

U.S. COURT OF APPEALS, FOURTH CIRCUIT

MARTHA CARROLL; JAMES CARROLL; ROSETTA EDWINA ROGERS; JAMES CARROLL, JR.; KEITH S. GENTLE; BELINDA GADDIS, INDIVIDUALLY AND AS NEXT FRIEND AND PARENT OF JUSTIN GADDIS AND DERRICK GADDIS, BOTH MINORS; RANDY GADDIS, INDIVIDUALLY AND AS NEXT FRIEND AND PARENT OF JUSTIN GADDIS AND DERRICK GADDIS, BOTH MINORS; FRED ALLEN CHAMBERS, INDIVIDUALLY AND AS NEXT FRIEND AND PARENT OF RUSTY CHAMBERS, A MINOR; DEBBIE CHAMBERS, INDIVIDUALLY AND AS NEXT FRIEND AND PARENT OF RUSTY CHAMBERS, A MINOR; BARBARA MESSER; ANCY SIMONDS, INDIVIDUALLY AND AS NEXT FRIEND AND PARENT OF JENNIFER SIMONDS, A MINOR; JAMES GREEN; MARVIN GARRETT; KENNY GREEN; PEGGY GREEN; SANDRA HANCOCK, INDIVIDUALLY AND AS NEXT FRIEND AND PARENT OF CHUCK HANCOCK, A MINOR; JAMES R. MESSER, INDIVIDUALLY AND AS NEXT FRIEND AND PARENT OF JONATHAN MESSER, A MINOR; MELANIE MESSER, INDIVIDUALLY AND AS NEXT FRIEND AND PARENT OF JONATHAN MESSER, A MINOR; ANN CARROLL, PLAINTIFFS-APPELLANTS, AND LUCILLE LEATHERWOOD, INDIVIDUALLY AND AS NEXT FRIEND AND PARENT OF CRYSTAL LEATHERWOOD, A MINOR; EDNA CONLEY; JOE CONLEY; TERRY CONLEY, PLAINTIFFS,

v.

LITTON SYSTEMS, INC., A DELAWARE CORPORATION THROUGH ITS AGENT FOR SERVICE OF PROCESS: C.T. CORPORATE SYSTEM, DEFENDANT-APPELLEE, AND LITTON INDUSTRIES, INC., THROUGH ITS AGENT FOR SERVICE OF PROCESS: THE CORPORATION TRUST COMPANY, DEFENDANT. PRODUCT LIABILITY ADVISORY COUNCIL, INCORPORATED, AMICUS CURIAE.

No. 92-2219

Decided February 1, 1995

Counsel:

Rosewell Paige, III, E. Duncan Getchell, Jr., Melissa K. Force, MCGUIRE, WOODS, BATTLE & BOOTHE, Richmond, Virginia, for Amicus Curiae.

ARGUED: Donna Keene Holt, Knoxville, Tennessee, for Appellants.

Donald W. Fowler, SPRIGGS & HOLLINGS WORTH, Washington, D.C., for Appellee.

ON BRIEF: Sidney W. Gilreath, Knoxville, Tennessee, for Appellants.

Joe G. Hollingsworth, Bruce J. Berger, SPRIGGS & HOLLINGSWORTH, Washington, D.C.; James W. Williams, ROBERTS, STEVENS & COGBURN, Asheville, North Carolina, for Appellee.

Before Russell and Williams, Circuit Judges, and Butzner, Senior Circuit Judge. Judge Williams wrote a Concurring and Dissenting opinion.

Author: Per Curiam

Opinion

Per Curiam:

Plaintiffs, persons who obtained their drinking water from private wells allegedly contaminated by defendant

Litton Systems, Inc. (Litton), appeal the district court's grant of summary judgment for Litton on all of their claims. We affirm in part and reverse in part.

I.

Litton used trichloroethane (TCE) as a degreasing solvent at its plant in Murphy, North Carolina (the plant), from 1967 until about 1974. In 1986, Litton detected the presence of TCE in the groundwater at the plant site.

Four residential wells are located near the plant. Three of these wells, the Carroll well, the Green well, and the Messer well, are located directly across a creek, called Slow Creek, which runs next to the plant; the exact location of the fourth, the Kilpatrick well, is difficult to determine from the record.^{*fn1} Upon finding TCE in the groundwater at the plant site, Litton performed repeated tests to check for the presence of TCE in these wells. Some of the tests indicated that TCE was present in the water of these wells: at the Carroll well, 72% of the test results indicated the TCE was present, with the average concentration of the TCE approximately 19.6 parts per billion (PPB); at the Green well, 50% of the test results indicated the TCE was present, with the average concentration of the TCE approximately 2.9 PPB; at the Messer well, 25% of the test results indicated the TCE was present, with the average concentration of the TCE approximately 2.0 PPB; at the Kilpatrick well, 38% of the test results indicated the TCE was present, with the average concentration of the TCE approximately 1.8 PPB.

Litton reacted to these tests by temporarily supplying the people who used these wells with bottled water, and then installing filter systems in the wells that strained out the TCE. Litton also entered into a consent order with the Environmental Protection Agency (EPA) in which it agreed to perform certain remedial actions.

In October, 1988, persons who had obtained their drinking water from these wells brought an action against Litton in the Western District of North Carolina.^{*fn2} All asserted claims of negligence, gross negligence, strict liability, nuisance, and trespass, as well as claims under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. §§ 9601-9675, and the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§ 6901-6992k. Magistrate Judge Toliver Davis was assigned to conduct the pre-trial stage of the action.

The record demonstrates that Magistrate Judge Davis encountered significant problems with plaintiffs' preparation of their case. The magistrate Judge's original

pre-trial order, filed January 12, 1989, set an April 22, 1989, discovery deadline, giving the parties 100 days to conduct discovery. Plaintiffs' counsel, however, who performed almost no investigation of plaintiffs' claims before they filed the complaint, sought and were given four extensions of this discovery deadline. In all, plaintiffs were given fifteen months to prepare their case. During this discovery period, plaintiffs moved to have their action dismissed without prejudice so that they could bring it again at a later date when they were better prepared; the district court, on the magistrate Judge's recommendation, denied their motion. Finally, in May, 1990, more than a year after the original discovery deadline, plaintiffs completed their discovery.

Plaintiffs' theory of the case is that in the late 1960's and early 1970's, the period when TCE was used in the plant, TCE was transported in the groundwater from the plant to the four residential wells. During the approximately fifteen years prior to the discovery of the TCE in the wells in 1986, plaintiffs consumed TCE in their drinking water and, as a result, developed a variety of health problems which were known to be caused by TCE exposure.

To prove their case, plaintiffs intended to rely on several experts. Gerald Moore, a hydrologist, indicated that, in his opinion, the TCE in the four residential wells had been transported there from the plant by groundwater. Moore acknowledged that under normal conditions, TCE would not be transported in the groundwater to the residential wells on the other side of Slow Creek because the flow of the groundwater on both sides of the creek was toward the creek. He stated that under certain conditions, however, when as a result of low rainfall or heavy well usage, the water level in the wells was below the bottom of the creek, it was theoretically possible

that the wells could have drawn groundwater containing TCE from the other side of Slow Creek. Moore offered no evidence that these conditions allowing for this movement of groundwater beneath Slow Creek had ever occurred between the early 1970's and 1986. Despite this lack of evidence, however, he concluded, without support, that TCE had been drawn under Slow Creek "within a few months to a year" after the Carroll well was dug in 1969.^{*fn3}

Moore was asked by Litton to estimate the concentrations of TCE that had been transported under Slow Creek by groundwater into the residential wells between the early 1970's and 1986. At one point, he speculated as to such concentrations, but later deferred to Dr. Hugh Spencer, another of plaintiffs' experts, to

determine the concentrations over this period.

Spencer was an expert in the field of “chemodynamics,” the study of the movement of chemicals in air, water, and soil. To determine the concentration of Litton’s TCE in the residential wells prior to 1986, Spencer employed a concept called environmental “half-life,” which posits that certain chemicals “degrade” into other chemicals over time. A chemical’s half-life is the time it takes for one-half of its mass to degrade. Spencer proposed to determine the half-life of TCE, and then, assuming that the TCE found in the wells in 1986 had been degrading, to use this half-life to determine how much TCE had been in the wells during the period prior to 1986.

Spencer estimated TCE’s half-life between 1.5 and 2 years. He used this half-life figure to calculate the concentrations of TCE that must have been in the four wells from 1970 until 1986, given the small amounts of TCE found in the wells in 1986. By this calculation, he determined that in the Carroll well, the concentration of TCE in 1970 was between 1,728 and 27,591 micrograms per liter, a concentration too high for safe drinking water. This concentration had reduced by half every 1.5 to

2 years after 1970, but, under Spencer’s calculations, the plaintiffs had undergone long-term exposure to high concentrations of TCE in their drinking water between 1970 and 1986.

Next, the plaintiffs offered the testimony of three physicians, Drs. Feldman, Broughton, and Rodgers. These physicians cited studies indicating that TCE was known to cause the following health problems: nervous system disorders including numbness and tingling, memory deficits, dizziness, fatigue, weakness, depression, headaches, heart palpitations, impaired vision, headaches, skin rashes, respiratory disorders, intestinal disorders, and immune system disorders. They indicated that twenty-one of the twenty-two plaintiffs involved in this appeal had experienced some combination of these problems.*fn4

In addition, Dr. Rodgers estimated each of the plaintiffs’ exposures to TCE through the well water based on Spencer’s calculations of the amount of Litton’s TCE in the residential wells since 1970. All of the physicians opined that if Rodgers’ exposure estimates were correct, plaintiffs’ health problems were caused by Litton’s TCE. They noted, however, that “if Dr. Spencer’s calculations were dismissed entirely,” they “would . . . require another review of the information on each plaintiff to ascertain the length of time that the particular plaintiff was exposed to the well water.”

When plaintiffs’ discovery was complete, Litton moved for summary judgment on all plaintiffs’ claims. Litton conceded, for the purposes of its motion, that the TCE found in the residential wells in 1986 originated in its plant, but argued that plaintiffs’ evidence was insufficient to prevail on any of their claims.

Magistrate Judge Davis agreed and recommended granting Litton’s summary judgment motion. First, he addressed plaintiffs’ negligence, gross negligence, and strict liability claims. For all of these claims, he reasoned, plaintiffs had to show that TCE from Litton’s plant had caused them health problems. He found Moore’s opinion that Litton’s TCE entered the residential wells in 1970, and Spencer’s calculations on the amount of Litton’s TCE in plaintiffs’ wells since 1970, inadmissible under Fed. R. Evid. 702. Without these, he indicated, plaintiffs could not show that Litton’s TCE had harmed them.

Accordingly, he advised that plaintiffs’ negligence, gross negligence, and strict liability claims must fail. He also recommended that plaintiffs’ nuisance, trespass, CERCLA, and RCRA claims be rejected.

The district court accepted the magistrate Judge’s recommendations and reasoning on all plaintiffs’ claims and granted summary judgment for Litton on all of them.

II.

We first address the district court’s grant of summary judgment for Litton plaintiffs’ claims for negligence, gross negligence, and strict liability (the personal injury claims). To succeed on any of these claims, plaintiffs have to show that their medical problems were caused by Litton’s TCE, which they ingested by drinking water from the residential wells. *Jefferson-Pilot Life Ins. Co. v. Spencer*, 336 N.C. 49, 442 S.E.2d 316, 319 (N.C. 1994); *Falls Sales Co. v. Board of Transp.*, 292 N.C. 437, 233 S.E.2d 569, 572-73 (N.C. 1977). To survive summary judgment on any of these claims, plaintiffs had to submit admissible evidence from which a reasonable jury could find, viewing this evidence in the light most favorable to them, that Litton’s TCE caused their medical problems. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248, 91 L. Ed. 2d 202, 106 S. Ct. 2505 (1986).

Plaintiffs offered the following evidence to show that Litton’s TCE had caused their medical problems: (1) Litton’s concession that it used TCE at its plant from 1967 until about 1974; (2) Litton’s concession, for the purposes of its summary judgment motion, that the TCE found in the residential wells in 1986 originated at

its plant; (3) Mr. Moore's testimony that Litton's TCE crossed Slow Creek and entered plaintiffs' wells around 1970; (4) Dr. Spencer's testimony calculating the amount of Litton's TCE in the residential wells since 1970; (5) the testimony of Drs. Feldman, Broughton, and Rodgers that TCE was known to cause the types of medical problems experienced by twentyone of the twenty-two plaintiffs in this appeal; and (6) the opinions of Drs. Feldman, Broughton, and Rodgers that Litton's TCE caused plaintiffs' medical problems if plaintiffs were exposed to TCE in the amount and over the period estimated by Dr. Spencer.

Preliminarily, we must consider the admissibility of this evidence. The district court concluded that Moore's testimony that Litton's TCE entered the residential wells around 1970 and Spencer's testimony on the amount of TCE in plaintiffs' wells since 1970 would be inadmissible at trial under Fed. R. Evid. 702. Rule 702 states that an expert may only testify about "scientific, technical, or other specialized knowledge" that "will assist the trier of fact to understand the evidence or to determine a fact in issue." Fed. R. Evid. 702. The Supreme Court recently indicated in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 125 L. Ed. 2d 469, 113 S. Ct. 2786 (1993), that to qualify as scientific knowledge which assists the trier of fact, scientific evidence must be "reliable." *Id.* at 2795. To make the requisite reliability determination, trial courts are to take into account whether the evidence has been published and subjected to peer review, whether it has been tested and verified, whether its rate of error is high, and whether it has been generally accepted in the scientific community. *Id.* at 2796-97. See also *United States v. Bynum*, 3 F.3d 769, 773 (4th Cir. 1993). We review a district court's decision on the admissibility of scientific evidence under Rule 702 for abuse of discretion. *Id.*

Moore indicated that Litton's TCE had crossed Slow Creek and entered into the residential wells around 1970, or "within a few months to a year" after the Carroll well was dug in 1969. Moore failed, however, to offer any support for this Conclusion. In fact, he conceded that TCE could only pass under Slow Creek into the residential wells when, as a result of little rainfall or heavy well usage, the water level in the wells fell below the depth of Slow Creek, and he acknowledged that he had no evidence of such a low water level in the wells around 1970. As a result, we conclude that the district court did not abuse its discretion in concluding that Moore's expert opinion that Litton's TCE entered the residential wells around 1970 was unreliable and, therefore, ruling it inadmissible.

With regard to Spencer's testimony, plaintiffs point to absolutely no scientific support for using the concept of environmental half-life, as Spencer did, to determine how much TCE must have been present fifteen years before the discovery of TCE in the residential wells at issue in this case. In fact, the lead author of the paper on which Spencer relied heavily in calculating the half-life of the TCE in the residential wells, Dr. Paul Roberts, submitted an affidavit stating that Spencer's "approach [was] imprudent and prone to enormous error." And even Spencer concedes that the rate of error of his method could not be reduced below 1,400 percent. Moreover, Spencer's method of determining the amount of TCE

in the residential wells in years past failed its only test. Spencer admits that over a two-year period after 1986 the concentration of TCE in one of the residential wells showed no change. To sustain Spencer's theory that TCE's half-life was 1.5 to 2 years, the level of TCE should have declined by half or more; Spencer makes no effort to explain why his theory failed in this test. For all of these reasons, we conclude that the district court did not abuse its discretion in finding Spencer's expert testimony unreliable and, therefore, inadmissible under Rule 702.

The exclusion of Spencer's testimony also affects the opinions of Drs. Broughton, Feldman, and Rodgers. In forming their opinions that plaintiffs' medical problems were caused by Litton's TCE, each of these physicians relied on Dr. Rodgers' estimates of "the range of exposures to which each individual plaintiff was subjected," and Dr. Rodgers estimates, in turn,

were based on Spencer's calculations using his half-life theory. These physicians noted in their joint affidavit that "if Dr. Spencer's calculations were dismissed entirely," they "would . . . require another review of the information on each plaintiff to ascertain the length of time that the particular plaintiff was exposed to the well water." As Spencer's calculations were properly ruled inadmissible by the district court, plaintiffs cannot rely on these physicians' opinions that Litton's TCE caused their medical problems.*fn5

Plaintiffs, therefore, are left with three pieces of evidence--that Litton used TCE at its plant from 1967 until about 1974, that the TCE found in the residential wells in 1986 originated at its plant, and that the types of health problems experienced by twenty-one of the twenty-two plaintiffs were known to be caused by TCE*fn6 --to show that their health problems had been caused by Litton's TCE, which they ingested by drinking water from the residential wells. We determine that for these twenty-one plaintiffs, a reasonable jury could find, on the basis of this evidence, that their health problems

were caused by Litton's TCE. It could reasonably be inferred from the fact that Litton used TCE in its plant only in the late 1960's and early 1970's that the TCE discovered in the residential wells in 1986 entered these wells many years earlier, giving these plaintiffs, all of whom drank from these wells, long-term exposure to Litton's TCE. See *Anderson*, 477 U.S. at 249 (stating that the court determining summary judgment motion must examine what jury could have inferred from the evidence). And it could be further reasonably inferred from the fact that TCE was a known cause of the types of health problems experienced by these plaintiffs that this long-term exposure to Litton's TCE had caused their health problems. As a result, we conclude that the district court erred in granting summary judgment on these plaintiffs' personal injury claims.*fn7

We note that our Conclusion that summary judgment was inappropriate on these plaintiffs' personal injury claims is premised largely on Litton's concession, apparently made only for the purposes of this summary judgment motion, that the TCE found in the residential wells in 1986 originated at its plant. If Litton is able to retract this concession at some later point in the litigation, summary judgment on these claims may be proper.

III.

We next turn to the plaintiffs' claims of nuisance and trespass. To recover for nuisance, a plaintiff must show that the defendant unreasonably interfered with his use and enjoyment of his property and that defendant's conduct caused him "substantial injury." *Twitty v. State*, 85 N.C. App. 42, 354 S.E.2d 296, 302 (N.C. Ct. App.), rev. denied, 320 N.C. 177, 358 S.E.2d 69 (N.C. 1987). Similarly, to recover compensatory damages for trespass, a plaintiff must demonstrate that defendant made an unauthorized entry on his land and that this entry caused him "actual damage." *Matthews v. Forrest*, 235 N.C. 281, 69 S.E.2d 553, 555 (N.C. 1952). The district

court granted summary judgment for Litton on plaintiffs' claims on the ground that the entry of Litton's TCE into the residential wells constituted only a de minimis encroachment and, therefore, did not cause a substantial injury or actual damage.

Preliminarily, as the district court recognized, a number of plaintiffs have no ownership or possessory interest in the residential wells. The nuisance and trespass claims of these plaintiffs were properly dismissed. See *State ex. rel v. Simpson*, 325 N.C. 514, 385 S.E.2d 329, 332 (N.C. 1989) (holding that plaintiff must have ownership or possessory interest to maintain trespass action).*fn8 The

nuisance and trespass claims of those plaintiffs with an ownership or possessory interest in the residential wells require further analysis.

With regard to the claims of those who hold such an interest in the Carroll well, the 1986 tests revealed an average concentration of 19.6 PPB in the Carroll well, and Litton has conceded, for present purposes, that this TCE originated at its plant. The Environmental Protection Agency (EPA) has determined that the maximum concentration of TCE allowed in the public drinking water supply (also called the maximum contaminant level, or "MCL") is 5 PPB; the concentration of Litton's TCE in the Carroll well is, thus, nearly four times the maximum allowed in the public drinking supply. We believe that on this evidence alone, a reasonable jury could conclude that Litton's TCE had caused those plaintiffs who have an ownership or possessory interest in the Carroll well substantial injury or actual damage. We therefore reverse the district court's grant of summary judgment on these plaintiffs' nuisance and trespass claims.

The claims of those plaintiffs who hold ownership or possessory interests in the other three wells pose a more difficult problem, for the 1986 tests on these wells revealed average concentrations of 2.9 PPB, 2.0 PPB, and 1.8 PPB, well below the EPA's MCL for TCE. A reasonable jury could infer from the fact that Litton last used the TCE in 1974, and the fact that plaintiffs who consumed water from these wells show health problems consistent with TCE exposure, however, that the concentration of Litton's TCE in these wells was at some point before 1986 considerably higher than the concentrations measured in 1986 and, therefore, that Litton's TCE did cause substantial injury and actual damage to those plaintiffs who had an ownership or possessory interest in these wells. As a result, we reverse the district court's grant of summary judgment on these plaintiffs' nuisance and trespass claims as well.

IV.

Finally, we consider the plaintiffs' CERCLA and RCRA claims. Plaintiffs claimed under section 107 of CERCLA, 42 U.S.C. § 9607, that Litton was liable for certain of their costs, including medical costs, the costs of obtaining alternate water, and attorney's fees. To recover these costs under section 107, however, plaintiffs must demonstrate that they were "incurred . . . consistent with the national contingency plan." 42

U.S.C. § 9607(a)(4)(B); *White v. County of Newberry*, 985 F.2d 168, 174 (4th Cir. 1993). Plaintiffs did not even attempt to show that the costs they seek to recover

under section 107 were incurred consistent with the national contingency plan in effect when they brought their action.

With respect to plaintiffs' RCRA claims, these claims had to be brought against a "person [including a company] . . . who is alleged to be in violation of any . . . requirement[of RCRA]." 42 U.S.C. § 6972(a)(1)(A) (emphasis added). The language "to be in violation" requires that the defendant be in violation of an RCRA requirement when the plaintiff's action is filed. See *Gwaltney of Smithfield, Ltd. v. Chesapeake Bay Foundation, Inc.*, 484 U.S. 49, 57, 98 L. Ed. 2d 306, 108 S. Ct. 376 (1987) (interpreting identical language in the Clean Water Act in the same way). Plaintiffs made no showing that any of Litton's alleged violations of RCRA requirements were continuing at the time they filed their action.*fn9

V.

For the reasons stated, we reverse the district court's grant of summary judgment on the personal injury claims of all plaintiffs except Jonathan Messer and on the nuisance and trespass claims of those plaintiffs with ownership or possessory interests in the residential wells. We affirm the district court's grant of summary judgment on the remainder of plaintiffs' claims.

AFFIRMED IN PART, REVERSED IN PART, AND
REMANDED

Disposition

AFFIRMED IN PART, REVERSED IN PART, AND
REMANDED

WILLIAMS, Circuit Judge, Concurring in part and
Dissenting in part:

As to the Disposition of this case, I find myself in substantial agreement with much of the panel's well reasoned opinion. I write separately because language in parts II and III of the majority opinion implies that a lay person can infer causation when the evidence is insufficient to support a similar opinion by expert witnesses. Because I do not believe that a reasonable jury could find for plaintiffs without expert testimony, I would affirm the district court's grant of summary judgment on the personal injury issues in part II. Furthermore, although I agree with the decision to remand as to the nuisance and trespass claims on all four wells, I do so not because I believe the plaintiffs are entitled to personal injury damages, but because I

believe that, at least for summary judgment purposes, plaintiffs have created a triable issue with respect to property damages.

I begin with the proposition that the following three Conclusions of the majority are correct. First, I agree that Moore and Spencer's expert testimony is inadmissible under F.R.E. 702. Therefore, I must also conclude that plaintiffs cannot rely on Drs. Feldman, Rodgers, and Broughton because the doctors relied on Moore and Spencer's inadmissible calculations to develop their expert opinions stating that the TCE caused the plaintiffs' medical problems. Finally, I agree with the panel that the district court properly admitted the doctors' expert testimony that plaintiffs' ailments were of the kind that may be caused by TCE exposure.

In my opinion, the three pieces of evidence remaining--that Litton used TCE in its plant between 1967 and 1974, Litton's stipulation that the TCE found in plaintiffs' wells in 1986 originated at Litton's plant, and that the types of health problems experienced by plaintiffs were known to be caused by TCE--are simply not sufficient to support a reasonable inference that Litton's TCE caused plaintiffs' health problems. There must be some evidence that the plaintiffs' wells contained TCE for a long enough time, and at a sufficiently high concentration,

to cause their health problems.*fn1 "In a long line of decisions in this circuit, we have emphasized that proof of causation must be such as to suggest 'probability' rather than mere 'possibility,' precisely to guard against raw speculation by the fact-finder." *Sakaria v. Trans World Airlines*, 8 F.3d 164, 172-73 (4th Cir. 1993), cert. denied, 128 L. Ed. 2d 463, 114 S. Ct. 1835 (1994).

See also *Yeater v. Allied Chem. Co.*, 755 F. Supp. 1330, 1337-38 (N.D. W.Va. 1991) (intensity of exposure and concentration of hazardous substance necessary to show probability of injury in workers' compensation suit).

Absent evidence of the length of exposure and the concentration of TCE, the similarity of plaintiffs' complaints to those caused by TCE contamination is not, I believe, sufficient to allow a reasonable inference that plaintiffs' brief exposure to Litton's TCE caused their longstanding medical problems. The admissible medical expert testimony "merely relates a hypothetical or inferential causal relation between" plaintiffs' exposure to TCE and their injuries, and thus "is not probative

and cannot provide the basis for a reasonable finding of fact." *Porter v. Whitehall Lab., Inc.*, 791 F. Supp. 1335, 1345 (S.D. Ind. 1992), aff'd, 9 F.3d 607 (7th Cir. 1993); see *Lust v. Clark Equipment Co.*, 792 F.2d 436, 437 (4th Cir. 1986) (jury may only draw reasonably probable inferences from evidence).

Because Dr. Spencer's chemodynamic back calculations to determine the concentration of TCE in the contaminated water over the years and Moore's expert opinion that the TCE entered the wells in 1970 were inadmissible, I do not see how a jury could infer from the admitted evidence that the contamination of the wells occurred prior to 1986. Nor could a jury build on that questionable inference a Conclusion that the TCE contamination was at a level of concentration sufficient to cause plaintiffs' medical problems. No admissible expert evidence indicated the length of plaintiffs' exposure or concentration of TCE before 1986. The majority's inference--from the fact that plaintiffs exhibited symptoms of a type consistent with TCE exposure--that Litton's TCE was present in wells at a higher concentration than that measured in 1986

and that Litton's TCE therefore caused substantial injury and actual damage to certain plaintiffs, is precisely the type of "raw speculation by the fact-finder" that expert testimony concerning proof of causation is intended to guard against.

That mere exposure to TCE may potentially cause harm similar to that suffered by plaintiffs does not suffice to create a triable issue. Although "a temporal congruity may be some evidence of causation, it is insufficient evidence to move the merely possible to the reasonably probable." *Porter v. Whitehall Lab., Inc.*, 791 F. Supp. at 1342; see also *Sakaria*, 8 F.3d at 172 (temporal nexus between event and injury without medical causation testimony is insufficient to suggest probability of causation). Given the absence of reliable scientific evidence, a jury cannot be permitted to make unsupported inferences to reach a Conclusion outside the realm of a lay person's knowledge. See *Sakaria*,

8 F.3d at 173 (refusing to allow causation issue to go to the jury when plaintiff's only expert testimony was inadmissible); *Wilson v. McLeod Oil Co.*, 327 N.C. 491, 398 S.E.2d 586, 602-03 (N.C. 1990), reh'g denied, 328 N.C. 336, 402 S.E.2d 844 (1991) (improper to allow jury to answer question that expert cannot answer).

I therefore Dissent from that portion of the majority opinion allowing the personal injury claims to proceed to trial.

As to the nuisance and trespass claims of plaintiffs with a possessory interest in wells, I concur in the majority's decision to remand those claims to the district court. While I do not think that plaintiffs can seek damages for personal injuries for the reasons discussed above, the record contains sufficient evidence to withstand summary judgment of plaintiffs' claims for other damages. In my opinion, plaintiffs adduced sufficient evidence to create a triable issue of fact as to the

nuisance and trespass claims. Litton has stipulated for the purposes of summary judgment that the TCE in plaintiffs' wells came from its factory. Plaintiffs presented evidence showing that the sheer presence of TCE severely reduced the market value of any property upon which it was found. This evidence of devalued or unmarketable property and loss of rental value is sufficient to support the state law nuisance and trespass claims.*fn2 *Maintenance Equip. Co. v. Godley Builders*, 107 N.C. App. 343, 420 S.E.2d 199, 202, 204 (N.C. App. 1992) (holding that a large depreciation in property value due to a trespass was sufficient to satisfy the damages requirement of the tort), review denied, 333 N.C. 345, 426 S.E.2d 707 (N.C. 1993); *Hanna v. Brady*, 73 N.C. App. 521, 327 S.E.2d 22, 25 (N.C. App. 1985), review denied, 313 N.C. 600, 332 S.E.2d 179 (N.C. 1985) (holding that a depreciation in property was a substantial injury supporting a nuisance suit). In sum, like the majority, I would remand the nuisance and trespass claims; however, in my opinion, any damages arising therefrom should exclude damages for personal injury.

For these reasons, I concur in part in the majority opinion and respectfully Dissent in part as I have described above.

*fn1 The parties refer to the wells by these names.

Opinion Footnotes:

*fn2 There were initially twenty-nine plaintiffs. The claims of five were dismissed early in the litigation and these dismissals are not appealed. Two others did not appeal the district court's grant of summary judgment for Litton. The remaining twenty-two are appellants in this appeal.

*fn3 Moore further noted that his tests in 1989 revealed that the chemical makeup in the groundwater on the two sides of Slow Creek was similar, which in his opinion, indicated that groundwater had traveled under Slow Creek. Because Litton concedes for the purposes of this appeal that its TCE traveled from its plant to the residential wells at some point in or prior to 1986, see *infra*, Moore's chemical analysis of the groundwater adds little to our inquiry.

*fn4 The one exception was Jonathan Messer, an eight-year-old plaintiff who had had less exposure to the water in the residential wells than any of the other plaintiffs.

None of the physicians identified any health problems with Messer that were consistent with TCE exposure.

*fn5 The district court ruled inadmissible the physicians' opinions that plaintiffs' health problems were caused by Litton's TCE. We need not address the merits of this ruling because, as these opinions were based on Spencer's inadmissible calculations, plaintiffs may not rely on them.

*fn6 While the district court ruled inadmissible the physicians' opinions that plaintiff's health problems were caused by TCE, it properly could not find inadmissible the physicians' statements that plaintiffs experienced the health problems detailed earlier and that these types of health problems were known to be caused by TCE.

*fn7 The district court correctly ordered summary judgment for Litton on the personal injury claims of the one plaintiff, Jonathan Messer, who showed no health problems consistent with TCE exposure; we therefore affirm its summary judgment order as it applies to Messer.

*fn8 It is not clear to us from the record which plaintiffs lack an ownership or possessory interest in the wells. On remand, the district court should determine which plaintiffs lack such an interest, and dismiss their nuisance and trespass claims.

*fn9 Plaintiffs also argue that the district court abused its discretion in denying their motion to dismiss their claims without prejudice under Fed. R. Civ. P. 41(a). We reject this argument. Plaintiffs asked to have their action dismissed without prejudice largely because they had filed it without adequate preparation and wanted to file it anew after the necessary preparation was complete. This is not a proper ground for voluntary dismissal without prejudice. Moreover, Litton would have been prejudiced by such a voluntary dismissal because, at the time the motion was filed, Litton had already incurred significant expense in preparing to defend against plaintiffs' claims, and much of this expense would have been wasted if plaintiffs were allowed to dismiss their action and refile it in the future.

Dissent Footnotes:

*fn1 Plaintiffs' experts conceded that there would be no measurable adverse health risks if the levels of TCE exposure were sufficiently low. (J.A. 1280.)

*fn2 Plaintiffs submitted deposition testimony of James T. Gentry, a real estate broker/appraiser and former bank director, that the local real estate community would not consider even the least contaminated property marketable after the media released information of contamination in 1987. This was supported by plaintiffs' testimony that no one would buy their properties because of the contamination, and by evidence that the properties had substantial value prior to the discovery of contamination.