

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF NEW YORK**

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**SUFFOLK COUNTY WATER
AUTHORITY,**

Plaintiff,

-against-

**THE DOW CHEMICAL COMPANY,
VIBRANTZ CORPORATION,
FORMERLY KNOWN AS FERRO
CORPORATION AND LEGACY
VULCAN, LLC, FORMERLY KNOWN AS
VULCAN MATERIALS COMPANY,**

Defendants.

OPINION & ORDER

17-cv-6980 (NG) (JRC)

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GERSHON, United States District Judge:

This action was brought by the Suffolk County Water Authority (“Suffolk”) against The Dow Chemical Company (“Dow”), Legacy Vulcan, LLC, formerly known as Vulcan Materials Company (“Vulcan”) and Vibrantz Corporation, formerly known as Ferro Corporation (“Ferro”). Before the court is a joint motion for summary judgment brought by the Defendants. Also before the court are summary judgment motions brought individually by Dow, Vulcan and Ferro that raise issues particular to each of them. Finally, before the court are motions to exclude the opinions of seven of Suffolk’s experts. For the reasons discussed below, the motions to exclude Suffolk’s experts’ opinions, with a few exceptions set forth below, are denied. The Defendants’ joint motion is granted in part and denied in part. Dow’s and Vulcan’s separate motions are both denied and Ferro’s separate motion is granted in part and denied in part.¹

¹ Both sides also have brought motions to exclude the opinions of other experts. Because they agree that such motions are not relevant to the summary judgment motions, I do not address them here.

I. Background

Suffolk is an independent public benefit corporation operating under the authority of New York law. As of 2021, Suffolk operates over 580 active water wells that provide drinking water to approximately 1.2 million Suffolk County residents. Suffolk's wells draw groundwater from aquifers in Suffolk County.

The Defendants, Dow, Vulcan, and Ferro are chemical manufacturers and sellers. Dow and Vulcan manufactured a chlorinated solvent called 1,1,1-trichloroethane ("TCA"), a popular metal cleaning agent. Dow and Vulcan used 1,4-dioxane ("dioxane"), a chemical which has been classified by the Environmental Protection Agency ("EPA") as a "probable human carcinogen," as a stabilizer in their TCA products. Dow and Ferro both manufactured dioxane.

This action arises out of dioxane contamination of the drinking water in 253 of Suffolk's wells. Suffolk asserts that the contamination in such wells comes predominantly from dioxane-stabilized TCA and refers to such wells as the "TCA Claim Wells." Suffolk further contends that the dioxane contamination of the TCA Claim Wells comes from dioxane-stabilized TCA products that Dow and Vulcan manufactured and that Ferro manufactured a portion of the dioxane in Dow's and Vulcan's dioxane-stabilized TCA. According to Suffolk, because of such contamination, it must design, construct, and maintain treatment facilities and equipment for the TCA Claim Wells to remove the dioxane from the groundwater.

All of Suffolk's claims are brought under New York common law: strict products liability and negligence for defective design and failure to warn; trespass; and public nuisance, but it has now withdrawn its failure to warn claims as to Ferro. Suffolk seeks compensatory and punitive damages, injunctive and equitable relief, declaratory relief, and attorneys' fees.

II. Defendants' Motions to Exclude Plaintiff's Experts

Because Suffolk's showing as to why its claims survive summary judgment is predicated largely on its experts' opinions, I begin by addressing the Defendants' motions to exclude their opinions. The motions relate to the following experts: Thomas K.G. Mohr, Dr. John W. Kern, Kenneth J. Goldstein, Dr. Andrew G. Salmon, Randall Lee Rabenhorst, Dr. Ruston M. Hunt, and Steven Amter.

A. Rule 702 Standard

Federal Rule of Evidence 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; *see Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579 (1993). Under Rule 702, a district court has a "gatekeeping" function. *Daubert*, 509 U.S. at 597. The Rule was recently amended to "clarify and emphasize" that the preponderance-of-the-evidence standard from Rule 104(a) applies to each of the four criteria set forth in Rule 702. Fed. R. Evid. 702 advisory committee's note to 2023 amendment. The Advisory Committee explained that this clarification was necessary because "many courts" have held that certain Rule 702 criteria "are questions of weight and not admissibility." *Id.*²

² As part of the amendment, Rule 702(d) was also amended 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." Fed. R. Evid. 702 advisory committee's note to 2023 amendment. The Advisory Committee explained that this part of the amendment "is especially pertinent to the testimony of forensic experts." *Id.*

Nevertheless, the Advisory Committee emphasized that “[n]othing in the amendment imposes any new, specific procedures.” *Id.* And prior authority construing Rule 702 remains relevant. *See Faison-Williams v. United States*, 2025 WL 974831, at *4 (2d Cir. Apr. 1, 2025) (citing pre-amendment authority construing Rule 702); *B & R Supermarket, Inc. v. Visa Inc.*, 2024 WL 4252031, at *3 (E.D.N.Y. Sept. 20, 2024) (same). Additionally, the Advisory Committee confirmed that, notwithstanding the amendment, certain challenges to expert testimony continue to “raise matters of weight rather than admissibility even under the Rule 104(a) standard.” Fed. R. Evid. 702 advisory committee’s note to 2023 amendment. For example, if an expert has a “sufficient basis to support an opinion, the fact that the expert has not read every single study that exists will raise a question of weight.” *Id.* Finally, the Advisory Committee underscored that the court may admit expert testimony even in the face of contradictory expert testimony, as admissible testimony may be the “product of competing principles or methods in the same field of expertise.” *Id.* A court need only find the opinion to be reliable; the “evidentiary requirement of reliability” remains “lower than the merits standard of correctness.” *Id.*

In general, then, in reviewing a motion to exclude an expert witness, a court must ensure: “(1) the witness is qualified to be an expert; (2) the opinion is based upon reliable data and methodology; and (3) the expert’s testimony on a particular issue will assist the trier of fact.” *Visa*, 2024 WL 4252031, at *3. The first requirement dictates a comparison between “the area in which the witness has superior knowledge, skill, experience, or education” and “the actual subject matter of the witness’s testimony.” *Id.* at *18 (internal quotation marks omitted). Under the second, the analysis must “be reliable at every step.” *Amorgianos v. Nat’l R.R. Passenger Corp.*, 303 F.3d 256, 267 (2d Cir. 2002). Where “there is simply too great an analytical gap between the data and the opinion proffered,” opinions must be excluded, *Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 146

(1997), but the “judge should only exclude the evidence if the flaw is large enough that the expert lacks ‘good grounds’ for his or her conclusions.” *Amorgianos*, 303 F.3d at 267. Instead, “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Id.* (quoting *Daubert*, 509 U.S. at 596). Whether the opinion will assist the trier of fact is primarily a question of relevance, which the Supreme Court has described as a question of “fit.” *Daubert*, 509 U.S. at 591. The opinion must be “sufficiently tied to the facts of the case that it will aid the jury in resolving a factual dispute,” rather than unrelated to any issue in the case and, therefore, “not relevant” and “non-helpful.” *Id.*

B. Application to Suffolk’s Experts³

1. Thomas K.G. Mohr

Thomas Mohr is a hydrogeologist with decades of experience working on groundwater contamination and environmental issues, including spending the last 17 years of his career as the Senior Hydrogeologist for the Santa Clara Valley Water District. He serves on an advisory panel to Yale University’s Superfund Research Group, which focuses on “mitigating the effects of exposure to 1,4-dioxane in drinking water,” and “has written or coauthored 6 peer reviewed papers on 1,4-dioxane occurrence and remediation.” Expert Report of Thomas K.G. Mohr (“Mohr Report”), at 2. He has “conducted extensive research on the history, use, disposal, environmental fate and transport, cleanup, and forensic applications of 1,4-dioxane” and is the “author of a book on the forensic aspects of chlorinated solvent additives, and specifically 1,4-dioxane, entitled

³ Throughout their motions, the Defendants contend that the Plaintiff’s experts warrant exclusion for the same reasons that they argue that Suffolk has not established facts from which a reasonable jury could find substantial factor causation. Because I address those arguments in the Substantial Factor Causation section below, I do not address them in this section but note that they do not provide a basis for excluding Suffolk’s experts.

‘Environmental Investigation and Remediation: 1,4-dioxane and Other Solvent Stabilizers.’” *Id.* He has also “provided litigation support, consulting and expert witness testimony on numerous contaminated property cases, cases involving 1,4-dioxane property and supply well contamination.” *Id.*

Mr. Mohr provides a comprehensive description of the origin, history, and physical characteristics of dioxane and its end uses, including its “largest” end use as a stabilizer for TCA; TCA’s end uses, including that the “overwhelming majority” was used for metal cleaning; and the industrialization of Suffolk County. *Id.*, at 6, 8. Mr. Mohr opines that dioxane-stabilized TCA was used in Suffolk County starting in the 1950s and that it was “widely used” there from the 1960s through the mid-1990s for metal cleaning. *Id.*, at 6. With respect to Dow specifically, Mr. Mohr opines that Dow began producing and marketing dioxane-stabilized TCA in 1951 and that it is more likely than not that Dow’s dioxane-stabilized TCA was used in Suffolk County at least as early as the 1950s.

He further opines that the ordinary use of dioxane-stabilized TCA and the disposal of dioxane-stabilized TCA waste in Suffolk County “inevitably” released dioxane into the Suffolk County groundwater. *Id.*, at 31. As to ordinary use, such releases occurred through accidental “leaks” and “spills” inherent in the “handling, storage, transport, and disposal” of dioxane-stabilized TCA. *Id.*, at 33. For example, leaks occurred at “piping connections” or “cracks in the machine or tank,” while spills occurred “during handling of TCA containers.” *Id.* As to ordinary disposal, Mr. Mohr describes in detail how end users disposed of dioxane-stabilized TCA waste using “onsite wastewater treatment systems,” “storm drains, recharge basins, and dry wells,” “community sewer systems,” and “landfills.” *Id.*, at 38, 48, 53, 59. The ordinary use, and especially, the ordinary methods of disposal led to dioxane contamination of the aquifers.

The Defendants explain that their motion to exclude with respect to Mr. Mohr is “narrow.” Defs.’ Reply to Mot. to Exclude Mr. Mohr’s Opinion (“Mohr Reply”), at 1. The Defendants seek to exclude only Mr. Mohr’s opinion that the ordinary use and disposal of dioxane-stabilized TCA and its waste in metal cleaning and manufacturing processes “inevitably” released dioxane into the Suffolk County groundwater. I am unpersuaded by the Defendants’ argument.

To begin with, Mr. Mohr is highly qualified to offer his opinions. While Mr. Mohr’s qualifications do not themselves render his opinions reliable, the “strength of an expert’s qualifications” can provide “circumstantial evidence of reliability.” *In re Fosamax Prods. Liab. Litig.*, 645 F. Supp. 2d 164, 179 (S.D.N.Y. 2009). “[T]he more qualified the expert, the more likely that expert is using reliable methods in a reliable manner.” *Id.*

Upon review of the data on which Mr. Mohr relied, there is not, as the Defendants contend, “too great an analytical gap between the data and the opinion” offered to warrant exclusion under Rule 702. *Joiner*, 522 U.S. at 146. Mr. Mohr reviewed an extensive dataset to support his opinion. *See, e.g.*, Pl.’s Opp. to Mot. to Exclude Mr. Mohr’s Opinion (“Pl.’s. Mohr Opp.”), at 4–5 (collecting and citing to examples of the dataset upon which Mr. Mohr relies). Based on his review of the dataset, Mr. Mohr describes the known mechanisms by which the accidental release and intentional disposal of dioxane-stabilized TCA and its waste would be expected to cause dioxane contamination of the groundwater in Suffolk County. And he supports his opinion with specific examples taken from government records of accidental release and intentional disposal of dioxane-stabilized TCA and its waste that occurred in Suffolk County. The review of this data is a reliable method, reliably applied to the facts of this case, for opining that the ordinary use and disposal of dioxane-stabilized TCA inevitably released dioxane into the Suffolk County groundwater.

The Defendants also argue that Mr. Mohr’s opinion that there were “over 1,100 additional Suffolk County businesses where the release of 1,4-dioxane related to TCA uses is highly likely,” Expert Rebuttal Report of Thomas K.G. Mohr, at 13–14, though uninvestigated, as compared with 315 sites known to have had TCA releases, “exacerbates” “the impact of his speculative opinions on the ‘inevitable’ release of TCA into Suffolk County groundwater.” Mohr Reply, at 5. This argument is a red herring because the Defendants are not challenging Mr. Mohr’s opinion that it is highly likely that there were over 1,100 uninvestigated dioxane-stabilized TCA release sites in Suffolk County. As Suffolk cogently explains, this opinion bears on the “ubiquity” of dioxane-stabilized TCA release sites, not the Defendants’ challenge to the “inevitability” of such releases. Pl.’s Mohr Opp., at 8. In any event, this argument is not a persuasive basis to exclude Mr. Mohr’s opinion. The Defendants challenge Mr. Mohr’s use of standard industrial classification (“SIC”) codes as one of twelve datapoints that he relies on to determine sites that were more likely than not to have dioxane-stabilized TCA releases. (The Defendants do not make any argument about Mr. Mohr’s reliance on the other eleven datapoints.) But Mr. Mohr’s use of business’s SIC codes to determine which businesses were engaged in manufacturing processes that required metal cleaning as a basis for determining which sites were more likely than not to have used dioxane-stabilized TCA (used, as noted, for metal cleaning) passes muster under *Daubert*. The Defendants can explore their disagreements with the conclusions that Mr. Mohr drew from the SIC code data through traditional means.

The Defendants’ motion to exclude Mr. Mohr’s opinion is denied.

2. Dr. John W. Kern

Dr. Kern is the president of Kern Statistical Services, Inc., a statistical consulting firm which he founded more than twenty years ago. He has a Ph.D. in Applied Statistics from the

University of Wyoming. Dr. Kern has significant experience applying his statistical expertise to contaminated sites, including “at the largest most complex superfund mega sites in the United States.” Curriculum Vitae of Dr. John W. Kern, at 6. He applies “the latest geostatistical techniques to all phases of the remedial investigation and design processes” and has consulted for state and federal agencies and private companies. *Id.* Additionally, at his deposition, Dr. Kern stated that he has over 30 years of experience working with “chemists, analytical chemists, [and] geochemists” and has a “fair degree of expertise in the application of data and analysis to environmental forensics problems.” Dr. John Kern Dep. Tr. 92. Dr. Kern also explained that he has experience from many projects in combining “related contaminants into a single variable for purposes of statistical analysis, including regression analysis.” Kern Aff. ¶¶ 5–10.

Dr. Kern was “asked to analyze water quality data collected by [Suffolk] from its wells since at least 2003” to evaluate whether dioxane contamination was “correlated” with TCA and its breakdown products. TCA, Dr. Kern explains, is more subject to degradation than dioxane and breaks down to form three “daughter” products: 1,1,-DCE, 1,1-DCA, and vinyl chloride. Dr. Kern opines that, where dioxane exceeds a certain threshold level, which he opines occurs in a subset of Suffolk’s wells, dioxane is highly correlated with TCA and its breakdown products.⁴ He further opines that the high correlation between dioxane and TCA and its breakdown products indicates that it is more likely than not that dioxane-stabilized TCA is the “predominant source” of dioxane contamination in such wells. Expert Report of Dr. John W. Kern (“Kern Report”), at 23. Those wells include the TCA Claim Wells.

⁴ Specifically, Dr. Kern opines that in Suffolk’s wells where dioxane exceeds 0.1 ug/L, dioxane is highly correlated with dioxane-stabilized TCA and its breakdown products.

Although Dr. Kern's expertise as a statistician is unquestioned, the Defendants argue that, despite this, he lacks sufficient expertise in chemistry to be allowed to testify. Dr. Kern authored his initial report with Dr. Edward Garvey, an environmental geochemist, who withdrew from the case because of illness. Dr. Kern was the sole author of the rebuttal report. The Defendants argue that, without Dr. Garvey's chemistry expertise, Dr. Kern is not qualified to offer his opinions.

To begin, although the Defendants make much of Dr. Kern's supposed lack of chemistry expertise, the heart of Dr. Kern's expert reports are his statistical analyses and not chemistry. Secondly, both the initial report co-authored with Dr. Garvey and the rebuttal report rely primarily on the expert opinions of Mr. Mohr for any chemistry conclusions. The Defendants mainly argue that Dr. Kern lacks the expertise to opine about the TCA+ daughters variable, which is premised on the fact that TCA breaks down to form three daughter products. But Dr. Kern relies on Mr. Mohr's opinion that TCA breaks down to form daughter products, and the Defendants do not dispute that an expert can rely on the testimony of another expert. Nor have they challenged Mr. Mohr's opinions on this subject. Thirdly, Dr. Kern has significant experience applying his statistical expertise to projects involving contaminated sites, including combining "related contaminants into a single variable for purposes of statistical analysis." Kern Aff. ¶¶ 5–10. Although Dr. Kern is not an expert in chemistry, his experience in the field is more than sufficient to allow him to testify to any issues that are not based on the testimony of Mr. Mohr.⁵

The Defendants also challenge the reliability of Dr. Kern's work. They contend that, in his regression analyses and in the TCA+ daughters variable, Dr. Kern fails to account for sources other

⁵ The Defendants also point to the fact that Dr. Garvey billed many more hours than Dr. Kern in work on the initial report and speculate that this difference in billed hours means that Dr. Kern is not qualified to testify to the opinions in the report. However, the relative number of hours that Dr. Kern billed has no bearing on his qualifications.

than TCA that might have caused the presence of the TCA daughter products. But generally, a challenge that a regression analysis fails to include certain variables faces a “high bar,” *In re Keurig Green Mountain Single-Serve Coffee Antitrust Litig.*, 2025 WL 354671, at *17 (S.D.N.Y. Jan. 30, 2025), because even the failure “to consider some arguably significant variables” goes to “the analysis’ probativeness, not its admissibility.” *Kurtz v. Costco Wholesale Corp.*, 818 F. App’x 57, 62 (2d Cir. 2020). To be excludable on this ground, a regression must be “so incomplete as to be inadmissible as irrelevant.” *Id.*; see *Bickerstaff v. Vassar Coll.*, 196 F.3d 435 (2d Cir. 1999). The Defendants’ challenge does not meet this high bar. Dr. Kern’s analyses account for 20 parameters, and there is no basis in the record to conclude that his failure to include additional parameters suggested by the Defendants renders the analysis “so incomplete” as to be “irrelevant.” *Kurtz*, 818 F. App’x at 62.

Finally, the Defendants challenge certain choices that were made in importing the data from the Suffolk database to separate databases upon which Dr. Kern relied to perform his statistical analyses. The Defendants argue that such choices resulted in the overcounting of dioxane detections. These challenges may be explored through the traditional means at trial, such as cross-examination. They go only to the weight of Dr. Kern’s testimony, not its admissibility.

3. Kenneth J. Goldstein

Mr. Goldstein is a professional hydrogeologist with more than 40 years of experience in “contaminant hydrogeology, hydrology, groundwater supply development and management, site remediation, and ecosystems restoration.” Expert Report of Kenneth J. Goldstein (“Goldstein Report”), at 1. He has advised the EPA, the National Ground Water Association, and others regarding the remediation of contamination sites. He specializes “in remedial site investigations,

feasibility studies, remedial design, and site remediation.” Curriculum Vitae of Kenneth J. Goldstein, at 1.

Mr. Goldstein explains that there are three major aquifers found beneath Suffolk County: the upper Glacial; the Magothy; and the Lloyd. These three aquifers are part of the federally designated “Long Island Sole Source Aquifer System,” which is an aquifer system that is “the sole or principal drinking water source for the area and which, if contaminated, would create a significant hazard to public health.” Goldstein Report, at 3–5.

Mr. Goldstein offers two opinions. His first opinion is that “1,4-dioxane contamination is pervasive” in Suffolk County groundwater that is extracted by Suffolk’s production wells. *Id.*, at 2. His second opinion is that it is “more likely than not that the 1,4-dioxane contamination detected in the Long Island Aquifer system will persist for more than approximately 100 years” and that the “substantial majority of currently affected” Suffolk production wells “will continue to capture 1,4-dioxane contaminated groundwater for over approximately 100 years.” *Id.*

The Defendants challenge the reliability of two assumptions that Mr. Goldstein makes in forming his opinion relating to the persistence of dioxane. First, in reaching his opinion, Mr. Goldstein relies on a United States Geological Survey (“USGS”) “regional-scale groundwater-flow model.” *Id.*, at 21. Using this model, Mr. Goldstein offers a “time of travel” analysis, which estimates the time it takes for a water particle to migrate from the point of entry into the groundwater (or the “zone of contribution”) to the aquifer area contributing groundwater to Suffolk’s production wells (or the “capture zone”). He also estimates the flow paths of and “minimum, median, and maximum” travel times for water particles to travel from zones of contribution to capture zones. Because he opines that dioxane in Suffolk County aquifers “migrates at about the same rate as groundwater,” *id.*, at 22–23, 43, Mr. Goldstein explains that he

can rely on water travel times to estimate dioxane travel times. And, because he found that the “average maximum travel time” for water (and dioxane) to travel to production wells in the Magothy aquifer, for example, is approximately 164 years, travel time is a “major consideration” for reaching his second opinion relating to persistence. *Id.*, at 44.

The Defendants do not contend that the USGS model is unreliable for measuring *water* travel times. They contend that the model cannot provide a reliable estimate of *dioxane* travel times. Put differently, they challenge Mr. Goldstein’s opinion that dioxane in Suffolk County aquifers “migrates at about the same rate as groundwater.” *Id.*, at 43. They argue that Mr. Goldstein’s model does “not account for important chemical fate processes, including biodegradation,” of dioxane. Defs.’ Mot. to Exclude Mr. Goldstein’s Opinion, at 27. That is a mischaracterization of Mr. Goldstein’s reports. Mr. Goldstein provides ample explanation for his decision to apply the USGS model to dioxane, and, as part of that explanation, he plainly accounts for “important chemical fate processes, including biodegradation,” of dioxane. Mr. Goldstein simply concludes that such processes support his finding that the USGS model can reliably be applied to dioxane travel times in Suffolk County. For example, he explains that dioxane is “hydrophilic and infinitely soluble (miscible) in water and, therefore, highly mobile in groundwater,” “resistant to attenuation in the coarser sand and gravel aquifer deposits” in Suffolk County’s aquifers, and “does not biodegrade under natural conditions.” Goldstein Report, at 14; *see also, e.g.*, Expert Rebuttal Report of Kenneth J. Goldstein (“Goldstein Rebuttal Report”), at 10–13 (describing why biodegradation is likely to be an insignificant factor in dioxane attenuation in Suffolk County). Mr. Goldstein reliably applies the USGS model to the facts of this case. While the Defendants may present experts who disagree with the conclusions that Mr. Goldstein draws, that is not a basis for excluding his opinion under Rule 702.

Second, in reaching his opinion relating to persistence, Mr. Goldstein opines that “matrix diffusion”— “the process by which contaminants diffuse into lower-permeability zones (e.g., clay, silts, bedrock)” — “is occurring” in Suffolk County aquifers and “will contribute to the persistence of 1,4-dioxane detections” in Suffolk’s wells. Goldstein Rebuttal Report, at 13. Mr. Goldstein explains that matrix diffusion can result in significant long-term storage of dioxane mass, which, in a process called “back diffusion,” can eventually diffuse out of the lower-permeability zones when the concentration gradient reverses, contributing to dioxane’s persistence. In concluding that matrix diffusion is occurring in Suffolk County, Mr. Goldstein explains that he examined boring logs that showed the presence of clay layers adjacent to high permeability layers, “the exact conditions needed for matrix diffusion.” *Id.*

The Defendants take issue with the basis for Mr. Goldstein’s matrix diffusion opinion because, they argue, he examined only eight boring logs and, according to them, he should have undertaken other testing, such as laboratory analysis of “core samples.” Defs.’ Reply to Mot. to Exclude Mr. Goldstein’s Opinion, at 13. I find that Mr. Goldstein relies on sufficient data to support his opinion that matrix diffusion is occurring and will contribute to dioxane’s persistence in Suffolk County. The Defendants’ argument that Mr. Goldstein should have examined additional boring logs or conducted other types of testing goes to the weight, not the admissibility, of his testimony and may be explored through the traditional means at trial, such as cross-examination.⁶

⁶ The Defendants also contend that Mr. Goldstein’s opinions are unreliable because they rely on the same dataset that Dr. Kern used and they rehash their arguments about the unreliability of Dr. Kern’s dataset. Because the dataset that Dr. Kern relied on does not warrant exclusion under Rule 702, as I have already found, this argument provides no basis to exclude Mr. Goldstein’s opinions.

4. Dr. Andrew G. Salmon

Dr. Andrew Salmon is Suffolk's expert toxicologist. The bulk of Dr. Salmon's career was spent with the Office of Environmental Health Hazard Assessment ("OEHHA") within the California Environmental Protection Agency, where he worked for 31 years. There, Dr. Salmon "worked in the group undertaking cancer risk assessments for the Proposition 65 program," was "appointed as Section Chief of the group doing health risk assessment for the Air Toxics Hot Spots and Toxic Air Contaminants" programs, and spent six years as a "Scientific Advisor" to the Director. Expert Report of Dr. Andrew G. Salmon ("Salmon Report"), at 2. While at OEHHA, Dr. Salmon also worked with the staff developing the Public Health Goals for the Drinking Water Program, serving as the editor and joint author for the 2001 tetrachloroethylene Public Health Goals publication. Since leaving OEHHA, Dr. Salmon has worked as a consultant, including for the EPA. He holds a doctorate degree from Oxford University in the U.K.

In his rebuttal report, Dr. Salmon states that, in short, his report "summarizes key aspects of the EPA cancer risk assessment of dioxane, explains it in terms of the history and principles of cancer risk assessment and [the] EPA's health-protective mission," and explains how that informed the setting of the New York State Maximum Contaminant Level for dioxane. Expert Rebuttal Report of Dr. Andrew G. Salmon ("Salmon Rebuttal Report"), at 3. Dr. Salmon states that his report is "not intended to be an independent cancer risk assessment." *Id.*

Contrary to the Defendants' contention, Rule 702 permits Dr. Salmon to offer such testimony. The Rule itself provides that an expert "may testify in the form of an opinion or *otherwise*." Fed. R. Evid. 702 (emphasis added). And the Advisory Committee Notes to the Rule explain:

[I]t might also be important in some cases for an expert to educate the factfinder about general principles, without ever attempting to apply these principles to the

specific facts of the case. For example, experts might instruct the factfinder on the principles of thermodynamics, or bloodclotting, or on how financial markets respond to corporate reports, without ever knowing about or trying to tie their testimony into the facts of the case. The amendment does not alter the venerable practice of using expert testimony to educate the factfinder on general principles.

Fed. R. Evid. 702 advisory committee's note to 2000 amendments; *see also* 29 Charles Alan Wright & Arthur R. Miller, Fed. Prac. & Proc. Evid. § 6263 (2d ed.) (Apr. 2025 update) (stating that experts may “describe recognized principles of their specialized knowledge, provide general background, or simply explain other evidence”). In sum, Rule 702 plainly permits Dr. Salmon to offer testimony explaining to the jury general principles and background information that will aid it in understanding the EPA's and NYSDOH's risk evaluations for dioxane, including in drinking water.

Dr. Salmon intends to do more than merely recite EPA and NYSDOH regulatory documents, as the Defendants contend. Dr. Salmon will aid the jury in understanding the risk evaluations made by the EPA and NYSDOH for dioxane by contextualizing those evaluations within the history and general principles of cancer risk assessment.

As a separate basis for excluding Dr. Salmon's testimony, the Defendants argue that Dr. Salmon should not be permitted to testify about EPA's “no safe level” of exposure principle and how it relates to dioxane in drinking water. Because Dr. Salmon does not intend to offer his own opinions, but merely to explain the EPA's position on these topics, this argument amounts to disagreements with the EPA. Such disagreements provide no basis to exclude Dr. Salmon's testimony.

Finally, I turn to the Defendants' remaining requests: Because Suffolk concedes that Dr. Salmon does not opine about the reasonableness of Suffolk's plan to treat dioxane to non-detect levels and does not oppose the Defendants' request to preclude Dr. Salmon from offering such an

opinion, this portion of the Defendants' motion is granted. However, insofar as the Defendants seek additional limitations on Dr. Salmon's testimony, based upon his deposition testimony that he had no opinions in at least five areas of toxicology, such limitations are not properly raised on a *Daubert* motion, and are, therefore, denied without prejudice to renewal at an appropriate time.

5. Randall Lee Rabenhorst

Randall Rabenhorst, Suffolk's market share expert, has more than 30 years of experience working in the "petrochemical and specialty chemical industries as a consultant and advisor to businesses that sold products to other businesses." Expert Report of Randall Lee Rabenhorst ("Rabenhorst Report"), at 3. Mr. Rabenhorst has "been exposed to hundreds of chemical businesses" and "supported dozens of clients in analyzing their market and competitive positions for hundreds of commodity and specialty chemicals" with the goal of recommending strategies for growth and greater profitability. *Id.* His typical consulting engagement involves assessing his client's "market position on multiple levels." *Id.* Mr. Rabenhorst holds an MBA from The Wharton School of the University of Pennsylvania.

Generally, Mr. Rabenhorst opines as to each manufacturer's share of dioxane-stabilized TCA used in Suffolk County. To do so, he calculates each manufacturer's share of dioxane-stabilized TCA shipped to Long Island distributors and Suffolk County end users, excluding shipments to end users located in other Long Island counties. He refers to this metric as "Suffolk County Market Shares." He opines that there were four domestic manufacturers, including Dow and Vulcan, as well as foreign manufacturers, of dioxane-stabilized TCA.⁷

⁷ Mr. Rabenhorst does not opine as to the number of foreign manufacturers of dioxane-stabilized TCA, but as discussed below, in his "best estimate," he opines that foreign manufacturers captured only a small percentage of the Suffolk County dioxane-stabilized TCA market (and national market).

In his “best estimate,” Mr. Rabenhorst opines that, between 1951 and 1997, Dow and Vulcan captured approximately 81% and 15% of Suffolk County Market Shares, respectively, while Ethyl (another U.S. TCA manufacturer) captured 2.9%, and foreign manufacturers accounted for 1% of the market. *See* Expert Rebuttal Report of Randall Lee Rabenhorst (“Rabenhorst Rebuttal Report”), at 29–30. As part of the Suffolk County Market Shares, and based on available sales records, Mr. Rabenhorst opines that nearly all of Dow’s and all of Vulcan’s shipments were made to Long Island distributors, with a significant portion of those shipments being made to distributors located in Suffolk County, while Dow also made some shipments to Suffolk County end users. Mr. Rabenhorst opines that Dow began selling its dioxane-stabilized TCA to Long Island distributors and Suffolk County end users in 1951, and Vulcan began selling its dioxane-stabilized TCA to Long Island distributors in 1972. Mr. Rabenhorst also estimates Suffolk County Market Shares based on four other “scenarios,” which consider different time frames and an expanded geography.

Mr. Rabenhorst explains that Suffolk County Market Shares “reasonably approximates” each manufacturer’s share of dioxane-stabilized TCA used by end users in Suffolk County. Rabenhorst Report, at 40. Among the reasons for that, he opines that Suffolk County was a “distributors’ market.” *Id.*, at 41. Nearly all Suffolk County end users purchased their dioxane-stabilized TCA from Long Island distributors. Other reasons that Mr. Rabenhorst provides include that Long Island distributors sold dioxane-stabilized TCA to customers located all over Long Island, not just to customers residing in the county where the distributor was located; Dow’s and Vulcan’s largest Long Island distributors were geographically well located to serve Suffolk County end users because they had facilities in or near Suffolk County; and only a small fraction of Suffolk

County end users purchased dioxane-stabilized TCA from distributors located outside of Long Island.

With respect to Ferro, Mr. Rabenhorst opines that Ferro manufactured approximately 20% of the dioxane in dioxane-stabilized TCA used in Suffolk County. To reach this conclusion, he calculates the percentage of dioxane that Ferro manufactured that was contained in dioxane-stabilized TCA that Dow and Vulcan shipped to Long Island distributors and Suffolk County end users. Between 1951 and 1975, he opines, Ferro manufactured 0% of the dioxane contained in Dow's and Vulcan's dioxane-stabilized TCA. Between 1976 and 1988, he opines that Ferro manufactured 0% and 75% of the dioxane contained in Dow's and Vulcan's dioxane-stabilized TCA, respectively. Mr. Rabenhorst points to evidence that, during this period, Vulcan was Ferro's largest dioxane customer or one of its largest dioxane customers. As of 1988, Dow was Ferro's largest dioxane customer and Vulcan was Ferro's second largest dioxane customer. By 1989, Mr. Rabenhorst opines, "Ferro became the sole U.S. producer" of dioxane. Rabenhorst Rebuttal Report, at 42. Between 1989 and 1997, Ferro manufactured 100% and at least 75% of the dioxane contained in Dow's and Vulcan's dioxane-stabilized TCA, respectively.

Mr. Rabenhorst's opinions are the subject of two motions in limine: one by Dow and Vulcan and the other by Ferro.

i. Dow and Vulcan Motion to Exclude

Dow and Vulcan argue that Mr. Rabenhorst's opinions should be excluded because they would not help the jury, i.e., they are not relevant. Specifically, they argue, Mr. Rabenhorst's market share analysis estimates Dow's and Vulcan's shares of the market for dioxane-stabilized TCA, rather than Dow's and Vulcan's shares of the market for all dioxane products. This argument is easily rejected. Suffolk seeks damages to treat the 253 TCA Claim Wells where, were the jury

to credit Dr. Kern, the predominant source of dioxane contamination is from dioxane-stabilized TCA. Thus, the relevant market for considering what sources were responsible for the predominant contamination of the TCA Claim Wells *is* the market for dioxane-stabilized TCA, not a broader dioxane market.

In a similar vein, Dow and Vulcan argue that Mr. Rabenhorst's opinion should be excluded as irrelevant and unreliable because he took "direction from counsel" on what to include in his report, namely, Suffolk's counsel asked him to analyze the dioxane-stabilized TCA market, rather than the dioxane market more generally. Dow's and Vulcan's Mot. to Exclude Mr. Rabenhorst's Opinion, at 16. But, again, under Suffolk's theory of the case, the dioxane-stabilized TCA market is the relevant market and that Suffolk limited the scope of Mr. Rabenhorst's analysis to what was relevant does not provide a basis to exclude his opinion.

Dow and Vulcan also argue that Mr. Rabenhorst's methodology for measuring their Suffolk County Market Shares is unreliable. This argument is without merit. Mr. Rabenhorst relied on government data, market reports, including an internal market report created by Dow, and other documents and testimony produced during this litigation to identify domestic producers of TCA and dioxane-stabilized TCA. From there, he identified which domestic manufacturers sold dioxane-stabilized TCA to Long Island distributors and Suffolk County end users, and he accounted for foreign manufacturer imports. To opine as to their market shares, Mr. Rabenhorst reviewed Dow's and Vulcan's own sales records; other documents and testimony produced during this litigation; and calculated foreign TCA imports. Where there were gaps in the data, such as for Dow from 1951 (the year Mr. Rabenhorst opines Dow began producing dioxane-stabilized TCA) to 1977 (the first year of Dow's available sales records), Mr. Rabenhorst employs statistical

techniques to “backcast” their sales. Rabenhorst Report, at 45–48.⁸ Mr. Rabenhorst relies on sufficient facts and applies a reliable methodology to those facts to reach his market share estimates.⁹

Dow’s and Vulcan’s remaining arguments, which are based largely on the opinions of their own expert, Dr. Richard Bergin (and are addressed in Mr. Rabenhorst’s rebuttal report) regarding the sufficiency of facts that Mr. Rabenhorst relied on and the reliability of conclusions that Mr. Rabenhorst drew, are rejected. Dow and Vulcan contend that Mr. Rabenhorst misreads Vulcan’s pre-1990 sales records to reflect “ship-to” locations when they did not specify whether they were “ship to” or “sold to” locations; that Mr. Rabenhorst incorrectly assumes that dioxane-stabilized TCA sold to distributors in all four Long Island counties had an equal chance of being sold in Suffolk County; and that Mr. Rabenhorst improperly determines that the “vast majority” of dioxane-stabilized TCA shipped to Long Island distributors was likely sold to Long Island end users because, he opines, the “moat” of water that surrounds Long Island made it “very difficult, time-intensive, and costly to” ship dioxane-stabilized TCA onto and off of Long Island.

⁸ Dow and Vulcan challenge Mr. Rabenhorst’s “backcasting.” Mr. Rabenhorst explains that he used “standard statistical techniques” to “backcast” Dow’s dioxane-stabilized TCA sales, which he describes in a step-by-step manner in his report. Rabenhorst Report, at 45–48. Mr. Rabenhorst relies on sufficient facts and employs a reliable methodology for this analysis.

⁹ Dow and Vulcan requested to supplement their motion to exclude the opinion of Mr. Rabenhorst with the deposition testimony of Eva Gregory prior to taking Ms. Gregory’s deposition. I denied that request as untimely. *See* Order Den. Mot. to Suppl., Feb. 3, 2025. After taking Ms. Gregory’s deposition testimony, Dow and Vulcan make the same request. The request is again denied as untimely. Moreover, nothing that Dow and Vulcan point to in Ms. Gregory’s deposition testimony contradicts Mr. Rabenhorst’s opinion that PPG (another U.S. TCA manufacturer) did not sell dioxane-stabilized TCA on Long Island. Although Ms. Gregory was not aware that, for a “narrow period of time,” Rabenhorst Report, at 26, PPG manufactured dioxane-stabilized TCA, Mr. Rabenhorst *was* aware of that fact and acknowledged it in his report, but concluded that PPG never sold dioxane-stabilized TCA on Long Island. The challenge to Mr. Rabenhorst’s reliance on Ms. Gregory’s affidavit goes, at most, to the weight, not the admissibility, of Mr. Rabenhorst’s opinion.

Rabenhorst Rebuttal Report, at 3. However, for each conclusion, Mr. Rabenhorst relies on sufficient facts and reliably explains why such facts led him to reach those conclusions. To the extent that Dow and Vulcan dispute Mr. Rabenhorst's interpretations of the evidence, including based on the opinions of their own expert Dr. Bergin, such disagreements go to the weight, not the admissibility, of Mr. Rabenhorst's testimony.¹⁰

ii. Ferro Motion to Exclude

Ferro primarily challenges an intermediate step in Mr. Rabenhorst's calculation of Ferro's market share, namely, Mr. Rabenhorst's estimate that Ferro manufactured 75% of the dioxane in Vulcan's dioxane-stabilized TCA shipped to Long Island distributors and Suffolk County end users between 1976 and 1997, the years that Mr. Rabenhorst opines that Ferro manufactured dioxane for Vulcan. Ferro's challenge is rejected. Mr. Rabenhorst amassed a variety of evidence informing this opinion, including the Defendants' internal documents, witness testimony, and other records. Such evidence, Mr. Rabenhorst notes, includes an internal Ferro document in which Ferro identified Vulcan as its largest dioxane customer and estimated that Vulcan purchased 75% of its dioxane (which it used to make TCA) from Ferro; testimony from Ferro employees stating that Vulcan was one of Ferro's largest dioxane customers during the 1980s; and evidence that, by 1989, Ferro became the sole U.S. producer of dioxane. That evidence provided Mr. Rabenhorst with sufficient facts from which to form his opinion, and he applied a reliable methodology to such data to reach his opinion.

¹⁰ Dow's and Vulcan's request to supplement the summary judgment record with an addendum to the Rebuttal Expert Report of Dr. Richard Bergin based on the deposition testimony of Eva Gregory is denied as untimely. Moreover, as discussed in Footnote 9, nothing that Dow and Vulcan point to in Ms. Gregory's deposition testimony contradicts Mr. Rabenhorst's opinions and is reason to exclude them under Rule 702.

Ferro also contends that Mr. Rabenhorst should be precluded from testifying that the dioxane in Dow's dioxane-stabilized TCA was "attributable" to Ferro because Ferro only toll manufactured dioxane for Dow. Ferro's Reply to Mot. to Exclude Mr. Rabenhorst's Opinion, at 9. Ferro also argues that Mr. Rabenhorst should be precluded from opining that his 0% estimate for the share of dioxane that Ferro manufactured in Dow's and Vulcan's dioxane-stabilized TCA for certain periods is a "highly conservative" estimate or a "likely underestimate." Rabenhorst Rebuttal Report, at 40, 42. Neither of these arguments undermine Mr. Rabenhorst's opinion regarding the percent of dioxane that Ferro manufactured that was shipped in Dow's or Vulcan's dioxane-stabilized TCA to Long Island and provide no basis for excluding his opinions under Rule 702.

6. Dr. Ruston M. Hunt

Dr. Ruston Hunt holds a Master of Science degree in Industrial Engineering and a Ph.D. in Mechanical Engineering from the University of Illinois. He has more than 40 years of experience "in industrial, mechanical, systems, and human factors engineering." Expert Report of Dr. Ruston Hunt ("Hunt Report"), at 4. He explains that human factors engineering is defined generally as "application of knowledge about human capabilities and limitations to product design and development to achieve efficient, effective, and safe performance, while considering cost, skill levels, and training demands." Expert Rebuttal Report of Dr. Ruston Hunt ("Hunt Rebuttal Report"), at 9. After completing his studies, Dr. Hunt founded and operated Search Technology, Inc., a firm involved "exclusively with applied research and development in Human Factors Engineering." Hunt Report, at 2. For more than twenty years, Search Technology, Inc. secured research or applied development contracts in human factors engineering from government agencies and commercial and industrial customers. After selling his firm, and for approximately

fifteen years until his retirement, Dr. Hunt served on the faculty of various universities, teaching human factors and related undergraduate and graduate level courses. Throughout his career, Dr. Hunt has served as a consultant on a wide variety of consumer and industrial products. As a consultant, he has been “involved in product analysis and design,” with an emphasis on warnings and instructions, which required him to develop and maintain “an expertise in design and human factors as it relates to how humans interact with products and the manufactured environment.” *Id.*, at 3.

Generally, Dr. Hunt opines that the Defendants’ on-product precautionary labeling, Material Safety Data Sheets (“MSDSs”), and “collateral materials,” including, for example, safety posters, product brochures and technical manuals, did not adequately identify the hazards of dioxane; the consequences of improper handling and disposal of dioxane; and the proper methods of handling and disposal of dioxane-stabilized TCA and dioxane. Hunt Report, at 32. Dr. Hunt opines that the Defendants’ failure to provide adequate warnings and instructions more likely than not contributed to the release of dioxane into the Suffolk County groundwater. Finally, he opines that the Defendants failed to follow the “basic” tenets of “Product Stewardship” by, among other reasons, failing to verify with their customers and end users that they understood the hazards associated with the improper handling and disposal of dioxane and were following proper methods for handling and disposal of dioxane. *Id.*

To reach his opinions, Dr. Hunt’s “overarching approach” is based on the “System Safety Standard, Mil-Std-882.” Dr. Ruston Hunt Dep. Tr. 291; Hunt Report, at 4. As Dr. Hunt explains, the Mil-Std-882 “defines a framework for” the “management of environmental, safety, and health mishap risks encountered in the development, test, production, use, and disposal of [Department of Defense] systems, subsystems, equipment, and facilities.” Hunt Rebuttal Report, at 2. It was

originally developed by and for the military. However, the International Council on Systems Engineering “recognizes that the eight top level activities identified in Mil-Std-882 that define the system safety process” “are actually quite generic and applicable to almost any system safety process.” *Id.*, at 3. Thus, several government agencies, including the Occupational Safety and Health Administration, the Food and Drug Administration, and the National Highway Traffic Safety Administration, have applied elements of the Mil-Std-882 in their safety standards outside of the military context.

In his report, Dr. Hunt explains that, for this case, he “expanded” on the Mil-Std-882 to “include consumer, commercial, and industrial applications,” which is a process he has applied in “hundreds of projects” in his career. Hunt Report, at 4. This process included his review and discussion of, among other information, Suffolk’s other experts’ reports, human factors literature, industry association guidance, American National Standards Institute guidelines and Dow’s and Vulcan’s warnings. In his report, Dr. Hunt states that his methodology “consists of generally accepted practices performed by practitioners of human factors engineering,” and the “steps” “in this methodology” are “generally accepted in the human factors engineering profession.” *Id.*

The motion to exclude Dr. Hunt is brought only by Dow and Vulcan, except for one argument that Ferro joins. This is because, according to the Defendants, Dr. Hunt withdrew all his opinions as to Ferro. However, because Dr. Hunt “made a handful of statements as to Ferro’s general obligations to customers,” including what the Defendants describe as “a duty to verify,” Ferro joins in the motion to exclude to the extent it seeks to exclude Dr. Hunt’s “duty to verify” opinions. Defs.’ Mot. to Exclude Dr. Hunt’s Opinion, at 1 n.1.

Dow and Vulcan contend that Dr. Hunt is unqualified because he does not have prior experience applying human factors principles to products containing dioxane or chemicals

generally. But that is not necessary. Dr. Hunt is an expert in human factors principles and has applied those principles to a wide variety of consumer and industrial products. And, Dr. Hunt testified at his deposition that, based on his expertise, there is no basis in the record to conclude that such principles do not apply to the warnings or products at issue in this case.

Dow's and Vulcan's argument that Dr. Hunt fails to employ a reliable methodology is also rejected. Dow and Vulcan describe Dr. Hunt's methodology as "opaque" and "subjective." Defs.' Reply to Mot. to Exclude Dr. Hunt's Opinion, at 5. But Dr. Hunt details his methodology on a step-by-step basis in his report at a general level, *see* Hunt Report, at 4–5, and then describes how that methodology applies to the facts of this case in more detail, including with citation to and discussion of the materials he relies on in reaching his opinions. Dr. Hunt's methodology, based on the Mil-Std-882 but "expanded," as described above, is reliable and Dr. Hunt reliably applies it to the facts of this case.

Even were I to accept Dow's and Vulcan's argument that Dr. Hunt's opinion includes some subjectivity, that does not render his opinion excludable. The Second Circuit has explained that *Daubert* does not require exclusion of methods that include subjectivity and "are not entirely replicable because they are based in part on [an expert's] personal experience." *United States v. Romano*, 794 F.3d 317 (2d Cir. 2015); *see also United States v. Gil*, 680 F. App'x 11, 13 (2d Cir. 2017). And courts have held the same in the context of admitting the opinions of human factors experts. For example, in *Jenks v. New Hampshire Motor Speedway*, 2012 WL 405479 (D.N.H. Feb. 8, 2012), the district court found reliable a human factors expert's method that considered "established standards and guidelines for product warnings, as well as warnings and human factors literature and his own extensive experience and training in human factors analysis." *Id.* at *3; *see also, e.g., Donner v. Alcoa Inc.*, 2014 WL 12617747, at *2 (W.D. Mo. Dec. 19, 2014); *Mizrahi v.*

Yamaha Motor Corp., U.S.A., 2019 WL 3318527, at *10 (S.D. Fla. July 19, 2019), *R&R adopted*, 2019 WL 3315142 (S.D. Fla. July 23, 2019).

Dow and Vulcan also argue that Dr. Hunt did not rely on sufficient facts and data in reaching his opinion about the inadequacy of Dow's and Vulcan's warnings because he did not test such warnings on end users. However, as described above, Dr. Hunt relies on a host of information in evaluating the inadequacy of Dow's and Vulcan's warnings, including human factors principles and literature; discovery in this case, including Suffolk's other experts' reports; chemical industry guidance; and the warnings themselves. Such information provided Dr. Hunt with sufficient facts and data to render his opinions. *See Jenks*, 2012 WL 405479, at *3 (explaining that a human factors expert does not need to test the warnings to be admissible); *Donner*, 2014 WL 12617747, at *2 (same); *Mizrahi*, 2019 WL 3318527, at *9–10 (same).

For similar reasons, there is no basis to exclude Dr. Hunt's opinion regarding the adequacy of Dow's and Vulcan's warnings merely because he does not suggest an alternative warning. *See Donner*, 2014 WL 12617747, at *2 (explaining that a human factors expert does not need to propose an alternative warning to be admissible); *Mizrahi*, 2019 WL 3318527, at *11 (same). Dr. Hunt's review of the above-discussed dataset was sufficient for him to opine about what Dow's and Vulcan's warnings should have, but failed to, convey.

Dow's and Vulcan's argument that Dr. Hunt's causation opinion must be excluded because Dr. Hunt lacks data on end users is also unpersuasive. Dr. Hunt relied on a sufficient dataset to opine that Dow and Vulcan failed to convey the consequences of improper handling and disposal of, and unequivocal direction for, the proper methods of handling and disposal of dioxane and dioxane-stabilized TCA. That dataset was also sufficient for Dr. Hunt to opine that the failure to

provide such warnings “more likely than not contributed to the release of dioxane into the Suffolk County environment.” Hunt Report, at 34.

Finally, Dow and Vulcan, here joined by Ferro, seek to exclude the opinions that Dr. Hunt expresses relating to his finding that Dow and Vulcan failed to verify with end users that their warnings were effective and that it was a “basic” tenet of “Product Stewardship” to do such verification. They argue that there is no duty to verify and that his opinions provide no evidence that the Defendants could control end users or had a special relationship with Suffolk. I agree that Dr. Hunt may not opine about the contents of a “duty to verify,” as it is not the role of the expert, but of the court, to define the relevant duty for the jury. More fundamentally, there is no claim by Suffolk of such a “duty to verify.” Nor, as discussed below, are Suffolk’s negligence claims premised on an allegation that the Defendants had control over end users or a relationship creating a special duty to Suffolk. As the Defendants offer no challenge to the admissibility of Dr. Hunt’s absence of verification opinions to the extent that they provide evidence for the claims that Suffolk is bringing, such as its failure to warn claims, there is no basis to exclude his opinions under Rule 702. Any further evaluation of the admissibility of his opinions must await more focused briefing by the parties and review at trial.

7. Steven Amter

The motion to exclude as to Steven Amter was resolved at oral argument. Briefly, I noted that the Defendants sought to exclude only three of Mr. Amter’s opinions: the first relating to causation, the second relating to Mr. Amter’s references to the duty owed by the Defendants and the third relating to whether the “Defendants’ warnings for dioxane and TCA failed to meet the ‘prevailing industry standard’ of care applicable to chemical manufacturers.” Defs.’ Mot. to Exclude Mr. Amter’s Opinion (“Amter Reply”), at 1. As to the first challenged opinion, I agreed

with Suffolk that Mr. Amter does not offer a causation opinion and, therefore, it was unnecessary to exclude such an opinion. As to the second challenged opinion, I agreed with the Defendants, as did Suffolk, that Mr. Amter would not be permitted to define the Defendants' duty. As to the third challenged opinion, neither party took issue with my view that it was not relevant to the summary judgment motions and could be addressed later.

III. Summary Judgment Motions

A. Summary Judgment Standard

A party is entitled to summary judgment if “there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a); *Celotex Corp. v. Catrett*, 477 U.S. 317, 322–23 (1986). Only disputes relating to material facts — i.e., “facts that might affect the outcome of the suit under the governing law” — will properly preclude the entry of summary judgment. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986). An issue of fact is “genuine” if “the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *Id.* In determining whether to grant summary judgment, the court must “construe all evidence in the light most favorable to the nonmoving party, drawing all inferences and resolving all ambiguities in its favor.” *Dickerson v. Napolitano*, 604 F.3d 732, 740 (2d Cir. 2010).

“When the burden of proof at trial would fall on the nonmoving party, it ordinarily is sufficient for the movant to point to a lack of evidence . . . on an essential element of the nonmovant’s claim.” *Jaramillo v. Weyerhaeuser Co.*, 536 F.3d 140, 145 (2d Cir. 2008) (citing *Celotex*, 477 U.S. at 322–23). In turn, to defeat a motion for summary judgment, the nonmoving party must raise a genuine issue of material fact. It must do more than show that there is “some metaphysical doubt as to the material facts,” *Higazy v. Templeton*, 505 F.3d 161, 169 (2d Cir.

2007), and “may not rely on conclusory allegations or unsubstantiated speculation,” *Jeffreys v. City of New York*, 426 F.3d 549, 554 (2d Cir. 2005). However, “all that is required [from the non-moving party] is that sufficient evidence supporting the claimed factual dispute be shown to require a jury or judge to resolve the parties’ differing versions of the truth at trial.” *In re Methyl Tertiary Butyl Ether (“MTBE”) Prods. Liab. Litig.*, 824 F. Supp. 2d 524, 532–33 (S.D.N.Y. 2011).

B. Statute of Limitations

Defendants seek dismissal of all claims on statute of limitations grounds. Suffolk argues that, even assuming its claims lapsed, which it argues separately that they did not, they are timely under N.Y. CPLR 214-h(5)’s claim revival provision:

Any action, civil claim, or cause of action involving an emerging contaminant that is barred as of the effective date of this subdivision because the applicable period of limitation has expired is hereby revived, and such action, civil claim, or cause of action thereon may be commenced and prosecuted provided such action, civil claim, or cause of action is commenced either before or within one year and six months following the effective date of this subdivision.

The Defendants do not argue that Suffolk did not commence this action “before or within one year and six months following the effective date” of N.Y. CPLR 214-h(5), which was October 2022, or that this is not an action involving an “emerging contaminant,” as defined in N.Y. CPLR 214-h. Rather, the Defendants argue that subdivision (5) of N.Y. CPLR 214-h is unconstitutional under the New York Constitution’s Due Process Clause.¹¹

The New York Court of Appeals in *In re World Trade Center Lower Manhattan Disaster Site Litigation*, 30 N.Y.3d 377, 393–94 (2017), clarified the standard of review for a New York State Due Process Clause challenge to a claim-revival provision. It explained that “a claim-revival

¹¹ Pursuant to Federal Rule of Civil Procedure 5.1(b) and 28 U.S.C. § 2403(b), I directed notice to the New York State Attorney General that the constitutionality of N.Y. CPLR 214-h was being challenged under the New York Constitution’s Due Process Clause. She has elected not to intervene at this time.

statute will satisfy the Due Process Clause of the State Constitution if it was enacted as a reasonable response in order to remedy an injustice.” *Id.* at 400. Discussing, first, the inquiry into whether there was an “injustice,” the Court stated that, in “the context of a claim-revival statute, there is no principled way for a court to test whether a particular injustice is ‘serious’ or whether a particular class of plaintiffs is blameless; such moral determinations are left to the elected branches of government.” *Id.* Rather, a court must simply consider whether “there existed an identifiable injustice that moved the legislature to act.” *Id.* at 399. In this inquiry, courts have looked to the text as well as the legislative history of the claim revival provision. *See Carroll v. Trump*, 650 F. Supp. 3d 213, 220–22 (S.D.N.Y. 2023). The court must then determine whether the “legislature’s revival of the plaintiff’s claims for a limited period of time was reasonable in light of that injustice.” *In re World Trade Ctr.*, 30 N.Y.3d at 400.

Turning to the first part of the inquiry, it is necessary to consider the history of N.Y. CPLR 214-h, which was enacted in 2019. The statute provides for a three-year limitations period for any claim “brought by a public water supplier or wholesale water supplier against any person to recover damages for injury to property owned, managed or operated by a public water supplier or a wholesale water supplier resulting from the presence of a contaminant in a source of water supply.” N.Y. CPLR 214-h(2). The three-year limitations period commences upon the latest of three occurrences, which are provided for in the statute.¹² In explaining the justification for enacting the law in 2019, New York State Senator James Gaughran’s sponsor’s memorandum stated:

¹² The three occurrences are:

- (a) the detection of a contaminant in the raw water of each well or plant intake sampling point in excess of any notification level, action level, maximum contaminant level, or maximum contaminant level goal established by the commissioner of health, the department of health or the United States Environmental Protection Agency for that contaminant;

[N]ew drinking regulations will result in new and significant costs for public water suppliers, their customers and the state. Public water suppliers can mitigate these costs through litigation against polluters who caused or who are responsible for the contamination of sources of water supply. However, Civil Practice Law and Rules Section 214, 214-c and court rulings interpreting these statutes have made it difficult for public water suppliers to overcome statute of limitations defenses raised by polluters in many cases.

Senate Introducer's Mem. in Support, Bill Jacket, 2019 Senate Bill 3337, ch. 442.

As originally enacted, N.Y. CPLR 214-h did not contain subdivision (5), the claim-revival provision quoted above. In 2020, the New York Court of Appeals decided *Regina Metropolitan Co. v. New York State Division of Housing & Community Renewal*, 35 N.Y.3d 332 (2020), in which it explained that it takes “an unambiguous statement of legislative intent” to “revive time-barred claims.” *Id.* at 371. It held that Part F of the newly enacted Housing Stability and Tenant Protection Act of 2019, which was the law at issue in that case, did not contain such a statement.

Responding to *Regina*, the New York State Legislature enacted subdivision (5) of N.Y. CPLR 214-h. Senator Gaughran's sponsor's memorandum explained the justification for enacting the new provision:

While 214-h was intended to be remedial in nature and have retroactive effect, a recent Court of Appeals decision entitled *Regina Metropolitan Co. v. New York State Division of Housing and Community Renewal*, 35 N.Y.3d 332 (2020) may call the retroactive effect of the language of section 214-h into question.

(b) the last wrongful act by any person whose conduct contributed to the presence of a contaminant in a source of water supply or the raw water of each well or plant intake sampling point; or

(c) the date the contaminant is last detected in the raw water of each well or plant intake sampling point in excess of any notification level, action level, maximum contaminant level, or maximum contaminant level goal established by the commissioner of health, the department of health or the United States Environmental Protection Agency for that contaminant.

N.Y. CPLR 214-h(2).

This amendment to section 214-h is intended make it clear that section 214-h is intended to have retroactive effect and to revive any actions involving emerging contaminants that have ever been identified in or listed, or that have ever been required to be identified or listed, pursuant to section one thousand one hundred twelve of the public health law or any other law.

Senate Introducer’s Mem. in Support, Bill Jacket, 2022 Senate Bill 8763, ch. 566 (*italics added*).

Thus, as consideration of the text and history of subdivision (5) of N.Y. CPLR 214-h makes plain, the New York State Legislature responded to an “identifiable injustice” when it enacted N.Y. CPLR 214-h(5). *In re World Trade Ctr.*, 30 N.Y.3d at 399. It intended that the statute would allow public water suppliers to mitigate pollution “costs through litigation against polluters who caused or who are responsible for the contamination of sources of water supply” by enabling them to overcome statute of limitations defenses. And, in enacting N.Y. CPLR 214-h(5), the New York Legislature sought to ensure that public water suppliers with already time-barred claims would not be precluded from bringing such claims after the *Regina* decision. It is not for me to second-guess the New York Legislature. *See id.* at 400.

Turning to the second part of the inquiry, subdivision (5) revives only those actions or claims “involving” an “emerging contaminant,” as defined in N.Y. CPLR 214-h, not as the Defendants argue, “an undefined universe of claims,” *see* Defs.’ Joint Mot. for Summ. J. (“Defs.’ Joint Mot.”), at 47. And it does so for those actions or claims that were “commenced either before or within one year and six months following the effective date of” N.Y. CPLR 214-h(5), including, as in this case, actions that were pending at the time of its effective date. The Defendants contend that the claim-revival provision may reopen claims from long ago, but the Legislature is “entitled to make [such] determinations.” *See PC-41 Doe v. Poly Prep Country Day Sch.*, 590 F. Supp. 3d

551, 564 (E.D.N.Y. 2021). In short, N.Y. CPLR 214-h(5) was a reasonable response to remedy the identified injustice. *See id.* at 563–65.¹³

The Defendants also argue that I should find the claim revival provision unconstitutional because New York State Senator Gaughran was a former Chair of Suffolk County Water District, which provided input on the legislation. However, there is no basis for rejecting legislation on that ground nor do Defendants offer one.¹⁴ The Defendants also contend that claim revival statutes should be found constitutional only in “rare and exceptional circumstances.” Defs.’ Joint Mot., at 43. On the contrary, the New York Court of Appeals has said just the opposite: “modern cases reflect a less rigid view of the Legislature's right to pass such legislation.” *In re World Trade Ctr.*, 30 N.Y.3d at 400.

¹³ The Defendants posit hypothetical facts that they argue demonstrate that the claim-revival provision is not a reasonable response to remedy the injustice identified by the New York Legislature. For example, they suggest that N.Y. CPLR 214-h(5) may revive claims that have already been dismissed or those involving an “emerging contaminant” that had not yet been identified at the time the claim-revival provision was passed. Their arguments, which ask me to consider the constitutionality of the claim-revival provision as-applied to the individual circumstances of particular plaintiffs, are not available under New York law. *See Hymowitz v. Eli Lilly & Co.*, 73 N.Y.2d 487, 515 (1989) (explaining that the Legislature can properly make “fair[ness]” determinations across plaintiffs); *see also Poly Prep*, 590 F. Supp. 3d at 564 & n.11 (explaining the same and citing *Hymowitz*); *J.S.M. v. City of Albany Dep’t of Gen. Servs.*, 83 Misc. 3d 1082, 1088–89 (Sup. Ct., Albany Cnty. 2024) (same).

¹⁴ In a variation of this argument, the Defendants seek leave to supplement the summary judgment record with two emails that include Suffolk’s then-Chief Legal Officer Timothy Hopkins, other members of Suffolk’s senior management, and Long Island Water Conference members, including the Long Island Water Conference’s General Counsel Michael Ingham. The email chain notes that Long Island water suppliers sought to secure passage of N.Y. CPLR 214-h(5), expresses support for its passage and explains that it was necessary because of how a recent federal case had applied the *Regina* decision. Even if I consider it, this email chain adds nothing new to what was discussed in the text. That Long Island water suppliers, including Suffolk, sought to secure passage of the claim revival-provision is not a basis for finding it unconstitutional.

Accordingly, the Defendants' challenge to the timeliness of Suffolk's claims is rejected.¹⁵

C. Suffolk's Claims

Suffolk's claims are based on New York common law: strict products liability and negligence for defective design and failure to warn; trespass; and public nuisance.¹⁶

Preliminarily, I address the Defendants' argument that Suffolk is unable to show that remote manufacturers such as themselves had any "special duty" to Suffolk nor that they had control over end users of their products that could serve as a basis for Suffolk's negligence claims. In response, Suffolk disavows that its negligence claims rely on any "special duty" or on a claim that the Defendants had control over end users. Analysis of its claims shows that Suffolk is correct.¹⁷ Insofar as the Defendants make arguments directed to Suffolk's actual claims regarding their status as remote manufacturers or their lack of control over end users, those arguments are addressed below.¹⁸

¹⁵ Because I find that, even assuming Suffolk's claims lapsed, Suffolk's claims were timely under N.Y. CPLR 214-h(5), I do not reach Suffolk's alternative argument that its claims never lapsed under N.Y. CPLR 214-c(2).

¹⁶ In their opposition, Suffolk argued that its negligence claim was also premised on a "duty to test." See Pl.'s Opp. to Joint Mot. for Summ. J. ("Pl.'s Opp. to Joint Mot."), at 52 (quoting *George v. Celotex Corp.*, 914 F.2d 26, 28 (2d Cir. 1990)). However, at oral argument, Suffolk clarified that it does not intend the "duty to test" to be an independent claim; it intends only that the "duty to test" support its design defect claims. Accordingly, I have not treated Suffolk's asserted "duty to test" as a duty separate from its design defect claims.

¹⁷ The Defendants' reliance on *SUEZ Water N.Y. Inc. v. E.I. du Pont de Nemours & Co.* ("*SUEZ I*"), 578 F. Supp. 3d 511 (S.D.N.Y. 2022), for this point is misplaced. The Defendants highlight *SUEZ I*'s discussion of the failure of the plaintiff in that case to allege a "special duty" or control over end users. However, that discussion is inapposite, because, Suffolk does not rely on such duties but only on defective design and failure to warn, which *SUEZ I* acknowledges as viable New York claims. See *id.* at 553–54, 558.

¹⁸ In a separate argument applicable to all Suffolk's claims, Dow argues that summary judgment should be granted to the extent that Suffolk seeks to hold Dow liable for pre-1971 conduct. It argues that Suffolk lacks evidence that Dow's dioxane-stabilized TCA was used in Suffolk County before 1971. However, Suffolk's experts, Mr. Mohr and Mr. Rabenhorst, opine that Dow's

1. Defective Design

Suffolk brings design defect claims under both strict liability and negligence theories. As the parties agree, these claims are analyzed under the same standard. *See Adams v. Genie Indus., Inc.*, 14 N.Y.3d 535, 543 (2010) (citing *Denny v. Ford Motor Co.*, 87 N.Y.2d 248, 258 (1995)). To prevail, “the plaintiff must show that the manufacturer breached its duty to market safe products when it marketed a product designed so that it was not reasonably safe and that the defective design was a substantial factor in causing plaintiff’s injury.” *Voss v. Black & Decker Mfg. Co.*, 59 N.Y.2d 102, 107 (1983). The plaintiff has the burden of presenting evidence that the product at issue was “not reasonably safe” because it posed “a substantial likelihood of harm” and that “it was feasible to design the product in a safer manner.” *Id.* at 108.

This inquiry generally requires a plaintiff to introduce admissible expert testimony that there is “a technologically feasible and practical alternative design that would have reduced or prevented the harm to the plaintiff.” *Guarascio v. Drake Assocs. Inc.*, 582 F. Supp. 2d 459, 463 (S.D.N.Y. 2008); *Cuntan v. Hitachi KOKI USA, Ltd.*, 2009 WL 3334364, at *6–*7 (E.D.N.Y. Oct. 15, 2009); *Cibbarelli v. Bombardier, Inc.*, 2004 WL 3090594, at *4 (E.D.N.Y. Sept. 3, 2004). “[T]he absence of expert testimony is fatal to a case unless a reasonable alternative design is both obvious to, and understandable by, a lay person.” *Guarascio*, 582 F. Supp. 2d at 463.

Suffolk’s defective design claims against all three of the Defendants rest on its allegation that Dow and Vulcan could have used 1,3-dioxolane (“dioxolane”) as an alternative to stabilize TCA. It is not disputed that several government agencies have classified dioxane as a carcinogen,

dioxane-stabilized TCA was used in Suffolk County as early as the 1950s. Because the Defendants’ motions to exclude Mr. Mohr’s and Mr. Rabenhorst’s opinions are denied, their opinions create a genuine issue of material fact to the extent that Suffolk seeks to hold Dow liable for pre-1971 conduct. Accordingly, Dow’s summary judgment motion on this issue is denied.

nor is it disputed that dioxolane could have been used as a TCA stabilizer. The issue here is only whether Suffolk has sufficient proof that using dioxolane would been a *safer* alternative design to dioxane-stabilized TCA.

Suffolk argues that its experts, Dr. Bruce Dale, a chemical engineer, and Mr. Amter, satisfy the expert evidence requirement, but those experts do not address whether dioxolane is safer than dioxane. *See Zaremba v. Gen. Motors Corp.*, 360 F.3d 355, 359 (2d Cir. 2004) (“It is not enough for [an expert] to testify reliably that his hypothetical alternative design would, in some respects, have better performance than [the product] involved in the accident; to provide relevant testimony [the expert] must also establish that his hypothetical design would have resulted in greater safety . . .”). Dr. Dale offers an opinion on dioxolane’s stabilizing function and concludes that dioxolane’s effectiveness at stabilizing TCA is “reasonably equivalent” to dioxane. Expert Report of Bruce E. Dale, at 3. His report discusses, among other things, the stabilizing function of dioxolane; the criteria that TCA manufacturers weigh in selecting a stabilizer, such as cost, performance, and toxicity; and dioxane-free stabilizer packages marketed by Dow and Vulcan. *Id.* at 8–17. He does not discuss the toxicity of dioxolane or its likelihood of reducing or preventing harm relative to dioxane. Mr. Amter, in his report, provides an account of the Defendants’ research into and knowledge of alternative TCA stabilizers, such as dioxolane. Expert Report of Steven Amter (“Amter Report”), at 52–57. But like Dr. Dale, he does not express any opinion regarding dioxolane’s safety. He merely refers to the Defendants’ own documents which indicate concern about the toxicity of dioxane and that dioxolane is “reportedly” less toxic because, according to defendant Ferro, it passed the Ames test, while dioxane did not.¹⁹ *Id.*, at 53–54.

¹⁹ Suffolk relies on a Ferro document, quoted by Mr. Amter, which states: “Dioxolane’s use, vis a vis Dioxane, as a component for the inhibitor package for [TCA] is also receiving increased attention because dioxolane is reportedly less toxic than dioxane. Dioxolane passes the Ames test

As the Defendants point out, not only does Suffolk not offer expert testimony about dioxolane's safety, but, when asked about its safety, Suffolk's experts declined to offer an opinion. I have carefully reviewed the reports of Suffolk's experts and the deposition testimony of Suffolk's experts proffered by the Defendants. Dr. Salmon testified that there was very little information about dioxolane and that he does not, and cannot, offer an opinion that dioxolane could have been a safer alternative. Dr. Andrew Salmon Dep. Tr. 200–02. When Dr. Salmon's testimony was recited to Mr. Amter and Mr. Amter was asked whether he agreed with it, he responded that, "at the time," "there was less information about dioxolane's toxicity than there was about dioxane," and there was "some belief" that dioxolane might be a better alternative, but there was also "uncertainty," "a lack of information," and "more hoping rather than knowing." Steven Amter Dep. Tr. 179–85. When Mr. Amter was asked if he could "say one way or another, whether or not [dioxolane is] a safer alternative," he responded, "I don't give opinions of that type." *Id.* 184–85. And when Dr. Salmon's same testimony was read to Dr. Dale, he responded: "Since the beginning I have stated that I'm not going to offer opinions regarding the safety, relative safety of the product so you are asking whether I agree or disagree with that statement, but I have no opinion on that." Dr. Bruce Dale Dep. Tr. 108–10. It is thus apparent that Suffolk's experts will not offer their opinions on whether dioxolane was a safer alternative, without which Suffolk's claim cannot survive summary judgment.

whereas dioxane does not. The Ames test is a measure of carcinogenicity." Ex. 219; Amter Report, at 53–54. At oral argument, Suffolk's counsel explained that the Ames test "determines and evaluates the potential carcinogenicity of a product." Oral Arg. Tr. 14. Counsel emphasized that, because dioxolane passed the test and dioxane did not, governmental entities and experts continued to test dioxane, while further testing was not done on dioxolane, and it remained on the market for many years. But none of Suffolk's experts provide any explanation about the Ames test and the significance of passing or failing that test. Counsel's statements made at oral argument explaining the test are not evidence. Suffolk has not pointed to any evidence it can use to explain the significance of the Ames test to the jury.

Suffolk argues that its experts' testimonies do not defeat its design defect claims because its experts were referring to a measure of scientific certainty that is not required by New York law. But Suffolk offers no authority negating the need for expert testimony here.²⁰ In the absence of an expert opinion, a lay person would not understand, much less would it be obvious, that dioxolane is safer. *Id.* at 463. That would require extensive knowledge of the toxicology of dioxolane which the average person unquestionably does not have. *Cf. Castaldi v. Land Rover N. Am. Inc.*, 2007 WL 4165283, at *10 (E.D.N.Y. Nov. 21, 2007) (plaintiff did not need to introduce expert testimony to establish that a car's brakes "generally work to prevent vehicles from switching from park to drive unless the brake is engaged.")

In lieu of expert evidence, Suffolk points to all three of the Defendants' internal documents showing that they were concerned with the toxicity of dioxane and that Dow and Vulcan were researching and developing a TCA product that used dioxolane as a stabilizer. Suffolk also relies on the fact that Dow's and Vulcan's competitor, PPG, used dioxolane, which has been on the market for decades. From this evidence, Suffolk argues, a reasonable jury could infer that the Defendants knew dioxolane was a safer alternative and, from the Defendants' knowledge, the jury

²⁰ The cases that Suffolk relies upon are inapposite. *McCarthy v. Olin Corporation*, 119 F.3d 148 (2d Cir. 1997), is not applicable because the product at issue was purposely designed to be dangerous, negating the need for any defective design analysis at all. *Id.* at 156. *Anderson v. Hedstrom*, 76 F. Supp. 2d 422 (S.D.N.Y. 1999), and *Miele v. America Tobacco Company*, 2 A.D.3d 799 (2d Dep't 2003), do not specify whether plaintiff presented expert evidence on safety. In *Anderson*, the court simply held that "plaintiff has offered sufficient evidence to reach the jury on the question of whether the proposed changes would have reduced, or even prevented the kind of injury that plaintiff and others suffered." 76 F. Supp. 2d at 457. And in *Miele*, the court held that plaintiff had presented sufficient evidence — an affidavit from the defendant's former employee, a scientist, stating that tobacco companies opted not to pursue or exploit available technologies to reduce disease-causing toxins in cigarettes — to survive summary judgment on its design defect claim. 2 A.D.3d 799 at 804–05. While the *Anderson* and *Miele* courts might have found certain non-expert evidence compelling in sustaining the plaintiff's design defect claims, those cases do not challenge the basic principle of New York law, set forth in the text, that expert evidence is generally required to succeed on a design defect claim.

could then infer it was safer. But a defendant's speculation about and investigation into another option does not establish that there is a safer alternative.²¹ In *Cover v. Cohen*, 61 N.Y.2d 261 (1984), the New York Court of Appeals held that a proposed change to a product "established only that a better way was thought possible," not that the existing product was "not reasonably safe." *Id.* at 272. By the same token here, exploring the possibility of using dioxolane as a stabilizer does not prove that it was safer than using dioxane. *See also Stalker v. Goodyear Tire & Rubber Co.*, 60 A.D.3d 1173, 1175 (3d Dep't 2009) ("[A] factual issue regarding design defect is not established by merely pointing to efforts within the industry to make a safer product, without providing some detail as to . . . how a feasible alternative would be safer.") Put simply, no reasonable juror could reach the conclusion that dioxolane was safer based on this speculative evidence.

Finally, Suffolk argues that the record raises triable issues of fact because, in contrast to dioxane, there is no evidence suggesting that dioxolane is carcinogenic or otherwise hazardous to human health. Suffolk cites to testimony from Dow's toxicologist, Dr. Janet Anderson, that neither the EPA nor any state regulator in any state in the United States, any published peer-reviewed papers, any textbook authors, or any scientist, has concluded that dioxolane is a carcinogen, whether "probable," "likely," or "possible." Dr. Janet Anderson Dep. Tr. 137–41. But Suffolk relies on an absence of evidence, not on evidence that any expert or government agency has found dioxolane to be safe, much less safer than dioxane. The jury cannot infer from an absence of evidence that dioxolane is safer than dioxane. *See In re Methyl Tertiary Butyl Ether ("MTBE")*

²¹ Nor, without an expert's own assessment of the feasibility and safety of the alternative design, can an expert rely solely on a defendant's own documents studying an alternative design in order to provide testimony as to its safety. *See Zaremba*, 360 F.3d at 359.

Prods. Liab. Litig., 725 F.3d 65, 98 n.16 (2d Cir. 2013) (the “absence of evidence one way or the other” is not “equivalent to an affirmative finding that in fact there was no safer, feasible alternative.”)

Turning specifically to Ferro, Ferro correctly notes that Suffolk’s theory of liability is not even applicable to Ferro because it did not produce dioxane-stabilized TCA, but only dioxane. And, in arguing that Ferro should have manufactured dioxolane, Suffolk is essentially proposing that Ferro should have stopped manufacturing dioxane entirely. A design defect claim cannot stand if, as here, the proposed alternative design is an “outright ban.” *S.F. v. Archer Daniels Midland Co.*, 594 F. App’x 11, 12 (2d Cir. 2014); *Hilarie v. DeWalt Indus. Tool Co.*, 54 F. Supp. 3d 223, 248 (E.D.N.Y. 2014) (“A plaintiff cannot satisfy his burden to propose a feasible alternative design by proposing that an entirely different product could have been used.”)²²

Summary judgment is granted to the Defendants insofar as Suffolk seeks to recover damages based upon its strict liability and negligence design defect claims.

2. Failure to Warn

Suffolk brings its failure to warn claim against Dow and Vulcan under both strict liability and negligence theories. As the parties agree, under New York law, these claims are analyzed under the same standard. *In re Eighth Jud. Dist. Asbestos Litig.*, 33 N.Y.3d 488, 495 (2019). A plaintiff may recover in negligence and strict products liability “when a manufacturer fails to provide adequate warnings regarding the use of its product.” *See MTBE*, 725 F.3d at 123. “This is because a manufacturer has a duty to warn against latent dangers resulting from foreseeable uses

²² Suffolk’s reliance on *Olson v. Brenntag North America, Inc.*, 69 Misc. 3d 1214(A) (Sup. Ct., N.Y. Cnty. 2020), is misplaced. In that case, the plaintiffs did propose a feasible alternative design, cornstarch-based baby powder, to the defendants’ product, talc-based baby powder.

of its products of which it knew or should have known.” *Id.* (internal quotation marks omitted). “The duty to warn extends to third persons exposed to a foreseeable and unreasonable risk of harm by the failure to warn.” *Id.* (internal quotation marks omitted). To prevail on a failure to warn claim, a plaintiff must show (1) that a manufacturer has a duty to warn; (2) against dangers resulting from foreseeable uses about which it knew or should have known; and (3) that failure to do so was a substantial factor in causing the plaintiff’s injury. *See Sokolovic v. CVS Health*, 2023 WL 2742148, at *13 (E.D.N.Y. Mar. 31, 2023).²³

The only element that Dow and Vulcan challenge on these motions is the third. They raise two distinct substantial factor causation arguments, one that sweepingly attacks the proof of the link between the products that they manufactured and Suffolk’s injury and one that challenges the necessary causal link between the failure to warn and Suffolk’s injury. (Suffolk also seeks to hold Dow and Vulcan liable under other causation theories, which Dow and Vulcan contest, and those arguments are addressed below.)

i. Substantial Factor Causation

“Under New York law, an act or omission is regarded as a legal cause of an injury ‘if it was a substantial factor in bringing about the injury.’” *MTBE*, 725 F.3d at 116 (quoting *Schneider v. Diallo*, 14 A.D.3d 445 (1st Dep’t 2005)). “This test recognizes that often many acts can be said to have caused a particular injury, and requires only that defendant’s actions be a substantial factor in producing the injury.” *Locust Valley Water Dist. v. Dow Chem. Co.*, 465 F. Supp. 3d 235, 240 (E.D.N.Y. 2020) (internal quotation marks omitted). “The word ‘substantial’ means that the act

²³ The New York Pattern Jury Instructions instruct that the phrase “substantial factor” should be used in place of the phrase “proximate cause” because the latter is “confusing to the lay juror and is scarcely descriptive of the ‘substantial factor’ concept.” N.Y. Pattern Jury Instructions — Civil (“PJI”) 2:70.

or omission ‘had such an effect in producing the injury that reasonable people would regard it as a cause of the injury.’” *MTBE*, 725 F.3d at 116. In a products liability action based on groundwater contamination, the plaintiff is generally required to identify the “‘exact defendant whose product injured’ it” to establish substantial factor causation. *Id.* (quoting *Hymowitz*, 73 N.Y.2d at 504). Causation in such cases “is generally a question for the finder of fact.” *Locust Valley*, 465 F. Supp. 3d at 240.

In the *MTBE* case, the City of New York brought failure to warn and other New York State common law claims against Exxon, claiming that the organic chemical compound methyl tertiary butyl ether (“MTBE”) from Exxon’s gasoline was contaminating a system of water wells in Queens known as the Station Six Wells, which as a result required treatment. The jury returned a verdict in favor of the City, finding that Exxon was a cause of the City’s injury on two different theories of causation. On one theory, the City had claimed that Exxon caused its injury as a “direct spiller” of gasoline containing MTBE, i.e., “Exxon owned or controlled underground storage tank systems at six gasoline stations in Queens, and that MTBE leaked from these tanks into the groundwater.” *Id.* at 88. The City also asserted that Exxon had caused damage to the Station Six water supply as a “manufacturer, refiner, supplier, or seller” of MTBE gasoline that “leaked or spilled from service stations *not* owned or controlled by Exxon.” *Id.* The Second Circuit considered whether a reasonable jury could have found that Exxon’s conduct was a substantial factor in bringing about the City’s injury on its second theory of causation. *Id.* at 115–17.

It noted that the plaintiffs “adduced three principal pieces of evidence.” *Id.* at 116. First, the City presented expert testimony that Exxon’s gasoline was “commingled” with the gasoline of other manufacturers before distribution and, therefore, Exxon gasoline ended up in each of the retail gas stations and underground storage tanks in the vicinity of the Station Six Wells. Second,

the City presented expert testimony that Exxon supplied approximately 25% of the gasoline sold in Queens. Third, the City presented expert testimony that leaks happen at gas stations “on a fairly routine basis.” *Id.*

Based on this testimony, the Second Circuit held that a reasonable jury could have found that the defendant “Exxon’s conduct as a manufacturer, refiner, supplier, or seller of gasoline containing MTBE was indeed a substantial factor in bringing about the City’s injury.” *Id.* at 117. It also found proper the district court’s jury instruction, which allowed the jury to consider market share data as “part of the mosaic of circumstantial evidence that helps the jury determine the scope of the defendant’s contribution to the plaintiff’s injury.” *Id.*

Suffolk argues that, as in *MTBE*, it can present a “mosaic of circumstantial evidence that traces” the “Defendants’ dioxane from the production plant to the end user, to the groundwater system, and ultimately to individual wells.” Pl.’s Opp. to Joint Mot., at 4. Suffolk’s showing is based on the opinions of its expert witnesses. I have reviewed Suffolk’s experts’ opinions in detail, and, having done so, I find that a reasonable jury could conclude, if those experts are credited, that Dow’s and Vulcan’s conduct was a “substantial factor” in bringing about Suffolk’s injury.

Suffolk’s evidence is sufficient to meet the New York law requirement to identify the “exact defendant whose product injured it.” *MTBE*, 725 F.3d at 116 (quoting *Hymowitz*, 73 N.Y.2d at 504). Here, as in *MTBE*, this requirement is met through the presentation of circumstantial evidence. Dr. Kern opined, based on his regression analyses, that dioxane from dioxane-stabilized TCA is the predominant source of contamination of the TCA Claim Wells. And Suffolk has pointed to evidence that would allow a reasonable jury to identify the Defendants’ products as a cause of that contamination. Mr. Mohr explains that, because of the industrialization of Suffolk County, dioxane-stabilized TCA was used in Suffolk County starting in the 1950s and

“widely used” there from the 1960s through the mid-1990s for metal cleaning. Mohr Report, at 6. In Mr. Rabenhorst’s “best estimate,” Dow and Vulcan captured about 81% and 15% of the dioxane-stabilized TCA market in Suffolk County, respectively, which he explains are good approximations of their shares of dioxane-stabilized TCA used in Suffolk County by end users. Rabenhorst Rebuttal Report, at 29–30. Mr. Mohr further describes that, in the ordinary use of dioxane-stabilized TCA, Suffolk County end users leaked, spilled, and improperly disposed of the product in ways that inevitably released dioxane into Suffolk County’s groundwater. Finally, Mr. Goldstein describes how releases of dioxane would have spread through Suffolk County aquifers to the TCA Claim Wells and persisted there for many years.

Suffolk also has evidence from which a reasonable jury could conclude that the dioxane contaminating each of the TCA Claims Wells comes from both Dow’s and Vulcan’s dioxane-stabilized TCA. Among other evidence, Mr. Rabenhorst explains that end users of Dow’s and Vulcan’s dioxane-stabilized TCA were geographically intermingled across Suffolk County; Mr. Mohr describes how the different pathways by which dioxane-stabilized TCA entered the Suffolk County environment resulted in its commingling; and both Mr. Mohr and Mr. Goldstein detail how the characteristics of dioxane led to its spread and persistence in Suffolk County aquifers.

In sum, Suffolk can present evidence from which a reasonable jury could find, on a well-by-well basis, that the dioxane contaminating the TCA Claim Wells comes from dioxane-stabilized TCA manufactured by Dow and Vulcan and sold by them to Long Island distributors and Suffolk County end users.

Suffolk is not required to trace individual dioxane molecules back to Dow or Vulcan to establish substantial factor causation. *See MTBE*, 725 F.3d at 116–17; *Locust Valley*, 465 F. Supp. 3d at 241. It is enough that it has evidence that dioxane contamination of the TCA Claim Wells

came from dioxane-stabilized TCA products and that those products were manufactured by Dow and Vulcan. A defendant need not be the only cause of a plaintiff's injury. *See Locust Valley*, 465 F. Supp. 3d at 240.

Suffolk's causation showing does not seek to hold Dow and Vulcan liable under a market share theory of causation, as Dow and Vulcan contend. The Second Circuit rejected the same argument made by Exxon in *MTBE*. *See MTBE*, 725 F.3d at 115–17. Under a market share theory of causation, as is described below, the plaintiff cannot “identify the manufacturer of [an] injurious product,” and a defendant may still be held liable “to the extent of its share of the relevant product market.” *Id.* at 115–16. By contrast, here, Suffolk does identify the exact defendants, Dow and Vulcan, whose products it claims injured it. Suffolk uses market share data not to hold Dow and Vulcan liable to the extent of their market share, but as circumstantial evidence to aid in the determination of “the scope of [Dow's and Vulcan's] contribution to [Suffolk's] injury” and whether such contribution was “substantial.” *MTBE*, 725 F.3d at 117.²⁴

²⁴ As was explained more fully by the Second Circuit in *MTBE* in rejecting the same argument made by Exxon:

Viewed in context, the market share data adduced by the City served merely as some proof that sufficient quantities of Exxon gasoline were delivered to gas stations in the vicinity of Station Six to make it more likely than not that Exxon gasoline played a substantial role in bringing about the City's injury. Like the District Court, we perceive a difference between employing market-share data in this fashion and imposing liability based solely on a defendant's share of the market for a dangerous product, absent any evidence that the defendant's own product directly caused some of the harm alleged. Here, the City did not use market share data as a substitute for showing that Exxon contributed to the contamination of Station Six. Instead, it used such data to help quantify the scope of that contribution.

725 F.3d at 116 (internal citation omitted).

And, contrary to Dow’s and Vulcan’s argument, *MTBE* did not sanction the use of market share data only after the plaintiff’s other evidence identified the defendant’s product as contributing to the plaintiff’s injury; it sanctioned the use of market share data “as one piece of circumstantial evidence that Exxon caused the City’s injury.” *Id.* at 116.

It does not make a difference that the commingling of MTBE gasoline occurred before distribution, whereas here, the end users of Dow’s and Vulcan’s products were geographically intermingled and the commingling of dioxane occurred after its disposal by those end users into the Suffolk County environment. Nothing in *MTBE* suggests that the timing of the commingling was necessary to the Second Circuit’s conclusion that sufficient evidence had been presented to the jury to establish substantial factor causation. And, to the extent that Dow and Vulcan are arguing that the timing of the commingling in this case renders Suffolk’s evidence insufficient to establish product identification, I disagree. As discussed above, based on Suffolk’s evidence, a reasonable jury could identify Dow and Vulcan as the manufacturers of the products that Suffolk claims injured it.

Finally, Dow and Vulcan suggest that the acts of Suffolk County end users — in releasing the dioxane-stabilized TCA into the Suffolk County environment — broke the causal chain. However, “liability *subsists* when . . . the intervening act is a natural and foreseeable consequence of a circumstance created by defendant,” which is generally a question of fact. *Hain v. Jamison*, 28 N.Y.3d 524, 529 (2016) (internal quotation marks omitted) (ellipses in original). Put differently, “where the risk of harm created by a defendant’s conduct corresponds to that which actually results,” “absent an extraordinary intervening act or significant facts weighing in favor of

attenuation,” the determination should be left to the factfinder. *Id.* at 530.²⁵ Here, I cannot conclude as a matter of law that the acts of Suffolk County end users broke the causal chain. A reasonable jury could conclude that the harm that resulted, namely, the contamination of Suffolk’s wells by dioxane, corresponds to the very risk that was created by Dow’s and Vulcan’s manufacture and sale of dioxane-stabilized TCA into Suffolk County.

Turning to the Defendants’ second causation argument, in a failure to warn claim, the burden is on the plaintiff to point to facts from which a reasonable jury could conclude that “the failure to warn” was a substantial factor in causing “the events which produced the injury.” *Sokolovic*, 2023 WL 2742148, at *16. Generally, this requires the plaintiff to present facts that would allow “a jury reasonably to infer that a warning, reasonably required, would have been heeded.” *Raney v. Owens-Illinois, Inc.*, 897 F.2d 94, 96 (2d Cir. 1990); *see also In re N.Y.C. Asbestos Litig.*, 27 N.Y.3d 765, 805 (2016). However, under *Liriano v. Hobart Corp.*, 170 F.3d 264 (2d Cir. 1999), the plaintiff can establish a *prima facie* case by showing that the negligent failure to warn “tends to cause exactly the kind of injury that the plaintiff suffered.” *Id.* at 271. As elaborated by Judge Calabresi, such evidence raises a “strong inference, arising from the accident, that the defendant’s negligence was in fact a but-for cause of the plaintiff’s injury.” *Id.* The burden then shifts to the defendant “to come forward with evidence that its negligence was *not* such a but-for cause.” *Id.* *Liriano*’s burden-shifting framework has been applied in subsequent federal cases. *See, e.g., Derienzo v. Trek Bicycle Corp.*, 376 F. Supp. 2d 537, 566–70 (S.D.N.Y.

²⁵ The New York Court of Appeals has described two types of “rare” cases in which a court may find, as a matter of law, that the causal chain was broken. *Id.* at 530. Either, “the risk created by the original negligence was not the risk that materialized into harm,” “in other words, the intervening act was unforeseeable,” or, “the defendant’s acts of negligence had ceased, and merely fortuitously placed the plaintiff in a location or position in which a secondary and separate instance of negligence acted independently upon the plaintiff.” *Id.* at 531–32. Neither applies here.

2005) (applying New York law). Contrary to Dow's and Vulcan's argument, the burden-shift allowed by *Liriano* does not relieve Suffolk of its burden of proof; only the burden of production is shifted to the defendants. *Liriano*, 170 F.3d at 272 & n.5.²⁶

Suffolk has presented evidence from which a reasonable jury could conclude that, at no relevant time, did Dow and Vulcan provide adequate warnings. Indeed, Dow and Vulcan do not seek dismissal, as a matter of law, on the ground that their warnings were adequate. A reasonable jury could conclude, under *Liriano*, that the absence of adequate warnings about dioxane; the consequences of improper handling and disposal of dioxane-stabilized TCA and dioxane; and the absence of directions as to the proper handling and disposal of dioxane-stabilized TCA and dioxane tended to cause exactly the kind of injury that Suffolk suffered, namely, dioxane contamination of Suffolk's wells.

Dow and Vulcan try to distinguish *Liriano* on the ground that there the defendant's product lacked any warnings, whereas here, Dow and Vulcan always provided warnings on their products. But Dow and Vulcan do not show why that should make *Liriano* inapplicable. The *Liriano* inference is premised on the causal connection between the "defendant's negligent act" and the "type of injury that ensued." *Liriano*, 170 F.3d at 271. That principle applies whether the defendant's negligence was that no warnings were present or inadequate warnings were provided. *See also Derienzo*, 376 F. Supp. 2d at 566–70 (applying the *Liriano* inference in a case in which warnings were provided).

Finally, Dow and Vulcan contend that New York courts have "repudiated" *Liriano*. However, they point only to a single New York State trial court decision, *Castorina v. A.C. & S.*,

²⁶ Suffolk contends that, even without the benefit of the *Liriano* inference, it has pointed to evidence that would allow a jury reasonably to infer that a warning would have been heeded. Because I apply the *Liriano* inference, I have not considered whether that evidence is sufficient.

55 Misc. 3d 968 (Sup. Ct., N.Y. Cnty. 2017), which may be read to cast doubt on *Liriano*.²⁷ In *Castorina*, the trial court concluded that New York state law does not recognize a “heeding presumption” or what it described as a requirement that it charge the jury with a “burden-shifting presumption that a plaintiff would have heeded a warning” “if given.” *Id.* at 975. However, *Castorina* does not provide a persuasive basis for not following *Liriano* or for concluding that New York courts have “repudiated” the Second Circuit’s decision.²⁸ While *Castorina* concluded that New York law does not recognize a “mandatory” heeding presumption, even a rebuttable one, it distinguished “presumptions” from “inferences” and noted that *Liriano* spoke in terms of a “strong inference.” *Id.* at 974; *see Liriano*, 170 F.3d at 271; *Raney*, 897 F.2d at 96. The latter is all that is being applied here.²⁹

In sum, Suffolk has presented sufficient evidence to go to the jury on its failure to warn claim.

²⁷ Dow and Vulcan also point to two First Department decisions, *Reis v. Volvo Cars of N. Am., Inc.*, 73 A.D.3d 420 (1st Dep’t 2010), and *Sosna v. Am. Home Prods.*, 298 A.D.2d 158 (1st Dep’t 2002). In both cases, the users of the products stated at their depositions that they did not read the products’ warnings. Thus, no inference could have been drawn that the absence of adequate warnings was a substantial cause of the plaintiffs’ injuries. These cases present no inconsistency with *Liriano*.

²⁸ In *In re N.Y.C. Asbestos*, the New York Court of Appeals noted that the trial court in that case instructed the jury to apply such a presumption, but did not reach the issue as to whether the trial court’s instruction was proper because the issue had not been preserved for appeal. 27 N.Y.3d at 805.

²⁹ At oral argument, the Defendants pointed to statements by Mr. Mohr at his deposition that they say require me to dismiss Suffolk’s failure to warn claim for lack of causation. They claim his testimony as to the inevitability of the release of dioxane into the groundwater means that warnings would not have mattered. However, after careful review of the portions of Mr. Mohr’s deposition testimony cited by the Defendants, I find that the Defendants overstate his testimony. Indeed, for example, Mr. Mohr concluded that in “a perfect world,” where proper handling and disposal practices were followed, “TCA contamination would not result.” Thomas Mohr Dep. Tr. 447.

ii. Market Share and Alternative Liability Theories of Causation

Were a jury to conclude that Suffolk did not establish substantial factor causation on its failure to warn claim, Suffolk seeks to hold Dow and Vulcan liable under other causation theories, specifically, the market share and alternative liability theories.

As already noted, in “a products liability action, identification of the exact defendant whose product injured the plaintiff is, of course, generally required.” *Hymowitz*, 73 N.Y.2d at 504. Such a showing can be made circumstantially, as in *MTBE*. However, in limited circumstances, and in the interests of fairness and justice, courts have allowed plaintiffs to proceed on other theories of causation, such as the market share and alternative liability theories, where traditional principles of causation would not provide the plaintiffs a “realistic avenue of relief.” *Id.* at 507.

Thus, in *Hymowitz v. Eli Lilly & Co.*, the New York Court of Appeals was faced with “an unprecedented identification problem.” *Id.* at 505, 513 n.3. There, plaintiffs were injured by the drug diethylstilbestrol (DES) ingested by their mothers during pregnancy. But given that the drug, regardless of manufacturer, was of identical chemical composition, and given the nature of the DES market and the “long latency period of a DES injury,” “identification of the producer of the specific drug that caused the injury [was] impossible.” *Id.* at 503, 505. The Court of Appeals determined that the plaintiffs should not be left without “a realistic avenue of relief” and that the circumstances “require[d] formation of a remedy for injuries caused by DES.” *Id.* at 507. *Hymowitz* departed “from traditional common-law principles of causation,” *Hamilton v. Beretta U.S.A. Corp.*, 96 N.Y.2d 222, 242 (2001), and adopted the market share causation theory. Under that theory, each manufacturer would be held severally liable, according to its share of the national DES market sold for pregnancy use, unless the manufacturer could show that it was not a member of the market.

Similarly, in *Summers v. Tice*, 33 Cal.2d 80 (1948), the paradigm of alternative liability, the defendants carried identical shotguns and ammunition. The defendants fired their shotguns simultaneously, and the plaintiff was struck by a bullet from one of the defendants' guns. Though the evidence established that both defendants were negligent, only one defendant, in fact, shot the plaintiff, but the plaintiff could not identify which one. Rather than deny the plaintiff relief, the California Supreme Court shifted the burden of proof to each defendant to show that he was not the cause of the plaintiff's injury; otherwise, both defendants would be held jointly liable.

In this case, there is no need to depart, as *Hymowitz* and *Summers* did, “from traditional common-law principles of causation.” *See Hamilton*, 96 N.Y.2d at 242. Suffolk continues to proceed under such principles — specifically, substantial factor causation — and Suffolk has not shown that it does not have a “realistic avenue of relief” under such principles. *Hymowitz*, 73 N.Y.2d at 507. The interests of fairness and justice that have compelled courts to allow plaintiffs to proceed under other theories of causation are not present here.

Suffolk argues that it should be allowed to present the market share and alternative liability theories of causation to the jury in the alternative because the jury might conclude that Suffolk did not establish substantial factor causation. But Suffolk's inability to persuade the jury on its principal theory of causation is not a sound basis to depart from traditional common-law causation principles and allow Suffolk to proceed on theories that were adopted for exceptional circumstances where the plaintiffs otherwise would have been left without remedies.

Accordingly, Dow's and Vulcan's motions for summary judgment on Suffolk's failure to warn claim is granted to the extent that Suffolk may not proceed on its market share and alternative liability theories of causation and otherwise denied.³⁰

3. Trespass

Trespass "is the intentional invasion of another's property." *Scribner v. Summers*, 84 F.3d 554, 557 (2d Cir. 1996). As an initial matter, a plaintiff must establish its "right to possession" of the invaded property. *Benoit v. Saint-Gobain Performance Plastics Corp.*, 959 F.3d 491, 503 (2d Cir. 2020). As to intent, to be liable, the trespasser "need not intend or expect the damaging consequence of his intrusion"; rather, "he must intend the act which amounts to or produces the unlawful invasion, and the intrusion must at least be the immediate or inevitable consequence of" the trespasser's intentional acts. *Phillips v. Sun Oil Co.*, 307 N.Y. 328, 331 (1954).

As relevant here, a trespass may result from the conduct of a remote actor, like a manufacturer. *See MTBE*, 725 F.3d at 120. A trespass is actionable even if the trespasser does not "directly and immediately" place the foreign matter "upon the other's land." Restatement § 158, cmt i.³¹ In *Phillips*, the New York Court of Appeals explained that the application of these principles to trespass actions involving the "underground movements of noxious fluids" means

³⁰ The Defendants have recently filed a "Notice of Supplemental Authority," which is an opinion and order in the *MTBE* litigation, which rejected a "Commingle Product Theory," as an alternative to establishing product identification. *See In re Methyl Tertiary Butyl Ether ("MTBE") Prods. Liab. Litig.*, 2025 WL 1795126 (S.D.N.Y. June 30, 2025). The Plaintiff has not as yet responded but there is no reason to require it to do so. In this case, I have not relied on the Commingle Product Theory, and I have held Suffolk to its proof of product identification and substantial factor causation. Under the analysis approved by the Second Circuit in *MTBE*, Suffolk has sufficient proof that the products of each of the Defendants did in fact contaminate each of the TCA Claim Wells. Nothing in the recently submitted decision suggests the contrary. And there is no reason to address any impact of that decision on Suffolk's market share or alternative liability theories of causation because I am dismissing those theories.

³¹ All references to the Restatement refer to the Restatement (Second) of Torts (Am. L. Inst. 1965).

that a plaintiff must demonstrate that the trespasser “had good reason to know or expect that subterranean and other conditions were such that there would be passage [of the pollutant] from defendant’s to plaintiff’s land.” 307 N.Y. at 331. In stating this rule, *Phillips* spoke in terms of knowledge or “notice.” *Id.* It affirmed the dismissal of the trespass claim because there was no evidence that the defendant “knew, or had been put on notice” of a gas leak from its underground tank that resulted in the defendant’s gas being found on the plaintiff’s property. *Id.* at 330.

In *Scribner v. Summers*, the Second Circuit accepted *Phillips*’ statement of New York trespass law as expressing a particular rule for trespass claims “arising from the movement of noxious liquids from one property to another.” 84 F.3d 554, 557 (2d Cir. 1996). There, the defendants demolished and washed barium-tainted furnaces on their own property, and this resulted in barium contamination on the plaintiffs’ property. The district court had found the defendants not liable because the plaintiffs had failed to show the requisite intent for a trespass claim. The Second Circuit reversed. It explained that the district court had erroneously considered the issue to be whether the defendants intended the contaminated water to enter plaintiffs’ land and held that the intent requirement had been met because the defendants intended “the acts which caused the invasion” and had “good reason to know or expect” that its barium would travel from its property to the plaintiff’s. *Id.* at 558.

Since *Scribner*, both federal and state courts have routinely used the “good reason to know or expect” standard in cases involving groundwater pollution. *See, e.g., 69 Bloomingdale, LLC v. Coral Graphics, Inc.*, 2021 WL 7830149, at *6–7 (E.D.N.Y. July 14, 2021); *White Plains Hous. Auth. v. BP Prods. N. Am. Inc.*, 482 F. Supp. 3d 95, 122–23 (S.D.N.Y. 2020); *Town of Hempstead v. United States*, 2017 WL 11699273, at *23 n.28 (E.D.N.Y. Sept. 18, 2017); *Town of New Windsor v. Avery Dennison Corp.*, 2012 WL 677971, at *14–15 (S.D.N.Y. Mar. 1, 2012); *Baity v. Gen.*

Elec. Co., 86 A.D.3d 948, 951 (4th Dep’t 2011); *Hilltop Nyack Corp. v. TRMI Holdings, Inc.*, 264 A.D.2d 503, 505 (2d Dep’t 1999). And, in *Cangemi v. United States*, 13 F.4th 115 (2d Cir. 2021), the Second Circuit applied the same test even when the invasion was not of a contaminant but of water causing erosion of the plaintiffs’ properties. *See id.* at 139.³²

In sum, in a groundwater contamination case, the appropriate standard is whether the Defendants: (i) intended the act which amounts to or produces the unlawful invasion; and (ii) had good reason to know or expect that the contaminant would pass to the plaintiff’s property.

Suffolk has put forth sufficient evidence demonstrating that it has a property interest in each of its wells, through either leasehold, easement, or ownership. The Defendants argue that Suffolk’s trespass claim fails because Suffolk has no ownership interest in the groundwater itself, which is a natural resource entrusted to the State. The Second Circuit rejected that very argument in *Benoit*, where the Court, relying on New York cases, held that an action for property damage based on trespass may be maintained for groundwater contamination by the owners of wells through which the groundwater passes. *Benoit*, 959 F.3d at 503; *Baker v. Saint-Gobain Perf. Plastics Corp.*, 232 F. Supp. 3d 233, 247 (N.D.N.Y. 2017) (sustaining the well owners’ trespass claim because the groundwater was the medium through which the contaminant invaded the wells).

³² In *MTBE*, the Second Circuit held that the district court’s jury instruction satisfied *Phillips* where it required the jury to find that Exxon “knew that its conduct made it substantially certain” that MTBE would “enter the groundwater, including the groundwater in the capture zone of the Station 6 wells.” *MTBE*, 725 F.3d at 120 & n.40; *see also Sahu v. Union Carbide Corp.*, 650 F. App’x 53 (2d Cir. 2016) (referring to the substantial certainty test in distinguishing *MTBE*). I do not read *MTBE* as requiring, in groundwater contamination cases, use of the knowledge to a substantial certainty test. Rather, *MTBE* merely explained that the district court’s jury instruction was sufficient to meet *Phillips*’ requirement. Clearly, the “good reason to know or expect” standard that was expressly set forth in *Phillips* and *Scribner* would also satisfy *Phillips*. Indeed, in this case, citing *Scribner*, the Defendants accept that “good reason to know or expect” is the correct standard to apply. *See* Defs.’ Joint Reply to Mot. for Summ. J., at 28.

Suffolk also proffers evidence from which a reasonable jury could conclude that Dow, Vulcan and Ferro intended acts that amounted to or produced the unlawful invasion. It is obvious that Ferro's manufacture of dioxane and sale of it to Dow and Vulcan for use in stabilizing TCA was an intentional act and that Dow's and Vulcan's manufacture of dioxane-stabilized TCA were intentional acts. Dow and Vulcan also intentionally sold their products to distributors on Long Island and end users in Suffolk County, and instructed end users on how to use and dispose of their dioxane-stabilized TCA through product labels, product safety sheets, and other product safety materials. As discussed in detail in the failure to warn section, Suffolk has pointed to facts from which a reasonable jury could conclude that Dow's and Vulcan's products were the products that contaminated the TCA Claim Wells. It also has sufficient evidence to identify the contaminant in its wells as coming from Ferro in that, among the other evidence described in the failure to warn section, Ferro manufactured about 20% of the dioxane that was used in Dow's and Vulcan's dioxane-stabilized TCA shipped to Long Island distributors and Suffolk County end users. In sum, Suffolk can establish that it was the Defendants' products that invaded the plaintiff's property.

There is abundant evidence that each Defendant had good reason to know or expect that this contamination of Suffolk's wells would occur as a result of its intentional acts. To begin with, Dow and Vulcan together manufactured about 96% of the dioxane-stabilized TCA shipped to Long Island distributors (with a significant portion of those shipments being made to distributors located in Suffolk County) and Suffolk County end users, marketed their products to and interacted with Long Island distributors and were aware that their products were being used for industrial metal

cleaning.³³ A reasonable jury could, therefore, conclude that they had good reason to know or expect that their products were being used for metal cleaning in Suffolk County.

Although there is no direct evidence that Ferro was aware that its dioxane was being used in Suffolk County, this can be inferred from the evidence. Mr. Amter opines that Ferro knew that the dioxane that it produced for Dow and Vulcan would be used primarily as a stabilizer for TCA, and it knew that dioxane-stabilized TCA's primary use was for industrial metal cleaning. Mr. Rabenhorst opines that, from 1976-1988, Ferro manufactured 75% of the dioxane contained in Vulcan's dioxane-stabilized TCA, and in 1989, according to Mr. Rabenhorst, Ferro became the sole U.S. producer of dioxane. In that year until 1997, Ferro manufactured 100% and at least 75% of the dioxane contained in Dow's and Vulcan's dioxane-stabilized TCA, respectively. As described below, there is also evidence that, by the late 1970s, Ferro knew or should have known that TCA was contaminating Suffolk County's public drinking water supply wells. And Mr. Rabenhorst opines that there were only four domestic manufacturers that produced TCA at a commercial scale between 1950 through 1997. As the dominant or sole manufacturer of dioxane for two of the four domestic manufacturers of TCA, that Ferro knew or should have known of

³³ Dow and Vulcan manufactured and sold about 81% and 15%, respectively, of all dioxane-stabilized TCA shipped to Long Island distributors and Suffolk County end users. Rabenhorst Rebuttal Report, at 29–30. There is evidence that they interacted with Long Island distributor customers “for trainings and sales events, to service equipment, or provide other technical support.” Amter Report, at 24–25. For example, as to Dow, the founder of a major Long Island-based TCA distributor, Pride Inc., testified that Dow held seminars for Pride Inc. salespeople and that “Dow’s salespeople would accompany Pride Inc. salespeople on sales calls.” Arthur Dhom Dep. Tr. 155. There is also evidence that Dow visited a Long Island customer to help configure its equipment for dioxane-stabilized TCA use. Ex. 227. As to Vulcan, a Vulcan sales representative, whose territory covered New York, testified that he “regularly” communicated with and visited distributor customers. Thomas Meade Dep. Tr. at 112–13. Vulcan’s corporate representative likewise testified that Vulcan visited and provided “technical services . . . related to” its brand of dioxane-stabilized TCA to its Long Island customers. Roger Ethrington Dep. Tr. 58.

TCA contamination in Suffolk County would support a jury's conclusion that Ferro also was aware of its products' use in Suffolk County.

Other evidence also supports such a conclusion. Suffolk's experts opine that, in the twentieth century, Suffolk County was a manufacturing hub for industries that used TCA for metal cleaning. Mohr Report, at 19–26; Amter Report, at 24.³⁴ Based on internal documents of Ferro, Mr. Amter opines that “Ferro understood that its fiscal success was closely linked to the success of chlorinated solvents” and “carefully tracked developments in the solvents market that could impact its own production.” Amter Report, at 54. This included tracking “actions taken by competitors and customers” in relation to the toxicity of dioxane. *Id.* And Mr. Rabenhorst points to evidence that, from 1976 until 1988, Vulcan was Ferro's largest dioxane customer or one of its largest dioxane customers; as of 1988, Dow was Ferro's largest dioxane customer and Vulcan was Ferro's second largest dioxane customer. Given all the evidence just described, including Ferro's deep interest in its sales of dioxane in the chlorinated solvents market, which included Suffolk County, a reasonable jury could conclude that Ferro had good reason to know or expect that the dioxane it manufactured for Dow's and Vulcan's dioxane-stabilized TCA was being used in the Suffolk County market.

Next, there is a variety of evidence that the Defendants had good reason to know or expect that the ordinary use and disposal of dioxane-stabilized TCA created a risk of water pollution. First, Mr. Amter describes how the Defendants knew or should have known about how end users

³⁴ Mr. Mohr opines that Suffolk County had a “significant number” of manufacturing operations during the 1950s that would have used solvents like TCA for metal cleaning; Suffolk County “continued to industrialize rapidly during the 1960s and 1970s;” by 1979, more than 40% of the workforce in Suffolk County was employed in industries in which TCA has historically been widely used; and from the early 1980s through late 1990s, there was “widespread use” of TCA in Suffolk County.

disposed of dioxane-stabilized TCA waste, including directly into the ground, in landfills, and drains, all of which results in its release into groundwater. *Id.*, at 43–45; *see also* Mohr Report, at 37–65. Mr. Amter opines that, based on their knowledge of the chemical properties of dioxane, the Defendants knew or should have known that conventional wastewater treatment systems do not effectively remove dioxane from groundwater. Ferro’s own practice was to incinerate dioxane waste because, Ferro knew, it could not be put in landfills. *See* James Love Dep. Tr. 199–201.

Second, there is evidence that the Defendants knew or should have known that dioxane would spread rapidly and persist once released in groundwater. Mr. Amter opines that, as sophisticated chemical manufacturers, and based on their own research and the state of scientific knowledge, the Defendants knew or should have known that dioxane spreads rapidly, persists in the environment and does not biodegrade.

Third, there is evidence that the Defendants were all members (and Dow and Vulcan active leaders) of chemical trade organizations, including the Manufacturing Chemists’ Association (“MCA”), later renamed the Chemical Manufacturers’ Association. According to Mr. Amter, the MCA was an “extremely well funded” and influential organization that published technical and ethical guidance for its members. Amter Report, at 13. The MCA formed committees consisting of industry scientists and experts from member companies devoted to environmental subjects, including water pollution. Indeed, an MCA member directory indicates that a Dow representative was the chairman of the “Water Resources Committee,” the function of which, among others, was “[t]o inform the chemical industry concerning events and trends bearing on water resources and pollution control.” Ex. 178. The MCA also maintained a sophisticated lobbying function. Mr. Amter explains that, in the middle part of the twentieth century, the MCA’s expertise in areas like water pollution “rivalled and often exceeded that of the government.” Amter Report, at 14.

Through their membership in trade organizations like the MCA, Mr. Amter opines, the Defendants knew or should have known of the “state of scientific knowledge, including the relevant scientific, industry, and academic literature, government regulatory action and public statements.” *Id.*³⁵ Finally, there is evidence showing that the Defendants internally monitored regulatory developments that could impact the sales of their products. Amter Report, at 24–25, 47–52; Ex. 195 (Dow); Ex. 123, (Vulcan); Ex. 218 (Ferro).

According to Mr. Amter, as sophisticated chemical manufacturers and members of the MCA, they knew or should have known that chlorinated solvents and dioxane were, in fact, polluting groundwater. Mr. Amter explains that, by the late 1940s and early 1950s, “voluminous” publications detailed the risks industrial chemicals and wastes posed to groundwater, and water pollution became a “major” concern for state governments and the chemical industry. Amter Report, at 14–15. According to Mr. Amter, the MCA formed water pollution committees and sponsored guidance and several large conferences on the topic. In the first 70 years of the twentieth century, Mr. Amter explains, there was also a “vast body of historical literature,” some of which he summarizes, documenting groundwater pollution that was caused by industrial chemicals and waste releases, including from chlorinated solvents. *Id.*, at 15–19. Additionally, there were reports specifically of dioxane detections in groundwater around the country by the late 1970s and particularly in the early 1980s. *Id.*, at 46.

³⁵ At oral argument, Ferro’s counsel argued that membership in a trade organization is not enough for an inference of knowledge; he analogized such membership to a lawyer’s membership in the American Bar Association (“ABA”) and noted that a member may not read every newsletter sent out by the ABA. But the ABA has tens of thousands of members and a broad mission ranging from the professional and health needs of lawyers to the study of different areas of law to the protection of the rule of law. The record in this case contains evidence that the MCA had less than 300 members, as of 1969, and a mission with a major focus on the environmental risks associated with the members’ products and the likelihood of their being the subject of governmental regulations.

The Defendants also had good reason to know or expect that contamination of groundwater by chlorinated solvents, including TCA, was occurring in Suffolk County and to know of Long Island's aquifers' acute vulnerability to contamination. According to Mr. Amter, by the mid-twentieth century, it was recognized that Long Island's aquifers were "acutely" vulnerable to contamination. *Id.*, at 21. Long Island was designated a "sole source aquifer" in 1978. *Id.*, at 22. Evidence of both the "vulnerability" and "degradation" of Long Island's aquifer system, Mr. Amter explains, became "increasingly obvious" around 1975, when it was discovered that chlorinated solvents from industrial operations were polluting Long Island aquifers. *Id.* The problem was considered "so severe" and "nationally relevant" that, in 1978, Congress held a multi-day hearing in Nassau County, which neighbors Suffolk County, on the topic. *Id.*, at 22–23. Shortly after the hearing, the Nassau-Suffolk Regional Planning Board published an extensive analysis of groundwater contamination on Long Island that, among other topics, detailed the hydrogeology of the Long Island aquifer system; described the mechanisms by which industrial chemicals and wastes were being discharged to Long Island groundwater, including in Suffolk County; and discussed the sampling results of public drinking water supply wells, including findings that TCA was polluting wells in Suffolk County. Amter Report, at 23–24; Ex. 183. A reasonable jury could infer that, as sophisticated chemical manufacturers and members of the MCA, the Defendants were aware of the congressional hearings in Nassau County, the Nassau-Suffolk Regional Planning Board's report and the reports of dioxane detections in groundwater around the country. *See Olin Corp. v. Lamorak Ins. Co.*, 332 F. Supp. 3d 818, 844–47 (S.D.N.Y. 2018) (holding that a reasonable juror could infer subjective knowledge from general industry knowledge, membership in trade associations, and publications in newspapers and magazines); *In re N.Y.C. Asbestos Litig.*, 36 Misc. 3d 1234(A) (Sup. Ct., N.Y. Cnty. Aug. 20, 2012).

In sum, considering the evidence described above, a reasonable jury could conclude that the Defendants had good reason to know or expect that their products would migrate to and contaminate Suffolk's TCA Claim Wells. For these reasons, summary judgment is denied as to Suffolk's trespass claim.

4. Public Nuisance

Although Suffolk is a public entity, it brings its public nuisance claim in its private capacity and seeks damages based on special injury to its wells. Its right to seek such damages is not challenged on these summary judgment motions.³⁶

A public nuisance claim arises where a “defendant’s conduct amounts to a substantial interference with the exercise of a common right of the public, thereby endangering or injuring the property, health, safety or comfort of a considerable number of persons.” *MTBE*, 725 F.3d at 121 (internal quotation marks omitted); *Copart Indus. v. Consol. Edison Co.*, 41 N.Y.2d 564, 568 (1977). To establish a public nuisance claim seeking damages, a plaintiff must demonstrate “(1) the existence of a public nuisance; (2) conduct or omissions by a defendant that create, contribute to, or maintain the public nuisance; and (3) particular harm suffered by a plaintiff different in kind from that suffered by the community at large.” *Hicksville Water Dist. v. Philips Elec. North Am. Corp.*, 2018 WL 1542670, at *7 (E.D.N.Y. Mar. 29, 2018); see *N.A.A.C.P. v. AcuSport, Inc.*, 271 F. Supp. 2d 435, 482 (E.D.N.Y. 2003). As to the second element, as Suffolk argues, negligent conduct as well as intentional conduct may give rise to a public nuisance claim; *Hicksville* itself was based on negligent conduct. 2018 WL 1542670, at *7–8; see *Copart*, 41 N.Y.2d at 569;

³⁶ Suffolk also brings its public nuisance claim as a public entity seeking abatement and equitable relief. See *Copart Indus. v. Consol. Edison Co.*, 41 N.Y.2d 564, 568 (1977). The Defendants challenge Suffolk's right to equitable relief, but it was agreed on oral argument that this issue can be held in abeyance until after the jury trial. Oral Arg. Tr. 135–36.

AcuSport, Inc., 271 F. Supp. 2d at 487; PJI 3:17, cmt.

When several actors are involved in creating and/or maintaining a nuisance, to satisfy the causation requirement of the second element, a plaintiff must demonstrate that each defendant's participation in carrying on the nuisance-causing activity was "substantial." Restatement § 834 cmt. d.; *MTBE*, 725 F.3d at 121. "This is true because to be a legal cause of harm a person's conduct must be a substantial factor in bringing it about." Restatement § 834 cmt. d. And, as pertinent here, even if the activity that created the harmful condition has ceased, but the harmful condition remains, "a [defendant] who . . . participated to a substantial extent in the activity" may be liable where the defendant's "active conduct has been a substantial factor in creating the harmful condition . . . so long as [the] condition continues." *Id.* § 834 cmt e.

With respect to the first element of Suffolk's public nuisance claim, the Defendants do not appear to dispute on these motions that the release of dioxane into Suffolk County aquifers and its presence in the groundwater in Suffolk County created a public nuisance. *See State of N.Y. v. Shore Realty Corp.*, 759 F.2d 1032, 1051 (2d Cir. 1985) ("[T]he release or threat of release of hazardous waste into the environment . . . is a public nuisance as a matter of New York law"); *Benoit*, 959 F.3d at 504–05 ("It is well settled that the seepage of chemical wastes into a public water supply constitutes a public nuisance") (internal quotation marks omitted). The Defendants also do not dispute on these motions that Suffolk can meet the third element, that it suffered an injury different in kind from the public at large.

Upon review of the record, there is sufficient evidence from which a reasonable jury could conclude that each of the Defendants participated to a substantial extent in the alleged nuisance.³⁷

³⁷ The parties do not address on these motions the standard of proof applicable to a public nuisance claim. But "the inquiry involved in a ruling on a motion for summary judgment . . . necessarily implicates the substantive evidentiary standard of proof that would apply at the trial on the merits."

Among the evidence discussed previously in this opinion, Mr. Rabenhorst concluded in his “best estimate” that Dow and Vulcan manufactured about 81% and 15%, respectively, of all dioxane-stabilized TCA shipped to Long Island distributors and Suffolk County end users. Rabenhorst Rebuttal Report, at 29–30. He also concluded that Ferro manufactured about 20% of the dioxane shipped in Dow’s and Vulcan’s dioxane-stabilized TCA to Long Island distributors and Suffolk County end users and, by 1989, Ferro became the only domestic manufacturer of dioxane. *Id.*, at 35, 42.³⁸ And, there is evidence that the contamination in the TCA Claim Wells comes predominantly from dioxane-stabilized TCA. Kern Report, at 4, 16.

New York recognizes that a non-landowner such as a manufacturer can be liable for taking part in the creation of or participation in a nuisance. *State v. Schenectady Chems., Inc.*, 117 Misc.2d 960, 966–67 (Sup. Ct., Rensselaer Cnty. 1983), *aff’d as modified on other grounds*, 103 A.D.2d 33 (3d Dep’t 1984); *see also Sahu v. Union Carbide Corp.*, 2012 WL 2422757, at *5 (S.D.N.Y. June 26, 2012), *aff’d* 528 F. App’x 96 (2d Cir. 2013). And, that a defendant is an out-of-state manufacturer does not make its conduct too remote to be actionable. The lesson of *MTBE* is that a remote manufacturer can be liable for public nuisance so long as it meets the substantial participation test just described. *MTBE*, 725 F.3d at 121–23. Nothing in that test requires that the Defendants have made their sales directly to end users, as the Defendants contend.

The Defendants argue that they had no ability to control how end users disposed of TCA. While some jurisdictions require a control element for public nuisance claims brought against product manufacturers, others, including New York, hold that nuisance claims are not so limited.

Anderson, 477 U.S. at 252. Therefore, I will apply here the clear and convincing evidence standard. *See* PJI 3:17 & cmt.; *AcuSport*, 271 F. Supp. 2d at 448.

³⁸ Also relevant to the public nuisance claim, but already discussed in the failure to warn and trespass sections of this opinion, Suffolk has sufficient evidence to identify the products contributing to the nuisance as coming from Dow, Vulcan and Ferro.

Compare, e.g., Tioga Pub. Sch. Dist. No. 15 v. U.S. Gypsum Co., 984 F.2d 915, 920 (8th Cir. 1993) (“[L]iability for damage caused by a nuisance turns on whether the defendant is in control of the instrumentality alleged to constitute a nuisance”), and *Camden Cnty. Bd. of Chosen Freeholders v. Beretta, U.S.A. Corp.*, 273 F.3d 536, 539, 541 (3d Cir. 2001), with *MTBE*, 725 F.3d at 121–23, and *State v. Fermenta ASC Corp.*, 162 Misc. 2d 288, 293 (Sup. Ct., Suffolk Cnty. 1994) (“[C]ontrol by the defendant over the offending product is not a prerequisite to liability for damages or injury due to . . . nuisance”), *aff’d*, 238 A.D.2d 400 (2d Dep’t 1997). Guided by New York law, as described by the Second Circuit in *MTBE*, I decline to adopt a rule requiring a showing of control to demonstrate substantial participation in a public nuisance. Participation and control, while not mutually exclusive, are distinct concepts. New York law permits a jury to conclude that a chemical manufacturer substantially participated in the creation of a nuisance even without evidence that the manufacturer had control over the end users’ conduct.

At oral argument, the Defendants argued that, in *MTBE*, the Second Circuit did not have to “grapple with the issue of whether there was control,” Oral Arg. Tr. 140, because Exxon was physically pumping MTBE gasoline directly into storage tanks that Exxon itself owned and knew were leaking. But the Second Circuit did address control in *MTBE*. It held that there was sufficient evidence to support the jury’s public nuisance verdict as to Exxon’s conduct as a manufacturer, refiner, supplier, and seller of MTBE gasoline, as distinguished from its conduct as a direct spiller of MTBE gasoline. 725 F.3d at 88, 122–23. Its recognition of this distinction reinforces that a component manufacturer may be held liable under public nuisance law notwithstanding a lack of control over the end user.³⁹

³⁹ In making their arguments, the Defendants principally rely on *SUEZ I*, which held that the plaintiff did not allege sufficient participation in the nuisance-causing activity because the defendants did not sell to end users, were not involved in the sale to end users, and did not direct

Defendants also argue that a public nuisance claim cannot stand against a manufacturer of a lawful product lawfully placed in the stream of commerce. This is incorrect. As just described, the relevant inquiry is whether there was a substantial interference with a public right and to what extent the Defendants participated in that interference. *See City of New York v. A-1 Jewelry & Pawn, Inc.*, 247 F.R.D. 296, 346 (E.D.N.Y. 2007) (“When a substantial interference with a public right is alleged, a court cannot, as a matter of law, deny judicial recourse to those who try to enjoin it simply because it involves otherwise lawful commercial activity.”); *see also* 81 N.Y. Juris. 2d Nuisances § 62 (“The mere fact that the business conducted by the defendants is in itself lawful is not an excuse in law for the commission of a public nuisance.”); *but see People ex rel. Spitzer v. Sturm, Ruger & Co.*, 309 A.D.2d 91, 103–105 (2d Dep’t 2003). That the Defendants lawfully

or have the capacity to direct how end users disposed of the products. *SUEZ I*, 578 F. Supp. 3d at 550. In so holding, the *SUEZ I* court was concerned with “extending liability to anyone who contributed in some way or another to a nuisance or its maintenance” regardless of how far removed they were from the harm. *Id.* Also, in *SUEZ Water N.Y. Inc. v. E.I. du Pont de Nemours & Co.* (“*SUEZ II*”), 2023 WL 2601161 (S.D.N.Y. Mar. 22, 2023), which was decided after the plaintiff filed an amended complaint, the court held that the complaint did not allege that the defendants substantially participated in the nuisance causing activity because they disseminated only “miniscule” amounts of the alleged contaminant, which was incapable of causing the “degree of harm necessary” to maintain the public nuisance claim. *Id.* at *12. *SUEZ I*’s concerns are not present, and *SUEZ II*’s holding is inapposite here, where there is evidence that the Defendants were among the few manufacturers of dioxane and dioxane-stabilized TCA in the United States. Dow and Vulcan were two of four U.S. dioxane-stabilized TCA manufacturers during the relevant period. Dow and Ferro both manufactured dioxane and Ferro became the only manufacturer of dioxane in the United States. According to Mr. Rabenhorst, Dow and Vulcan produced about 96% of all dioxane-stabilized TCA, and Ferro manufactured about 20% of all dioxane in Dow’s and Vulcan’s dioxane-stabilized TCA used in Suffolk County. And Dr. Kern opined that the predominant source of dioxane contamination in the TCA Claim Wells came from dioxane-stabilized TCA.

Moreover, both *SUEZ I* and *SUEZ II* held that the complaints alleged only that the defendants could “foresee” that their conduct could result in groundwater contamination, which is insufficient to allege an intentional public nuisance claim. *SUEZ I*, 578 F. Supp. 3d at 551; *SUEZ II*, 2023 WL 2601161, at *12–13. By contrast, as discussed in the text below, Suffolk has proffered sufficient evidence for an intentional public nuisance claim.

manufactured dioxane and dioxane-stabilized TCA and then lawfully placed those products on the market says nothing about whether their conduct interfered with the public's right to potable drinking water.⁴⁰

Finally, I turn now to the question of whether Suffolk can show either intentional conduct or negligent conduct on the part of the Defendants.

“An invasion of another's interest in the use and enjoyment of land is intentional when the actor . . . knows that it is resulting or is substantially certain to result from his conduct.” *Copart*, 41 N.Y.2d at 571.⁴¹ In discussing the trespass claim, I concluded that, based upon a combination of direct and circumstantial evidence, Suffolk can establish that each of the Defendants had “good reason to know or expect” that its products would invade the TCA Claim Wells. As I noted, Suffolk has abundant evidence to meet the standard for trespass, itself an intentional tort. Construing all of this evidence, in the light most favorable to Suffolk, and drawing all inferences and resolving all ambiguities in Suffolk's favor, as I must, I find that Suffolk has proffered sufficient evidence to also meet the substantial certainty test for intentional public nuisance. The Plaintiff's evidence goes far beyond a showing that the Defendants were aware of a “serious risk” or “likelihood” of their conduct “causing the invasion” of Suffolk's wells. Restatement § 825 cmt. c; *see AcuSport, Inc.*, 271 F. Supp. 2d at 488. Rather, it is sufficient to show intentionality. Close questions of fact on issues like knowledge and intent are best left to the jury.

⁴⁰ The Defendants made the same argument on their motion to dismiss before now-Circuit Judge Bianco. In his oral ruling, he held that a plausible claim is stated against a defendant who contributes to a public nuisance as a manufacturer.

⁴¹ *Copart* described this standard in the context of a private nuisance claim; however, the same standard applies to public nuisance claims. *See AcuSport, Inc.*, 271 F. Supp. 2d at 487; PJI 3:17, cmt.

As to negligent conduct, none of the Defendants offers any factual basis for dismissing Suffolk's public nuisance claim based on negligent conduct. Unlike in a traditional negligence claim, where the duty is owed to a particular injured person, in a negligence-based public nuisance claim, the duty of care is owed to the public. *See AcuSport*, 271 F. Supp. 2d at 490–91. As in *Hicksville*, where negligent conduct was at issue, there is an unquestionable duty to the public regarding “the release of 1,4-Dioxane into the groundwater.” 2018 WL 1542670, at *8. That duty is breached when a defendant fails to use the degree of care that a reasonably prudent manufacturer of dioxane or dioxane-containing products would have exercised. Because the number of persons to whom the defendant owes a duty is greater than in a traditional negligence claim, the foreseeability of harm is greater and the “unreasonableness of failing to act to prevent it . . . increases.” *A-1 Jewelry & Pawn*, 247 F.R.D. at 345. In the world of negligence, foreseeability is prime. The Defendants have not shown as a matter of law, on the factual record before the court, that the creation of a public nuisance was not foreseeable. *See Hain*, 28 N.Y.3d at 530 (“[W]here the risk of harm created by a defendant’s conduct corresponds to that which actually results . . . it cannot be said, as a matter of law, that a defendant’s negligence merely furnished the occasion for the harm.”) Given the Defendants’ conduct in the face of the severity of the risk, a reasonable jury could conclude that each of the Defendants breached its duty to the members of the public in Suffolk County.

Accordingly, summary judgment is denied on Suffolk’s public nuisance claim whether based on intentional or negligent conduct.

IV. Conclusion

For the foregoing reasons, the motions to exclude Suffolk’s experts’ opinions, with a few exceptions set forth above, are denied.

The Defendants' joint motion for summary judgment is granted only to the extent that Suffolk's design defect claims against all of the Defendants and Suffolk's market share and alternative liability causation theories for Suffolk's failure to warn claims against Dow and Vulcan are dismissed, and is otherwise denied. Dow's and Vulcan's separate motions for summary judgment are both denied. Ferro's separate motion for summary judgment is granted only to the extent that Suffolk's design defect claims are dismissed against Ferro, and is otherwise denied. In sum, Suffolk's design defect claims are dismissed as to all the Defendants. Its market share and alternative liability causation theories for the failure to warn claims against Dow and Vulcan are dismissed.⁴²

The following claims remain as to Dow and Vulcan: strict products liability and negligent failure to warn, trespass and intentional and negligent public nuisance. The following claims remain as to Ferro: trespass and intentional and negligent public nuisance.

SO ORDERED.

/S/
NINA GERSHON
United States District Judge

July 9, 2025
Brooklyn, New York

⁴² Decision on the issue of punitive damages is reserved.