties encompassed by the [c]lasses and estimating the cost to remediate those properties class-wide.” [D.E. 581] 6–7. Gamble’s 2024 report uses the same mathematical model as Gamble’s 2021 report, which the court found admissible over defendants’ objections. See [D.E. 420] 24–28.

Defendants seek to exclude the Gamble’s 2024 report for two main reasons: (1) Gamble’s cost estimates “are based on an inaccurate description of class membership resulting in a gross overcalculation of damages,” and (2) Gamble “is not qualified to offer testimony concerning water heater replacement, flushing, or the use of R/O versus GAC for water treatment.” [D.E. 527] 5, 9. As for Gamble’s allegedly inaccurate class description, defendants argue that Gamble’s estimates fail to account for variation among the class members’ individual damages. For example,

defendants note that some class members have moved away from the Cape Fear River Basin and therefore would not require an R/O system, water bottles, or other remediation. See id. at 5–9. As for Gamble’s allegedly impermissible testimony concerning water heater replacement, flushing, or the use of R/O versus GAC for water treatment, defendants argue that Gamble’s opinions rest “entirely” on the opinions of other retained experts, and the court should therefore exclude the opinions as derivative. Id. at 9–10.

The court has reviewed the record, the parties’ arguments, and Gamble’s 2024 report. Defendants do not challenge Gamble’s qualifications, and the court has admitted Gamble as an expert witness. Moreover, defendants do not challenge Gamble’s mathematical model, and the court has found that Gamble’s mathematical model satisfies Rule 702. See [D.E. 420] 24–28.

Defendants argue that Gamble’s 2024 report fails to reflect a reliable application of the principles and methods to the facts of the case. See Fed. R. Evid. 702(d). Gamble’s 2024 report represents a global estimate of class damages, not an estimate of individual class members’ damages. To calculate his estimates, Gamble relied on the work of other experts, his own expertise, and a mathematical formula the court has found reliable. As the court said when defendants first moved to exclude Gamble’s testimony, “[t]o the extent defendants believe that Gamble’s damages calculations do not consider sufficient individual factors, these arguments go to the weight of Gamble’s testimony.” [D.E. 420] 26.

To the extent defendants argue the court should exclude Gamble’s testimony because he relies on other experts, the court rejected this same argument when defendants raised it during class certification. As the court stated, “Gamble is an expert in real estate and finance, and he has extensive experience analyzing large, interconnected networks of properties, their respective value, and other related market characteristics.” Id. at 27. “Gamble is not an expert on engineering

or contamination.” Id. Thus, in preparing his 2024 report, “Gamble properly relied on the opinions of several experts to establish a ‘recommended remediation protocol,’ which he then applied to his model to estimate total replacement costs.” Id. In other words, “Gamble did not simply parrot other experts in his conclusions.” Id. Instead, Gamble properly applied his own expertise to calculate the estimates contained in his 2024 report.

The court has reviewed defendants’ motion to exclude, the parties’ arguments, and Gamble’s 2024 report. The court finds that Gamble’s 2024 report satisfies Rule 702. Accordingly, the court denies defendants’ motion to exclude. See [D.E. 526].

C.

On August 30, 2024, defendants moved to exclude the expert opinions of plaintiffs’ expert Duncklee [D.E. 528] and filed a memorandum in support [D.E. 529]. On September 27, 2024, plaintiffs responded in opposition [D.E. 569] and filed a declaration in support [D.E. 570]. On October 18, 2024, defendants replied [D.E. 607].

Duncklee “is a seasoned geologist” with nearly “40 years of experience.” [D.E. 569] 6. Duncklee received a Bachelor of Science in Geology from North Carolina State University and undertook graduate studies in geophysics. See [D.E. 570-1] 74. Duncklee also received an Associate of Applied Science from Wake Technical College. See id. Duncklee has testified as an expert in several cases and held numerous relevant industry positions. See id. at 75–76. Duncklee submitted two expert reports in this case: (1) an initial report at the class certification stage (“Duncklee’s 2021 report”) and (2) a supplemental merits-stage report submitted in May 2024 (“Duncklee’s 2024 report”). See [D.E. 529-3]. Defendants ask the court to exclude Duncklee’s expert testimony in its entirety, and defendants’ memorandum of law in support focuses on five

opinions contained in Duncklee's 2024 report. Compare [D.E. 528], with [D.E. 529] 2. The court construes defendants motion as seeking to exclude those five opinions and his testimony.

Plaintiffs designated Duncklee to provide his testimony "on the fate and transport of PFAS [allegedly] emitted from [d]efendants' Fayetteville Works Plant." [D.E. 569] 6. In Duncklee's 2021 report, Duncklee offered the following opinions:

- (1) Chemours' and DuPont's Fayetteville Works plant is the source of Plaintiffs' PFAS contamination spreading across hundreds of square miles of soil, groundwater, and subsurface aquifers;
- (2) Defendants' Fayetteville Works plant is the source of PFAS contamination introduced into residential tap water for the utilities that draw water from the Cape Fear River downstream of Fayetteville Works;
- (3) The PFAS that [d]efendants have spread over hundreds of square miles in the area surrounding Fayetteville Works has, is currently, and will continue to migrate in groundwater to ultimately seep and discharge into the surface water of the Cape Fear River and its tributaries;
- (4) The scope of [d]efendants' contamination, combined with PFAS' inability to biodegrade, means that [d]efendants' PFAS will continue to migrate into the Cape Fear River for many years;
- (5) Defendants' PFAS resides in river sediment, which will serve as a "long-term sink" for PFAS contaminants in Cape Fear River water;
- (6) Defendants' efforts to date to clean up existing PFAS contamination *will not* result in drinking water free of [d]efendants' PFAS, including because Chemours' remediation efforts do not and cannot address PFAS seepage from groundwater to the surface water in, *inter alia*, the air deposition area, the seeps to the south of the plant, and the floodplain below Chemours' barrier wall; and
- (7) Concentrations of [d]efendants' PFAS in groundwater and surface water are estimated to continue to persist indefinitely into the future even as groundwater PFAS concentrations decrease slowly over time.

Id. at 7–8.

In May 2024, after additional discovery, plaintiffs submitted Duncklee's 2024 report. Duncklee's 2024 report "supplements his original opinions with additional data and literature that was not available in 2021 when he filed his original reports." [D.E. 569] 8. Specifically,

Duncklee's 2024 report contains opinions derived from (1) new testing data from Chemours concerning PFAS in residential water supply wells in eight counties and performance monitoring of Chemours's on-site mediation efforts, (2) PFAS contamination testing data from the North Carolina Department of Environmental Quality up to January 2024, (3) analytical testing and modeling performed by consultants who work for Duncklee's employer (SynTerra) and by Ruth Albright (another expert designated by plaintiffs), and (4) regulatory information from the EPA. See id.; [D.E. 529-3] 11. Duncklee analyzed this supplemental data and concluded that the supplemental data supports the conclusions in his 2021 and 2024 reports. See [D.E. 529-3] 11–15, 52.

Defendants seek to exclude the following five opinions of Duncklee:

- (1) The air deposition of PFAS contaminants covers hundreds of square miles surrounding Fayetteville Works and have infiltrated and continue to infiltrate to groundwater, contaminating the aquifer system, and then seep from groundwater into the surface waters of the Cape Fear River system [(“opinion 1”)];
- (2) Chemours' remedial measures will not adequately protect [p]laintiffs' source water drawn from the Cape Fear River downstream of Fayetteville Works for many years [(“opinion 2”)];
- (3) The remedial measures being implemented by Chemours do not include active remediation nor prevent migration of Fayetteville Works PFAS into the Cape Fear River basin from the [various] sources [(“opinion 3”)];
- (4) Geosyntec found 21 unknown PFAS present in General Facility Discharge samples and 250 unknown PFAS present in Chemours Process Wastewater samples, with a total of 257 potential unique unknown PFAS [(“opinion 4”)]; and
- (5) Current analyses being performed on surface water, groundwater, rainwater, and process water from the Fayetteville Works do not fully characterize the true chemical composition, amounts, or concentrations of their PFAS released to the environment [(“opinion 5”)].

[D.E. 529] 2 (cleaned up); see [D.E. 569] 8–9. Defendants argue that the court should exclude the first opinion because it “is based entirely on the opinions of . . . Ruth Albright” and Johnathan Ebenhack. [D.E. 529] 2. Defendants incorporate by reference their arguments from their memorandum of law in support of their motion to exclude Albright’s testimony. See id.; [D.E. 542]. Defendants argue that the court should exclude opinions two through five as “unhelpful to the jury because they discuss possible future damages rather than present damages.” [D.E. 529] 3. Moreover, defendants argue that the court should exclude Duncklee’s opinions concerning Chemours’s testing of six wells because the tests are “unreliable and unhelpful to the jury due to the extremely small sample size, and lack [a] nexus to any class representatives.” Id. Defendants do not challenge Duncklee’s qualifications to offer the expert opinions contained in Duncklee’s 2024 report. See [D.E. 569] 11; [D.E. 607] 1.

In the court’s order of October 4, 2023, the court granted defendants’ motion to exclude Duncklee’s opinion in his 2021 report that PFAS will contaminate the Cape Fear River “for several decades to come.” [D.E. 420] 24. Specifically, the court held that since plaintiffs were not “seeking to certify a class of future property owners,” Duncklee’s opinion that PFAS will continue to contaminate the Cape Fear River for several decades did not “affect the court’s evaluation of plaintiffs’ motion for class certification.” Id. In granting defendant’s motion to exclude Duncklee’s opinion that PFAS will continue to contaminate the Cape Fear River, the court stated that its ruling was “for the purpose of class certification.” Id. The court did not make any findings under Rule 702 more broadly or assess the reliability of Duncklee’s report and opinions.

As for defendants’ argument that Dunklee’s first opinion rests entirely on Albright’s testimony, an expert may properly rely on the expert testimony of another in forming his opinion. See, e.g., [D.E. 420] 26–28. To be sure, Duncklee worked with Albright in forming his opinions.

Duncklee, however, did not rely “entirely” upon Albright’s testimony in forming his opinions. See [D.E. 336-21] ¶¶ 1, 3–4. Duncklee also relied on numerous other sources, such as tests of Geosyntec, Chemours’s environmental engineer. See id. at ¶¶ 79, 85, 96, 100, 104, 115, 117–20, 122–23, 129. Duncklee also relied on numerous studies and scientific publications. See id. at ¶¶ 70–72. Duncklee did not merely parrot Albright’s opinions in his expert report but properly relied, in part, on Albright’s testimony in forming his own opinions. Thus, defendants’ arguments about Albright fail. Likewise, the court rejects defendants’ similar argument about Duncklee’s alleged reliance on Johnathan Ebenhack’s data.

As for defendants’ arguments that opinions two through five contain Duncklee’s opinions about plaintiffs’ future damages, the court disagrees. Plaintiffs “seek replacement or remediation for property owners whose water systems have been contaminated.” [D.E. 420] 24. Duncklee’s report does not opine about future damages. It merely states that PFAS will continue to contaminate the Cape Fear River in the future. This statement, without more, does not reflect that plaintiffs seek speculative future damages or entitle them to such damages. To the contrary, Duncklee’s report opines about the extent and degree of PFAS contamination in the Cape Fear River, which will assist the trier of fact in determining the costs of remediating PFAS contamination on plaintiffs’ property. Put differently, Duncklee’s testimony goes to the extent of plaintiffs’ alleged injuries and how to remediate PFAS pollution in the Cape Fear River Basin. Thus, the court rejects defendants’ arguments that Duncklee’s testimony is not helpful to the trier of fact.

As for defendants’ arguments concerning Duncklee’s presentation and analysis of sampling data from six residential properties in the class area, Duncklee cites tests that Duncklee and SynTerra performed on six residential properties in the class area. See [D.E. 529-3] ¶ 17.

After citing these tests, Duncklee opines that “Fayetteville Works PFAS were found . . . at all of the properties” tested. Id.

Defendants argue that the limited testing data is not helpful to the jury because the test sites have “no nexus” to the class and because the sample size is “statistically inadequate.” [D.E. 529] 7–9. Duncklee, however, does not include the test results from the six residential properties as evidence of class-wide contamination or make claims about the contamination on a class-wide basis. Instead, Duncklee conducted the tests to determine whether area samples comported with his conclusions concerning the scope and extent of defendants’ alleged PFAS contamination of the Cape Fear River. See, e.g., id. at ¶¶ 50–68. The court finds Duncklee’s opinions both relevant for their proposed purpose and helpful to the trier of fact in assessing the extent of plaintiffs’ alleged damages. See Fed. R. Evid. 702.

The court has reviewed defendants’ motion to exclude, the parties’ arguments, and Duncklee’s opinions. The court finds that Duncklee’s opinions satisfy Rule 702. Accordingly, the court denies defendants’ motion to exclude. See [D.E. 528]. The court, however, agrees with defendants that Duncklee’s data would not form a sufficient basis for testimony regarding speculative future damages or class-wide PFAS contamination. Thus, plaintiffs may not use Duncklee’s opinions for those purposes.

D.

On August 30, 2024, defendants moved to exclude the opinions of plaintiffs’ expert DeWitt [D.E. 533, 560] and filed a memorandum in support [D.E. 534].⁵ On September 27, 2024, plaintiffs

⁵ Defendants inadvertently filed a duplicate document at docket entry 533 and later corrected the filing at docket entry 560. Thus, the court refers to docket entry 560 as the motion seeking to exclude the opinions of DeWitt.

responded in opposition [D.E. 583] and filed a declaration in support [D.E. 584]. On October 18, 2024, defendants replied [D.E. 608].

DeWitt is an “expert on the toxicity of PFAS.” [D.E. 583] 5; see [D.E. 534-3] 9–12, 63–102. DeWitt received a Bachelor of Science in Biology and Environmental Science from Michigan State University and a Ph.D. in Environmental Science and Neural Science from Indiana University-Bloomington. See [D.E. 534-3] 9. DeWitt has appeared in other cases as an expert on PFAS toxicity. See [D.E. 583] 5. DeWitt has submitted two expert reports in this case: (1) an initial report at the class certification stage (“DeWitt’s 2021 report”), and (2) a supplemental merits-stage report submitted in May 2024 (“DeWitt’s 2024 report”). See [D.E. 534-3]. Defendants seek to exclude the opinions contained in DeWitt’s 2024 report. See [D.E. 534].

In the court’s order of October 4, 2023, the court considered defendants’ motion to exclude DeWitt’s expert testimony for the purpose of class certification. See [D.E. 420] 28–31. The court determined that it need not rely on DeWitt’s opinions for the purpose of class certification and denied defendants’ motion. See id. at 30–31. The court, however, noted its doubts about DeWitt’s conclusions and defendants’ arguments in favor of their motion to exclude:

In declining to consider these opinions for purposes of class certification, the court notes the parties’ extreme positions. DeWitt . . . offer[s] the unsupported opinion that there is no safe level of PFAS exposure in drinking water for human beings. Defendants initially respond appropriately that risks to humans from PFAS exposure in drinking water for human beings vary depending on the “amount and type of the PFAS.” Defendants, however, then take the extreme position that no evidence suggests that PFAS exposure in drinking water for human beings is “injurious to human health.”

Id. at 30 (cleaned up). Put differently, the parties’ polarized arguments appeared to ignore scientific literature and peer-reviewed risk assessment methodologies. Thus, the court observed “that whether PFAS exposure in drinking water for human beings is unsafe (i.e., dangerous) or toxic (i.e., poisonous) is more nuanced than the parties suggest.” Id. Although expert testimony

as to exposure levels was not necessary at the class certification stage, the court acknowledged that the parties would eventually need to have a more definitive view of the “lines” between safe and unsafe exposure values. See id. at 31.

In response to the court’s order, plaintiffs “changed [DeWitt’s] assignment at the merits stage.” [D.E. 583] 8. Specifically, plaintiffs “no longer asked [DeWitt] to identify the level of PFAS in . . . [p]laintiffs’ drinking water that could be considered protective of human health.” Id. Instead, plaintiffs asked DeWitt to “assess the toxicological risks (if any) of exposing humans to per- and polyfluoroalkyl substances (PFAS).” Id. In turn, Dewitt’s 2024 report addresses this question. See id. at 8–9.

To prepare her 2024 report, DeWitt reviewed all available peer-reviewed literature regarding the toxicity of PFAS and concluded that “exposure to PFAS is associated with increased risk of myriad health effects, including, but not limited to, risk of cancer, developmental toxicity, immune system toxicity, cardiovascular disease, liver toxicity, and endocrine disruption in populations of exposed humans.” Id. at 8 (emphasis added). Based on her review of the scientific literature, DeWitt explained that (1) the EPA has set Maximum Contaminant Level Goals for several PFAS chemicals produced at the Fayetteville Works Facility at or near zero, (2) for some PFAS chemicals produced at the Fayetteville Works Facility, “there is evidence of their toxicity, but not sufficient data to identify the precise dose at which they may be expected to produce adverse health outcomes,” (3) there is evidence that PFAS are particular toxic in combination, and (4) current drinking water guidelines for PFAS may not be sufficient to protect class members from the mix of PFAS in their drinking water.” [D.E. 583] 8–9 (citations omitted); see [D.E. 534–3] 10, 14, 39, 37–39, 40–41. In addition, based on her review of the relevant scientific literature,

DeWitt reached several conclusions concerning the exposure risks of specific PFAS chemicals. See [D.E. 534-3] 14–16.

Defendants move to exclude DeWitt’s 2024 report and expert testimony. See [D.E. 560]. In support, defendants argue that DeWitt’s 2024 report “is inadmissible for lack of a reliable methodology.” [D.E. 534] 2. Specifically, defendants argue that DeWitt “conducted nothing more than a preliminary hazard identification analysis, which is only the first step in a risk assessment analysis, and conveys no useful information in and of itself.” Id. Defendants also argue that DeWitt’s expert testimony “will not help the jury decide a single issue in this case” because DeWitt essentially continues to assert that any level of PFAS exposure in drinking water poses a threat to human health. Id. at 2–3. This contention, according to defendants, “is too abstract and vague to be useful for any purpose.” Id. at 3. Moreover, defendants argue the court should exclude DeWitt’s testimony because DeWitt “provides no reliable facts and data to support the contention that any non-zero level of PFAS in drinking water is unsafe and poses a hazard to human and environmental health.” Id.

Plaintiffs respond that defendants’ “mischaracterize [DeWitt’s] opinions.” [D.E. 583] 5. Specifically, plaintiffs argue that DeWitt “never testified that there is one definitive method for assessing the toxicity of PFAS” or that DeWitt opines that there is no safe level of PFAS exposure in drinking water for human beings. Id. at 6. Moreover, plaintiffs argue that DeWitt employed reliable methods to assess the toxicological risks of PFAS and that, contrary to defendants’ arguments, DeWitt conducted both a hazard analysis and a risk assessment of plaintiffs’ alleged PFAS exposure. See id. at 10–16. Furthermore, plaintiffs argue that “it is perfectly acceptable for [p]laintiffs to use multiple experts to prove their case” and that DeWitt’s testimony will assist the

trier of fact determine whether defendants “unreasonably interfered with [p]laintiffs’ use and enjoyment of their property.” Id. at 16, 19.

“It is well recognized that epidemiology usually provides the best evidence of general causation in toxic tort actions.” Rhyne v. U.S. Steel Corp., 474 F. Supp. 3d 733, 743 (W.D.N.C. 2020); see Norris v. Baxter Healthcare Corp., 397 F.3d 878, 882 (10th Cir. 2005); Rider v. Sandoz Pharm. Corp., 295 F.3d 1194, 1198 (11th Cir. 2002); In re Lipitor (Atorvastatin Calcium) Mktg., Sales Pracs. & Prods. Liab. Litig., 174 F. Supp. 3d 911, 914 (D.S.C. 2016). In toxic tort cases, causation generally will depend on a qualified expert witness establishing “both general causation and specific causation.” Rhyne, 474 F. Supp. 3d at 743. “[I]n order to carry the burden of proving a plaintiff’s injury was caused by exposure to a specified substance, the plaintiff must demonstrate the levels of exposure that are hazardous to human beings generally as well as the plaintiff’s actual level of exposure.” Id. (quotation omitted); see Engilis, 2025 WL 2315898, at *2; Westberry, 178 F.3d at 263.

When experts testify concerning toxicity, “an expert witness will not necessarily need to define the precise lower bound of exposure risk” for the testimony to be reliable. In re Lipitor, 892 F.3d at 640. “The appropriate level of analysis will depend on the circumstances of the case and the capacity of current scientific methods.” Id.; see Westberry, 178 F.3d at 263–65 (affirming the admission of testimony about the dangers of “substantial exposure” to toxic materials without requiring the expert to identify the specific quantities at which a material becomes toxic); Benedi v. McNeil-P.P.C., Inc., 66 F.3d 1378, 1383–85 (4th Cir. 1995) (holding that testimony by treating physician concerning cause of plaintiff’s liver failure—acetaminophen combined with alcohol—was admissible despite the lack of epidemiological data). In order to opine on causation of injury, however, an expert generally must identify “the levels of exposure that are hazardous to human

beings generally as well as the plaintiff's actual level of exposure." Westberry, 178 F.3d at 263 (quotation omitted); see McGill v. BP Expl. & Prod., Inc., 830 F. App'x 430, 433 (5th Cir. 2020) (per curiam) (unpublished) (upholding the exclusion of an expert's opinion that was "not based on sufficient facts" and relied on studies that failed to "provide conclusive findings on what exposure level of Corexit is hazardous to humans"); McClain v. Metabolife Int'l, Inc., 401 F.3d 1233, 1241–42 (11th Cir. 2005) (noting that an expert who could not provide an opinion on "the dose or level of exposure at which [the chemical] causes harm" did "not follow the basic methodology that scientists use to determine causation—the dose-response relationship"); Zellers, 533 F. App'x at 198 (affirming exclusion of a doctor who opined that a toxic substance caused a plaintiff's injury despite not knowing the "intensity and duration" of plaintiff's exposure); Zellers v. NexTech Ne., LLC, 895 F. Supp. 2d 734, 739–51 (E.D. Va. 2012) (excluding testimony of causation expert whose opinions were not reliable and, on some points, not relevant to the issue of causation), aff'd sub nom., Zellers v. Nextech Ne., LLC, 533 F. App'x 192 (2013) (per curiam) (unpublished). When multiple avenues of potential causation exist, an expert must account for alternative causes. See Engilis, 2025 WL 2315898, at *7–10 (affirming exclusion of oncologist's opinion on specific causation because the oncologist failed to follow the differential etiology methodology his report purported to employ and "failed to reliably rule out obesity as a potential cause of [plaintiff's] cancer"); Bryte ex rel. Bryte v. Am. Household, Inc., 429 F.3d 469, 477 (4th Cir. 2005) (affirming exclusion of testimony about probable sources of a fire where the expert failed to consider alternative sources); Pipitone v. Biomatrix, Inc., 288 F.3d 239, 245 (5th Cir. 2002) (affirming the exclusion of testimony about probable source of infection where the expert's opinion was "equivocal").

In Zellars, the court evaluated four expert witnesses who sought to testify about plaintiffs' exposure to allegedly toxic refrigerants. See Zellars, 895 F. Supp. 2d at 739–51. The first expert, a medical doctor (Dr. Gallagher) who treated a plaintiff's underlying conditions, was not qualified to opine whether the refrigerant caused plaintiff's injury. See id. at 743. In excluding the testimony, the court noted that:

The scope of Dr. Gallagher's expertise does not encompass toxicology, chemical exposure, or, specifically, exposure to refrigerants. Her background includes training in emergency room medicine in medical school and during her residency, which included some training in diagnosing and treating toxic exposures and drug overdoses. However, Dr. Gallagher is not a toxicologist and has had no training in methodologies used for diagnosing refrigerant toxicity.

Id. (citation omitted).

Plaintiffs fail to explain how DeWitt's general review of the scientific literature will aid the trier of fact in determining whether defendants unreasonably interfered with the plaintiffs' use and enjoyment of their property. See In re Roundup Prods. Liab. Litig., 2023 WL 7928751, at *3. "It is not enough to simply read the conflicting studies in the literature and describe their findings." Id. "And it's certainly not enough to read and report on the summaries of the studies performed by other bodies or experts." Id. "For an expert to express an opinion that [no level of PFAS in drinking water is safe], that expert must have engaged with the relevant literature enough to assess whether a study is credible, to explain why they relied on one study more than another, and to articulate how they reached their conclusion in the face of conflicting evidence." Id. Where an expert fails to do so, a court excludes the opinion. See id. (excluding general causation opinion that Roundup causes non-Hodgkins lymphoma).

Plaintiffs' arguments in opposition to defendants' motion to exclude are confusing; at best and conflicting at worst. For example, plaintiffs explicitly reject defendants' argument that DeWitt opines that there is no safe exposure level to PFAS in drinking water. See [D.E. 583] 19–20. At

the same time, plaintiffs concede that DeWitt does not offer a safe exposure level for PFAS in drinking water. Likewise, DeWitt has not offered an opinion concerning the level of PFAS exposure at which a person may experience adverse health consequences. In other words, DeWitt can only say that peer-reviewed research has shown that PFAS exposure (at some undefined level) has been associated with certain adverse health risks. DeWitt then leaps to the opinion that any non-zero level of PFAS in drinking water is unsafe and hazardous to human and environmental health.

DeWitt's opinion does not help the jury answer whether the defendants unreasonably interfered with the plaintiffs' use and enjoyment of their property. Instead, plaintiffs seek to use DeWitt's 2024 report as a backdoor to discuss causation without offering any tool for the jury to assess whether plaintiffs' exposure to PFAS chemicals at any level in drinking water poses a risk to human health. Without a safe exposure level, DeWitt's testimony is not helpful to the trier of fact. Notably, DeWitt did not take site samples or study medical records and therefore cannot testify concerning specific causation. Moreover, DeWitt cannot testify concerning general causation without some method for assessing exposure risks. See, e.g., McGill, 830 F. App'x at 433; McClain, 401 F.3d at 1241–42; Zellers, 533 F. App'x at 198; Westberry, 178 F.3d at 263; Zellars, 895 F. Supp. 2d at 739–51. In short, the most DeWitt can tell a jury is that she reviewed peer-reviewed literature, and that the literature suggests that PFAS exposure (at some undefined level) is associated with certain adverse health effects. DeWitt's testimony is not helpful to the jury under Rule 702, and the court grants defendants' motion to exclude DeWitt's 2024 Report and testimony. See [D.E. 533, 560].

E.

On August 30, 2024, defendants moved to exclude the expert opinions of plaintiffs' expert Griffith [D.E. 535] and filed a memorandum [D.E. 536] and exhibit in support [D.E. 537]. On September 27, 2024, plaintiffs responded in opposition [D.E. 571] and filed a declaration in support [D.E. 572]. On October 18, 2024, defendants replied [D.E. 609].

Griffith is one of plaintiffs' experts "designated to testify about PFAS contamination of water heaters and methods of remediating such contamination." [D.E. 571] 7. Griffith received a Bachelor of Science in Mechanical Engineering from Tennessee Technological University in 1983 and has worked for over 30 years as a mechanical engineer. See [D.E. 572-1] ¶¶ 3–21. Griffith founded Griffith Engineering & Consulting and has testified as an expert witness in other cases. See id. at ¶ 4–5. Griffith filed two reports in this case: (1) an initial report submitted during class certification, see id. ("Griffith's 2021 Report") and (2) a rebuttal report during class certification, see [D.E. 572-2] ("Griffith's Rebuttal Report") (together, "Griffith's Reports"). Griffith did not file a merits report or amend his reports since class certification. Defendants seek to exclude Griffith's Reports. See [D.E. 535].

In the court's order of October 4, 2023, the court denied defendants' motion to exclude Griffith's Reports at the class certification phase. See [D.E. 420] 28–31. Since that order, Griffith's Reports have not changed. Plaintiffs retained Griffith to opine on the following: (1) "if PFAS contamination is eliminated as the source of public drinking water supplies . . . for residents in the affected counties who receive water from public utilities, will the PFAS in the sediment layer continue to pose a source of contamination; and [(2)] is there a known or established method . . . [for] eliminating PFAS-contaminated sediment remaining in water heaters." [D.E. 571] 9

(quotations omitted). After taking samples from certain residential hot water heaters, Griffith opined:

25. It is my opinion that contaminants present in the sediment layer will be released and reintroduced into the home's plumbing and tap water due to the turbulence created by the dip tube employed in water heater designs.

26. It is also my opinion that there is no methodology currently available that will completely remove all sediment from a residential water heater. Absent the development of an established and scientifically proven decontamination protocol, the replacement of contaminated water heaters is the only approach that can fully eliminate the risk of Fayetteville Works PFAS contamination from water heaters.

[D.E. 571] 9; [D.E. 572-1] 7.

Defendants ask the court to exclude Griffith's Reports. According to defendants, (1) Griffith's "dataset is wholly inadequate to support [his] broad class-wide conclusions," and (2) Griffith's methodology for the samples he did take is unreliable. See [D.E. 536] 5–15. Specifically, defendants argue that Griffith only took samples from "36 properties," which defendants argue "is too small and random to support class-wide conclusions." Id. at 6. Defendants also argue that Griffith's sampling of the 36 water heaters revealed such varying levels of PFAS contamination that Griffith cannot reasonably rely upon the data to form class-wide conclusions. See id. at 6–13.

Plaintiffs respond that the "law of the case doctrine" and the court's scheduling order of June 2, 2022, which required the parties to file any Rule 702 motions by July 13, 2022, bar defendants' motion to exclude. See [D.E. 571] 13–16. Plaintiffs also oppose defendants' arguments on their merits. See id. at 16–29.

The court has assessed the reliability of Griffith's Reports under Rule 702 and found that they pass muster. See [D.E. 420] 32–33. The court found that "Griffith's opinion . . . that no decontamination protocols would completely remove potentially contaminated sediment from water heaters is permissible given his experience, training, and explanation." Id. at 33. The court

adheres to this finding. The court agrees with defendants, however, that Griffith's dataset is too limited to draw class-wide conclusions regarding plaintiffs' alleged PFAS exposure or to opine broadly about any alleged health risks associated with PFAS exposure.

Plaintiffs respond that they do not offer Griffith's opinions for these purposes. Instead, plaintiffs argue that they offer Griffith's opinions to answer two questions: "[(1)] if PFAS contamination is eliminated at the source of public drinking water supplies . . . , will the PFAS in the sediment layer continue to pose a source of contamination; and [(2)] is there a known or established method that would be capable of eliminating PFAS-contaminated sediment remaining in the water heaters." [D.E. 571] 17. For these purposes, the court finds that Griffith's opinions are permissible given his experience, training, sampling, and explanation. See Fed. R. Evid. 702. Moreover, Griffith's testimony will aid the trier of fact in evaluating any mitigation evidence offered at trial and in assessing the propriety of any proposed remedial measures.

The court has reviewed defendants' motion to exclude, the parties' arguments, and Griffith's expert testimony. The court finds that Griffith's Reports and testimony satisfy Rule 702. Accordingly, the court denies defendants' motion to exclude Griffith's Reports and testimony. See [D.E. 535]. The court, however, agrees with defendants that Griffith's Reports and testimony would not form a sufficient basis for testimony regarding plaintiffs' alleged PFAS exposure or alleged potential future health risks. Thus, plaintiffs may not use Griffith's Reports or testimony for those purposes.

F.

On August 30, 2024, defendants moved to exclude the expert opinions of plaintiffs' expert Michaels [D.E. 538] and filed a memorandum in support [D.E. 539]. On September 27, 2024,

plaintiffs responded in opposition [D.E. 573] and filed a declaration in response [D.E. 574]. On October 18, 2024, defendants replied [D.E. 610].

Michaels is an environmental toxicologist with nearly “four decades of experience in environmental contamination risk and mediation.” [D.E. 573] 6; [D.E. 574-1] ¶¶ 4–11. Michaels holds degrees from City College of New York and the University of Georgia and a Ph.D. in Environmental Toxicology from Stony Brook University. See [D.E. 574-1] 25. Michaels filed two reports in this case: (1) an initial report submitted during class certification, see id. (“Michaels’s 2021 Report”), and (2) a rebuttal report during class certification, see [D.E. 574-2], (“Michaels’s Rebuttal Report”) (together, “Michaels’s Reports”).

Plaintiffs retained Michaels “to offer [his] expert opinion in evaluating the adequacy of proposed residential remedial drinking water treatment for control of GenX and other PFAS and, ultimately, for protection of public health.” [D.E. 573] 7 (alteration in original). To formulate his opinions, Michaels relied on “case-specific” documents, water filtration product literature, and peer-reviewed articles published in scholarly journals. [D.E. 574-1] ¶ 13. Michaels also relied on his “own scientific training and experience.” Id. at ¶ 14. After completing his review, Michaels reached the following opinions:

- 1) **Continued PFAS exposure.** Sampling of tap water and water heaters at numerous homes in the Cape Fear area indicate continued exposure of downstream residential consumers of public water (“DRCs”) to a complex mixture of PFAS, in many cases exceeding applicable individual-PFAS and/or combined-PFAS Action Levels for the 12 substances listed in Consent Order Appendix C.
- 2) **Remedies needed for DRCs.** Consistent with public health practice, downstream residential consumers need remedies for cold-water and hot-water usage in their homes, and for their health.
- 3) **Water heaters.** In all cases, in accordance with the opinion of Roger Griffith, in-home water heaters should be replaced.

4) Remedy selection. Selection of remedial technologies must be guided by recent findings: that granular activated carbon (GAC) filters are less effective for short-chain PFAS such as GenX, and that a treatment-chain approach should be adopted. The only acceptable treatment system in this case is reverse osmosis (RO) on the cold water inlet to (replaced) water heaters, and point-of-use (POU) under-sink reverse osmosis units for reliable, near complete, long-term PFAS removal.

5) Available remedies. Only one POU technology is adequate (at a minimum): under-sink reverse osmosis units installed in kitchens and bathrooms, in at least three locations per affected household as set forth in Paragraph 23 of the Consent Order. In addition, however, RO-filtered water should be supplied to replaced water heaters, as water heaters release water that is too hot relative to RO unit operating ranges.

6) Available POU products. I know of no POU system that offers equal or better protection from the 12 Attachment-C PFAS than the *Kinetico K5 Drinking Water Station*®. The K5 is a multi-stage RO treatment unit supported by prefiltration leading to the RO membrane, and by a GAC post-filtration ‘polisher’. The K5 was tested and approved by NC DEQ, and installed by Chemours at residences near the Fayetteville Works where drinking water was contaminated by PFAS exceeding applicable Action Levels established under Paragraph 23 of the Consent Order. Its selection is supported by the unit’s characteristics, and by peer-reviewed scientific publications. It also is the only product of which I am aware that is capable of restoring for residents the water flow and water quality in affected homes to the condition before discovery of contamination of their drinking water with PFAS.

Id. at ¶ 3.

Defendants seek to exclude Michaels’s Reports and testimony. See [D.E. 538]. Defendants argue that Michaels’s testimony “is inadmissible for the same reasons” they argued that Griffith’s testimony is inadmissible. [D.E 539] 3. In support, defendants incorporate by reference the “law, facts, and argument contained on pages four through fourteen in their [m]emorandum of [l]aw in [s]upport of [m]otion to [e]xclude” Griffith’s testimony. See id. at 7. Defendants also argue that Michaels assumes without specific knowledge that every class member’s residence will require a K5 filter and that his proposed remedies do not satisfy “Daubert’s ‘fit’ requirement.” Id. at 8.

Plaintiffs respond that the court should deny defendants' motion as untimely. See [D.E. 573] 9–14. Plaintiffs also argue that Michaels's methodology and opinions satisfy Rule 702. See id. at 14–24.

The court has reviewed the record, the parties' arguments, and Michaels's expert testimony and 2024 report. Although defendants incorporate their arguments from their motion to exclude Griffith's testimony in their motion to exclude Michaels's testimony, it is unclear which arguments defendants incorporate and which of Michaels's opinions defendants target. The court will not search for arguments that are not clear. In any event, defendants' arguments in their motion to exclude concerning Griffith's testimony failed, and those arguments do not warrant excluding Michaels's Reports and testimony. Michaels's testimony satisfies Rule 702 and will help the trier of fact in evaluating the adequacy of proposed residential remedial drinking water treatment. Moreover, contrary to defendants' argument, Michaels properly relied, in part, on the opinions and findings of Griffith in forming his own opinions. Cf. Gopalratnam v. Hewlett-Packard Co., 877 F.3d 771, 789 (7th Cir. 2017); Tamraz v. Lincoln Elec. Co., 620 F.3d 665, 675 (6th Cir. 2010), overruled on other grounds by A.K. ex rel. Kocher v. Durham Sch. Servs., 969 F.3d 625 (6th Cir. 2020); Nix v. Chemours Co. FC, No. 7:17-CV-189, 2023 WL 6471690, at *12 (E.D.N.C. Oct. 4, 2023) (unpublished); Funderburk v. S.C. Elec. & Gas Co., 395 F. Supp. 3d 695, 716–17 (D.S.C. 2019); In re Wright Med. Tech. Inc., Conserve Hip Implant Prods. Liab. Litig., 127 F. Supp. 3d 1306, 1320 (N.D. Ga. 2015). Thus, the court denies defendants' motion to exclude Michaels's Reports and testimony. See [D.E. 538]. The court will, however, hold plaintiffs to the limitations on Michaels's testimony described in defendants' reply brief. See [D.E. 610] 3–4.

G.

On August 30, 2024, defendants moved to exclude certain expert opinions contained in Albright's 2024 merits report [D.E. 541] and filed a memorandum in support [D.E. 542].⁶ On September 27, 2024, plaintiffs responded in opposition [D.E. 566]. On October 18, 2024, defendants replied [D.E. 611]. In their reply, defendants asked the court to either strike certain opinions from Albright's July 2021 and January 2022 reports or, alternatively, grant leave for defendants to again depose Albright. See id. at 2.

On October 25, 2024, plaintiffs moved for the court to strike or ignore the portion of defendants' reply seeking to strike Albright's opinions from her July 2021 and January 2022 reports (or to again depose Albright) or, in the alternative, to grant plaintiffs leave to file a sur-reply [D.E. 615]. On November 1, 2024, defendants responded in opposition [D.E. 618].

On November 25, 2024, defendants filed a motion for leave to file a supplemental motion to exclude certain expert opinions of Albright contained in her July 2021 and January 2022 reports [D.E. 626]. On December 6, 2024, plaintiffs responded in opposition [D.E. 628].

The court begins with defendants' motion for leave to file a supplemental motion to exclude. Albright has filed three reports in this case: (1) an initial expert report, see [D.E. 567-2], ("Albright's 2021 Report"); (2) a rebuttal expert report, see [D.E. 567-3], ("Albright's 2022 Rebuttal Report"); and (3) a supplemental expert report, see [D.E. 567-1], ("Albright's 2024 Report"). During class certification, defendants had the opportunity to challenge Albright's 2021 Report and Albright's 2022 Rebuttal Report. Cf. [D.E. 340, 373]. Defendants did not.

⁶ Although docket entry 542 is a memorandum of law in support of defendants' motion to exclude certain expert opinions of plaintiffs' expert Albright, defendants inadvertently titled the document "Corrected Motion to Exclude the Opinions of Roger Griffith." [D.E. 542]. The clerk shall correct the docket.

At the merits stage, defendants filed a motion to exclude certain opinions contained in Albright's 2024 report. See [D.E. 541]. In their response in opposition, plaintiffs observe that defendants' motion did not seek to exclude opinions from Albright's 2021 Report or Albright's 2022 Rebuttal Report. See [D.E. 566] 3. In reply, defendants raise new arguments and ask, for the first time, that the court exclude certain opinions contained in Albright's 2021 Report and Albright's 2022 Rebuttal Report. See [D.E. 611] 2. Defendants argue that they did not challenge Albright's opinions during class certification because plaintiffs "did not use [Albright's] opinions from her 2021 or 2022 Reports to support class certification." Id. Thus, according to defendants, "it would have been premature . . . for [d]efendants to move to exclude those opinions at that time." Id. Defendants essentially argue that they were unaware that plaintiffs intended to use Albright's opinions from her 2021 or 2022 reports, despite both of those reports being a part of the record in this case. Defendants ask that the court "(i) strike [Albright's] opinions from her July 2021 and January 2022 Report or, alternatively, (ii) grant [defendants] leave to depose [Albright] on those opinions and file a Rule 702 motion." Id.

On November 25, 2024, defendants filed a motion for leave to file a supplemental motion to exclude certain opinions from Albright's 2021 Report and Albright's 2022 Rebuttal Report. See [D.E. 626]. In that motion, defendants reassert that they "did not acquiesce to the admissibility" of Albright's 2021 Report or Albright's 2022 Rebuttal Report "but had not yet had reasons to challenge them." Id. at 2. Defendants also argue that "[b]y all appearances, [Albright] appeared to have abandoned" the opinions contained in her 2021 and 2022 report. Id. At bottom, defendants argue that the court should grant them leave to file motions to exclude certain opinions contained in Albright's 2021 Report and Albright's 2022 Rebuttal Report.

“Given their heavy caseloads, district courts require the effective case management tools provided by Rule 16.” Nourison Rug Corp. v. Parvizian, 535 F.3d 295, 298 (4th Cir. 2008).⁷ A trial court’s scheduling order “is not a frivolous piece of paper, idly entered, which can be cavalierly disregarded by counsel without peril.” Gestetner Corp. v. Case Equip. Co., 108 F.R.D. 138, 141 (D. Me. 1985). “[T]he terms of the [scheduling] order must be firmly and fairly enforced by the district judge if it is to serve the purpose of pretrial management designed ‘to secure the just, speedy, and inexpensive determination of every action.’” Barwick v. Celotex Corp., 736 F.2d 946, 954–55 (4th Cir. 1984) (quoting Fed. R. Civ. P. 1).

The court may extend the deadline for a party to file a motion if the party shows good cause and makes its request before the original deadline lapses. See Fed. R. Civ. P. 6(b)(1)(A). Alternatively, the court may extend a party’s deadline after the original deadline lapses if the party establishes both good cause and excusable neglect. See id. 6(b)(1)(B). “[I]nadvertence, ignorance of the rules or mistakes construing the rules do not usually constitute ‘excusable neglect.’” Thompson v. E.I. DuPont de Nemours & Co., 76 F.3d 530, 533 (4th Cir. 1996); see Symbionics Inc. v. Ortlieb, 432 F. App’x. 216, 220 (4th Cir. 2011) (per curiam) (unpublished). Excusable neglect is “not easily demonstrated” and applies “only in the extraordinary cases where injustice would otherwise result.” Symbionics Inc., 432 F. App’x. at 220 (quotation omitted); Thompson, 76 F.3d at 534. Relevant factors for determining excusable neglect include the danger of prejudice, length of delay and potential impact, the reason for the delay, whether the delay was within the reasonable control of the movant, and whether the movant acted in good faith. See Pioneer Inv. Servs. Co. v. Brunswick Assocs. Ltd. P’ship., 507 U.S. 380, 395 (1993); Thompson, 76 F.3d at 533.

⁷ This court has over 1,500 pending cases.

In analyzing excusable neglect, the most important factor is the reason for failing to timely file. See, e.g., Thompson, 76 F.3d at 534. Defendants argue that they “did not acquiesce to the admissibility” Albright’s 2021 Report or Albright’s 2022 Rebuttal Report “but had not yet had reasons to challenge them.” [D.E. 626] 2. Defendants also argue that “[b]y all appearances, [Albright] appeared to have abandoned” the opinions contained in her 2021 and 2022 report. Id. Thus, defendants argue that they could not “reasonably anticipate that [Albright] intended to offer opinions” from the class certification stage at the merits stage and that defendants only became aware of Albright’s intentions to do so when plaintiffs’ filed the response in opposition to defendants’ motion to exclude certain opinions from Albright’s 2024 Report. Id. at 3.

The record belies defendants’ arguments. The first paragraph of Albright’s 2024 Report states that Albright’s 2024 Report “is a supplement to the July 2021 expert report and 2022 surrebuttal report . . . and incorporates the supporting data and opinions expressed in those reports.” [D.E. 542-2] 3.

Defendants already had the opportunity to depose Albright and to seek to exclude Albright’s earlier reports. Even assuming that defendants did not understand that plaintiffs intended to rely on Albright’s earlier reports, Albright’s 2024 Report explicitly incorporates those earlier opinions and notified defendants of plaintiffs’ intention to rely on those earlier opinions at the merits stage. Defendants, however, failed to timely move to exclude those opinions. Defendants fail to show either good cause or excusable neglect. Thus, the court denies defendants’ motion for leave to file a supplemental motion and memorandum of law to exclude certain expert opinion testimony from Albright’s 2021 and 2022 reports.

As for plaintiffs’ motion to strike new arguments in defendants’ reply brief, “[g]enerally, a party cannot raise new arguments in a reply brief.” Coley v. Nat’l Collegiate Athletic Ass’n, No.

5:25-CV-98, 2025 WL 1616719, at *8 (E.D.N.C. June 6, 2025) (unpublished). “A contrary rule runs the risk of depriving a nonmovant an opportunity to respond.” De Simone v. VSL Pharms., Inc., 36 F.4th 518, 531 (4th Cir. 2022) (cleaned up); see United States v. Smalls, 720 F.3d 193, 197 (4th Cir. 2013); United States v. Al-Hamdi, 356 F.3d 564, 571 n.8 (4th Cir. 2004); Slominski v. Globe Life Inc., No. 7:23-CV-1081, 2024 WL 556978, at *6 n.3 (E.D.N.C. Feb. 12, 2024) (unpublished); United States v. Ballard, 708 F. Supp. 3d 717, 742 (E.D.N.C. 2023), appeal dismissed, No. 24-6172, 2024 WL 5431480 (4th Cir. Dec. 11, 2024) (unpublished). Defendants’ motion to exclude certain opinions from Albright’s 2024 report did not include any arguments concerning Albright’s 2021 Report, Albright’s 2022 Rebuttal Report, or defendants alleged need to again depose Albright concerning her earlier reports. Instead, defendants included these new arguments in their reply brief.

Granting defendants’ request in their reply to exclude certain opinions from Albright’s 2021 Report or Albright’s 2022 Rebuttal Report would impermissibly deprive plaintiffs of the opportunity to respond to defendants’ motion. See De Simone, 36 F.4th at 531; Smalls, 720 F.3d at 197; Al-Hamdi, 356 F.3d at 571 n.8; Slominski, at 2024 WL 556978, at *6; Ballard, 708 F. Supp. 3d at 742. The proper remedy is to disregard (not strike) the new arguments in defendants’ reply. See, e.g., Coley, 2025 WL 1616719, at *9; Intercollegiate Women’s Lacrosse Coaches Ass’n v. Corrigan Sports Enters., Inc., 694 F. Supp. 3d 625, 650 (M.D.N.C. 2023); Wall Recycling, LLC v. 3TEK Glob., LLC, 588 F. Supp. 3d 647, 658 n.10 (M.D.N.C. 2022). Accordingly, the court denies plaintiffs’ motion to strike or in the alternative for leave to file a surreply. Instead, the court disregards the new arguments in defendants’ reply brief.

As for defendants’ motion to exclude certain opinions in Albright’s 2024 Report, Albright is a chemical and environmental engineer. See [D.E. 566] 8. Plaintiffs proffer Albright as their

expert on defendants’ alleged “PFAS air emissions and wastewater discharges from [d]efendants’ Fayetteville Works facility.” Id. at 6. Specifically, plaintiffs retained Albright to opine on two questions: “(1) the fate and transport of PFAS that [d]efendants [allegedly] discharged from their Fayetteville Works facility . . . , and (2) the industry standard of care applicable to [d]efendants, and [d]efendants [alleged] failure to abide by that standard.” Id. at 8. In her 2021 and 2022 Rebuttal Report, Albright offered the following opinions to which defendants failed to timely object:

- (1) For more than forty-five years, [d]efendants have operated Fayetteville Works and released thousands of tons of Fayetteville Works PFAS.
- (2) Three general release routes of PFAS from Fayetteville Works have occurred and continue to occur to the environment: (a) air emissions from which PFAS have settled on over hundreds of square miles of land surface in the Cape Fear River Watershed; (b) releases of Fayetteville Works PFAS into subsurface soil and groundwater on the plant property that migrate through groundwater and seep into the Cape Fear River; and (c) releases of process wastewater or surface water runoff from the plant directly into the Cape Fear River.
- (3) The release of the Fayetteville Works PFAS has contaminated nearly 100 miles of the Cape Fear River, and thousands of square miles of the Cape Fear River Watershed.
- (4) Chemours has not itself determined the full extent of areal contamination, nor the chemical fate and transport for numerous other Fayetteville Works PFAS migrating from Fayetteville Works.
- (5) The Cape Fear River is a drinking water source for communities downstream of Fayetteville Works, including raw water intakes at the Kings Bluff Intake Canals located 55 miles downstream from the site.
- (6) Defendants should have foreseen their contamination and its effects, as they were aware, decades earlier, that nearly half of the site’s fluorine-containing compounds purchased as raw materials were discharged to the on-site wastewater treatment system.
- (7) It was not until independent researchers—who were not hired by [d]efendants—discovered the presence of concentrations of PFAS in the Cape Fear River, and NCDEQ filed a lawsuit against Chemours, that Chemours involuntarily agreed to install pollution-control equipment to reduce PFAS emissions to the environment.

- (8) Defendants failed to meet the standard of care applicable to sophisticated chemical manufacturers. By releasing thousands of tons of Fayetteville Works PFAS into the environment, [d]efendants failed to comply with industry standards for protection of the environment. Air emissions control technology has existed for decades that could have prevented the release of Fayetteville Works PFAS into the environment.

Id. at 8–9 (cleaned up). In her 2024 report, Albright supplements her previous opinions and includes the following new opinions:

- (1) Groundwater, as distant as 20 miles from Fayetteville Works, and surface water, as distant as 100 miles from Fayetteville Works, within the Cape Fear River watershed, has been contaminated by process-related PFAS air emissions originating from the Fayetteville Works chemical manufacturing operation;
- (2) Defendants’ documents demonstrate that they have long understood and considered off-site impact of their PFAS emissions but did not abate the releases of their impacts;
- (3) Dupont and Chemours continued to discharge PFAS into the environment for the period from 1980 to 2019 even though pollution control equipment that could have reduced or prevented such contamination was commercially available the entire time;
- (4) Pollution control equipment that could have effectively destroyed the Fayetteville Works PFAS compounds would have also provided a greater degree of control of the process-related air emissions preventing or reducing the quality of Fayetteville Works PFAS deposited onto land surfaces surrounding the facility; and
- (5) Defendants failed to identify and quantify the numerous PFAS compounds originating in their manufacturing processes and notify both regulators and the public of the presence of these compounds in the Fayetteville Works process discharges, and had [d]efendants followed industry standards, [p]laintiffs would not have suffered the harm and damages they respectively claim in the lawsuit for which this report is submitted.

[D.E. 542] 1–2; see [D.E. 542-2] ¶¶ 16–22 (“the challenged opinions”).

Defendants seek to exclude the challenged opinions. See [D.E. 542] 6–17. First, defendants argue that Albright’s opinion concerning the amount and extent of ground and surface water contamination is not relevant to the case and, therefore, not helpful to the trier of fact. See

id. at 6–9. Defendants also argue that Albright’s emission and discharges estimates “will not help the trier of fact because she has answered the wrong question by estimating the release of the wrong compounds” and because her model is not based “in physical reality.” Id. at 7–8. Specifically, defendants argue that Albright’s report considered estimated emissions for “all perfluorinated compounds—not just PFAS, the chemical at issue in this litigation.” Id. at 7; cf. [D.E. 542-2] 37. Moreover, defendants argue that Albright lacks the qualifications to offer the challenged opinions and that Albright lacks “the requisite facts and data” necessary to offer the challenged opinions. [D.E. 542] 9; see id. at 9–11. Furthermore, defendants argue that Albright’s opinion regarding defendants’ alleged failure to identify and quantify numerous PFAS compounds is inadmissible. See id. at 11–17.

Plaintiffs respond that Albright’s “opinions go particularly to causation by explaining how the PFAS that contaminate [p]laintiff’s homes are directly traceable to [d]efendants’ Fayetteville Works plant.” [D.E. 566] 12–13. Plaintiffs also argue that defendants have knowingly misrepresented Albright’s report to the court. See id. at 17. Specifically, plaintiffs dispute defendants’ claim that Albright’s report includes non-PFAS compounds. See id. at 14–15. According to plaintiffs, defendants “know that [Albright’s] summary table includes only PFAS compounds, and know that it is false to claim otherwise.” Id. at 15. Plaintiffs contend that defendants base their argument on Albright’s deposition testimony where she could not recall whether the EPA classified carbonyl fluoride as a PFAS. See id. According to plaintiffs, after Albright expressed her lack of recall during the deposition, Albright testified that she believed the EPA did not consider carbonyl fluoride a PFAS compound. See id. at 16.

Plaintiffs contend that after her deposition, Albright confirmed that the EPA does include carbonyl fluoride among PFAS compounds. See id. Three days after Albright’s deposition,

plaintiffs' counsel emailed defendants' counsel to inform defendants that the EPA does include carbonyl fluoride among PFAS compounds and to correct Albright's deposition answer in which she stated that she did not believe the EPA consider carbonyl fluoride among PFAS compounds. See id. at 16–17. Plaintiffs argue that defendants impermissibly refused to accept Albright's errata. See id. at 17. According to plaintiffs, “[d]efendants knew that their argument that [Albright’s] summary table included more than only PFAS was untrue. Yet they proceeded in making it. The court should not condone such overzealous advocacy, particularly when there is no dispute that [Albright’s] table correctly and accurately summarizes only PFAS emissions.” Id. (emphasis omitted).

In reply, defendants maintain their argument that Albright's report estimates “the release of all perfluorinated compounds (e.g., carbonyl fluoride)—not just PFAS.” [D.E. 611] 4. Defendants also dispute plaintiffs' contention that the EPA considers carbonyl fluoride among PFAS chemicals. See id.

The court has reviewed Albright's report and the parties' arguments. The court has concerns regarding the admissibility of Albright's report and testimony. Specifically, if plaintiffs intend to use Albright's testimony to establish that defendants' activities at the Fayetteville Works facility led to the contamination of plaintiffs' properties with particular PFAS compounds, then evidence tending to show that Albright's methodology or model included non-PFAS compounds would cast serious doubts on its usefulness to the trier of fact. Additionally, the court has serious concerns about the heated rhetoric between the attorneys concerning Albright's report and testimony.

The court will hold a hearing on the admissibility of Albright's report and testimony to resolve the dispute. At the hearing, the court will receive evidence concerning Albright's proposed

expert testimony. The parties shall meet and confer about a date for the hearing. Not later than October 15, 2025, the parties shall submit at least three proposed hearing dates. For now, the court denies without prejudice defendants' motion to exclude certain opinions in Albright's 2024 Report.

H.

On August 30, 2024, defendants moved to exclude the expert opinions of plaintiffs' expert Smith [D.E. 544] and filed a memorandum [D.E. 545] and exhibit in support [D.E. 546]. On September 27, 2024, plaintiffs responded in opposition [D.E. 578] and filed a declaration [D.E. 579] and exhibit [D.E. 580] in support. On October 18, 2024, defendants replied [D.E. 612].

Smith is a lawyer and "was an Assistant Secretary for the North Carolina Department of Environment and Natural Resources, the predecessor to the North Carolina Department of Environmental Quality [(“DEQ”)], for 13 years." [D.E. 578] 6. Smith spent over "30 years . . . working as a lawyer in environmental law and policy." *Id.* at 6–7. Smith received a Bachelor of Arts in History from Duke University in 1978 and a Juris Doctor from the University of North Carolina Law School in 1981. *See* [D.E. 580] 47.

Plaintiffs retained Smith to opine "on the standard of care applicable to operations at the Fayetteville Works [Facility], including the requirements of state and federal environmental laws." *Id.* at ¶ 4. To form her opinions, Smith relied on various federal and state laws and regulations, as well as DEQ complaints filed against defendants concerning alleged PFAS releases from the Fayetteville Works Facility and "internal documents" from defendants. [D.E. 578] 7; *see* [D.E. 580] ¶ 5, pp. 51–61. Smith filed a single report. *See* [D.E. 580] 1–61 ("Smith's Report"). In that report, Smith offers the following opinions which defendants seek to exclude:

1. Defendants failed to meet the standard of care expected of chemical manufacturers under the Clean Water Act, Clean Air Act, Toxic Substances Control Act, and Resource Conservation and Recovery Act;

2. Defendants frustrated the ability of state and federal regulators to limit risk to the public and to the environment through permit conditions that could have reduced the impact on aquatic life and human exposure to harmful chemicals through drinking water by withholding information;

3. Defendants allowed the continued release of toxic substances to the environment by choosing not to install more effective treatment technology; and

4. The volume of toxic substances released could have been dramatically reduced or eliminated if [d]efendants had acted earlier in accordance with the standard of care.

[D.E. 545] 2 (“the challenged opinions”); see [D.E. 580] ¶¶ 10–11.

Defendants seek to exclude the challenged opinions because: (1) Smith “is not qualified to opine on the applicable standard of care, and that opinion is unhelpful to the jury and based on no methodology[;]” (2) Smith’s “opinion that defendants failed to meet her standard of care by ‘withholding’ unidentified information from regulators and its impact is unqualified, unhelpful, and unreliable[;]” (3) Smith “is not qualified to opine that defendants allowed the continued release of toxic substances by not adopting more effective treatment technology[;]” and (4) Smith’s “causal opinion that defendants could have dramatically reduced or eliminated air emissions and groundwater discharges is complete speculation.” [D.E. 545] 6–19.

Plaintiffs respond that the court should deny defendants’ motion to exclude the challenged opinions because: (1) “numerous courts have rejected Daubert challenges to regulatory testimony akin” to Smith’s testimony; (2) defendants mischaracterize Smith’s opinions, qualifications, and the record; and (3) Smith’s “opinions about withheld information are fully informed and relevant.” [D.E. 578] 11–25. Plaintiffs concede that Smith is not “a scientific or technological expert” and argue that Smith “is, however, a longtime regulator of the chemical manufacturing industry” and worked for “well over a decade as” defendants’ “primary state regulator.” Id. at 13. Plaintiffs argue that Smith’s opinions are based on her years as a regulator and that courts have accepted testimony like Smith’s in other contexts. See id. at 12–17.

“[I]n certain circumstances, such as cases involving specialized industries, opinion testimony that arguably states a legal conclusion is helpful to the jury, and thus, admissible.” United States v. McIver, 470 F.3d 550, 562 n.13 (4th Cir. 2006) (quotation omitted); see United States v. Barile, 286 F.3d 749, 760 n.7 (4th Cir. 2002). In other contexts, courts have held that non-technical regulatory experts cannot testify “as to causal association . . . because they lack the appropriate qualifications.” In re Gardasil Prods. Liab. Litig., No. 3:22-MD-3036, 2025 WL 1782576, at *4 (W.D.N.C. Feb. 20, 2025) (unpublished) (collecting cases).

The court has reviewed the record, the parties’ arguments, Smith’s Report, and the challenged opinions. Smith is qualified to offer her opinion regarding the regulatory framework established by state and federal laws and regulations for the production and release of PFAS. Likewise, Smith may opine on the standard of care that those laws establish. Smith, however, lacks “scientific or technological” expertise to opine as to causation, mitigation, defendants’ specific alleged PFAS contamination, or whether defendants’ actions concerning their alleged PFAS contamination breached the standard of care. [D.E. 578] 13. Thus, the court will permit Smith to opine on the regulatory framework and the duties and responsibilities of chemical manufacturers under that regulatory framework. Smith, however, may not offer her opinion regarding causation, defendants’ alleged failure to meet the standard of care, or the scientific or technical implications of defendants’ alleged PFAS contamination.

I.

On August 30, 2024, defendants moved to exclude the expert opinions of plaintiffs’ expert DeGrandchamp [D.E. 547] and filed a memorandum [D.E. 548] and a sealed exhibit [D.E. 549] in support. On September 27, 2024, plaintiffs responded in opposition [D.E. 575] and filed a

declaration [D.E. 576] and exhibits [D.E. 577] in support. On October 18, 2024, defendants replied [D.E. 613].

On November 18, 2024, plaintiffs moved for the court to ignore or strike a portion of defendants' reply or, in the alternative, for the court to grant plaintiffs leave to file a sur-reply [D.E. 620] and filed a memorandum in support [D.E. 621]. On November 27, 2024, defendants responded in opposition [D.E. 627].

Defendants' reply brief impermissibly broadens its request to exclude DeGrandchamp's opinions. Specifically, in their reply, defendants ask the court to strike paragraphs 18 to 179 of DeGrandchamp's report for reasons not raised in their initial motion. See [D.E. 613] 1–2; cf. Local Civ. R. 7.1(g)(1). The court declines defendants' invitation.

DeGrandchamp is an “expert in the field of toxicology who regularly testifies regarding questions of toxicology testing, including the historical standard of care for conducting toxicity tests.” [D.E. 575] 8. DeGrandchamp has practiced toxicology for over 30 years and received a Bachelor of Science in Biochemistry from Eastern Michigan University and a Ph.D. in toxicology from the University of Michigan, School of Public Health. See [D.E. 577-2] ¶ 5. Defendants do not challenge DeGrandchamp's qualifications.

Plaintiffs retained DeGrandchamp to answer two questions: “(1) historically, was [d]efendants' toxicity testing of PFAS—or lack thereof—consistent with then-applicable standard of care for the chemical industry; and (2) given [d]efendants' toxicity testing of PFAS—or lack thereof—what amount of PFAS in . . . drinking water can be considered safe?” Id. at ¶ 1. To form his opinions, DeGrandchamp first “identif[ied] the relevant historical standards of care for the various periods relevant to this case and then examin[ed] whether [d]efendants adhered to th[ose] standards in its [PFAS] toxicity testing.” [D.E. 575] 8–9. Defendants seek to exclude

DeGrandchamp's June 7, 2024, Report ("DeGrandchamp's Report"). See [D.E. 577-2]. In DeGrandchamp's report, DeGrandchamp opines:

1. First, since the 1960s, [d]efendants ignored multiple triggers that would have prompted a company following then-applicable standards of care to conduct chronic toxicity testing on individual PFAS before exposing the public to those PFAS;
2. Second, [d]efendants did not adequately evaluate the summed risk of exposing the public to multiple PFAS;
3. Third, the [d]efendants did not adequately prioritize toxicity testing of the PFAS that likely posed the greatest threat to public health;
4. Fourth, DuPont relied on faulty science to develop community exposure guidelines for PFOA;
5. Fifth, [d]efendants were not sufficiently transparent with the public regarding the PFAS to which they were exposed.

[D.E. 548] 1–2 ("the challenged opinions"); see [D.E. 575] 9. Additionally, as for the amount of PFAS in drinking water that can be considered safe, DeGrandchamp opines that "there is no known safe level of PFAS for . . . drinking water." [D.E. 577-2] 5.

Defendants seek to exclude the challenged opinions. Defendants argue that: (1) DeGrandchamp's opinions are inadmissible "because they improperly seek to opine on the defendants' corporate state of mind[;]" (2) DeGrandchamp's opinion "that defendants were not sufficiently transparent with the public regarding PFAS is based on no methodology and inadequate data[;]" (3) "DeGrandchamp lacks reliable facts and data to opine that DuPont threatened scientists with retaliation[;]" and (4) DeGrandchamp's "opinion on community exposure guidelines is based on inadequate data." [D.E. 548] 1–17.

Plaintiffs respond that the court should deny defendants' motion to exclude because: (1) DeGrandchamp is qualified to offer his expert opinions in this case; (2) DeGrandchamp does not opine, as defendants argue, concerning defendants' state of mind; (3) defendants' "critique of

[DeGrandchamp's] transparency opinion rests on a mischaracterization of both his opinions and the basis for that opinion[;]" and (4) defendants' "remaining arguments represent improper (and misguided) disputes with the factual underpinnings" of DeGrandchamp's opinions. [D.E. 575] 2–29.

The court has reviewed the record, the parties' arguments, the Report, and the challenged opinions. DeGrandchamp's opinions extend beyond the boundaries of the questions plaintiffs retained DeGrandchamp to answer and beyond his alleged expertise. Plaintiffs state that they retained DeGrandchamp to answer two questions: "(1) historically, was [d]efendants' toxicity testing of PFAS—or lack thereof—consistent with then-applicable standards of care for the chemical industry; and (2) given [d]efendants' toxicity testing of PFAS—or lack thereof—what amount of PFAS in . . . drinking water can be considered safe?" [D.E. 577-2] ¶ 1.

DeGrandchamp's opinions go beyond attempting to answer the questions plaintiffs asked. Instead, DeGrandchamp improperly speculates concerning defendants' state of mind. "Testimony about intent or motive lies outside the bounds of expert testimony." SMD Software, Inc. v. EMove, Inc., 945 F. Supp. 2d 628, 643 (E.D.N.C. 2013); see Yates v. Ford Motor Co., No. 5:12-CV-752, 2015 WL 3448905, at *5 (E.D.N.C. May 29, 2015) (unpublished); Talley v. Novartis Pharms. Corp., No. 3:08-CV-361, 2011 WL 7941938, at *2 (W.D.N.C. June 28, 2011) (unpublished); In re Rezulin Prods. Liab. Litig., 309 F. Supp. 2d 531, 541, 547, 554 (S.D.N.Y. 2004). Thus, DeGrandchamp may not offer his opinion concerning defendants' state of mind.

DeGrandchamp's opinions bear the same defect as DeWitt's opinions. Both DeWitt and DeGrandchamp were retained to offer toxicological opinions concerning PFAS exposure. Like DeWitt, however, DeGrandchamp fails to identify a safe exposure level for PFAS in drinking water or to credibly explain why no level is safe. See [D.E. 577-2] ¶ 3. As explained, the court

has expressed its concerns regarding plaintiffs' inability to produce a safe exposure level for PFAS or to justify an opinion that any level of exposure to PFAS in drinking water is not safe. Without a safe exposure level or a credible explanation why any exposure is unsafe, the jury may only speculate about the level of PFAS exposure that may (or may not) cause negative health effects. Thus, DeGrandchamp's opinion testimony is also unhelpful to the jury. See Fed. R. Evid. 702. Accordingly, the court grants defendants' motion to exclude and excludes DeGrandchamp's testimony.

III.

On August 30, 2024, defendants moved for partial summary judgment [D.E. 550] and filed a memorandum in support [D.E. 551], a statement of material facts [D.E. 552], and an appendix [D.E. 553, 559]. On September 27, 2024, plaintiffs responded in opposition [D.E. 585] and filed a counterstatement to defendants' statement of material facts [D.E. 586] and an appendix [D.E. 587, 588]. On October 18, 2024, defendants replied [D.E. 614].

On December 18, 2024, defendants moved for class decertification [D.E. 629] and filed a memorandum in support [D.E. 630]. On January 17, 2025, plaintiffs responded in opposition [D.E. 632].

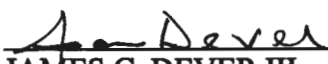
In this order, the court has granted defendants' motions to exclude the testimony of plaintiffs' experts DeWitt, DeGrandchamp, and set a hearing on the admissibility of Albright's testimony. Because the ultimate resolution of defendants' motion to exclude Albright's testimony will likely influence the viability of defendants' motion for partial summary judgment and plaintiffs' class allegations, the court declines to definitively resolve defendants' motions at this time. Accordingly, the court denies without prejudice defendants' motion for partial summary judgment and defendants' motion to decertify the class [D.E. 269]. After the court resolves

defendants' motion to exclude Albright's testimony, the court will definitively resolve defendants' motion for partial summary judgment and defendants' motion for class decertification.

IV.

In sum, the court DENIES plaintiffs' motion to exclude Travers [D.E. 520], DENIES defendants' motion to exclude Gamble [D.E. 526], DENIES defendants' motion to exclude Duncklee [D.E. 528], GRANTS defendants' motions to exclude DeWitt [D.E. 533, 560], DENIES defendants' motions to exclude Griffith [D.E. 535], DENIES defendants' motion to exclude Michaels [D.E. 538], DENIES defendants' motion to file a supplemental motion about Albright [D.E. 626], DENIES plaintiffs' motion to strike concerning defendants' Albright reply [D.E. 615], DENIES without prejudice defendants' motion to strike Albright [D.E. 541], GRANTS in part and DENIES in part defendants' motion to exclude Smith [D.E. 544], GRANTS defendants' motion to exclude DeGrandchamp [D.E. 547], and DENIES WITHOUT PREJUDICE defendants' motion for partial summary judgment [D.E. 550] and defendants' motion for class decertification [D.E. 629]. The parties SHALL meet and confer in accordance with this order. The court will then schedule a hearing in due course.

SO ORDERED. This 30 day of September, 2025.


JAMES C. DEVER III
United States District Judge