

**United States Court of Appeals**  
**FOR THE EIGHTH CIRCUIT**

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No. 09-3115

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Dave Barrett; Clean Harbors	*	
Environmental Services, Inc.,	*	
	*	
Plaintiffs - Appellants,	*	On Appeal from the United
	*	States District Court for the
v.	*	District of Nebraska.
	*	
Rhodia, Inc.,	*	
	*	
Defendant - Appellee.	*	

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Submitted: April 12, 2010  
Filed: May 24, 2010

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Before WOLLMAN, MURPHY, and SHEPHERD, Circuit Judges.

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MURPHY, Circuit Judge.

Dave Barrett and Clean Harbors Environmental Services, Inc. brought this action against Rhodia, Inc., alleging that Barrett had suffered permanent injury while working with a chemical manufactured by Rhodia. After granting a motion to exclude the causation evidence offered by plaintiffs' expert witnesses, the district court<sup>1</sup> granted Rhodia's motion for summary judgment. Barrett and Clean Harbors appeal,

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<sup>1</sup>The Honorable Thomas D. Thalken, United States Magistrate Judge for the District of Nebraska, presiding.

protesting the exclusion of some of their expert testimony and the adverse summary judgment. We affirm.

## I.

Clean Harbors is the country's largest provider of hazardous waste material disposal. Barrett worked as an ash technician for Clean Harbors at its Kimball, Nebraska plant. In that position Barrett participated in "ash fixation," a process by which waste materials are rendered stable so they can be safely disposed of in landfills. The chemical phosphorus pentasulfide ( $P_2S_5$ ) is used during ash fixation to accelerate the stabilization of the waste material. The  $P_2S_5$  used by Clean Harbors was manufactured and supplied by Rhodia.

$P_2S_5$  is a hazardous chemical. It is manufactured in solid form, but it reacts with water and water vapor to form toxic hydrogen sulfide gas.  $P_2S_5$  airborne dust is irritating to the eyes, nose, throat, and skin. If  $P_2S_5$  dust is inhaled, it reacts with moisture in the lungs to form hydrogen sulfide gas. High concentrations of hydrogen sulfide gas, in the range of 500 to 1000 parts per million (ppm), can cause unconsciousness and possible death. Given the dangers of  $P_2S_5$ , the Occupational Safety and Health Administration advises persons using the chemical to wear full protective clothing and a self contained breathing apparatus.

On June 27, 2003 four Clean Harbors employees, including Barrett, were participating in the ash fixation process. The process took place inside a building at the Clean Harbors Kimball plant. The building contains three floors, with each floor consisting of an open steel grating platform. Drums of  $P_2S_5$  are located on the top platform. During ash fixation one employee loads a drum of  $P_2S_5$  into a chute located on the top floor. An employee on the second floor then opens a chute on that level, which allows the  $P_2S_5$  to travel to the bottom floor, where the waste materials sit.

Clean Harbors employee Craig Wheeland was working on the top platform with the  $P_2S_5$  drums on June 27. He was wearing a self contained breathing apparatus. The remaining three employees, including Barrett, were situated on the second level, about twelve to fourteen feet below Wheeland. None of the employees on the second level were wearing protective masks or clothing. Wheeland opened a drum of  $P_2S_5$  and loaded it into the chute. Barrett was tasked with opening the chute on the second level. As he started to open the chute, he "went down" and became unresponsive. Another employee on the second level felt something "take his breath." He and the third colleague helped evacuate Barrett from the building. Wheeland was later found dead on the top floor.

Barrett was taken immediately to the hospital where he was unable to talk and unresponsive to questions. Barrett's wife testified that during his two weeks of missed work following the incident, he remained quiet and unresponsive. Barrett's coworkers reported that his speech slowed substantially, that he could not track in conversations or understand simple sentences, and that he could not handle even the simplest tasks, such as pushing a broom. He has since been diagnosed with dementia resulting from an anoxic brain injury, or lack of oxygen to the brain.

Clean Harbors hired Terracon, an independent environmental company, to investigate the June 27 incident. Terracon inspected and tested the  $P_2S_5$  drum Wheeland had opened, as well as other previously unopened  $P_2S_5$  drums stored at the Kimball plant. Terracon found hydrogen sulfide gas in the headspaces of the previously unopened drums and in the subject drum. Based on those findings, the company concluded that the drum opened by Wheeland may have had a maximum hydrogen sulfide concentration of 5,500 ppm. Because Terracon found the opened drum to have been airtight, it tested possible exposure levels based on a single, rather than continuous, release of hydrogen sulfide gas. Terracon then prepared a table of exposure concentrations for hydrogen sulfide gas dispersed from the opened drum at

different distances, which showed a range of 2.3 ppm to 120 ppm at a distance of twelve feet from the drum.

Barrett and Clean Harbors sued Rhodia, asserting that the chemical manufacturer was strictly liable for Barrett's injuries. They premised the strict liability claim on two theories: product defect and failure to warn. They alleged that defects in the  $P_2S_5$  drum had allowed condensation to form inside the drum, resulting in the creation of hydrogen sulfide gas. Barrett and Clean Harbors asserted that when Wheeland opened the  $P_2S_5$  drum on June 27, the hydrogen sulfide gas dispersed in a sufficient concentration to cause serious injury to Barrett. They also alleged that the  $P_2S_5$  drums were sold without a warning about the risk relating to the possible formation of hydrogen sulfide gas.

Barrett and Clean Harbors retained four expert witnesses to testify on their behalf. Dr. Gerti Janss has been a physician for 50 years. She works primarily as an allergist, but is board certified in toxicology and has worked with patients who have toxicology related problems. Dr. Janss examined Barrett in March 2005 and was prepared to testify that Barrett had suffered a brain injury resulting from exposure to hydrogen sulfide gas, that the hydrogen gas came from the  $P_2S_5$  drum opened by Wheeland, and that Barrett was exposed to a high concentration of the toxic gas, 500 to 700 ppm.

Dr. Terry Himes has been Barrett's treating physician since August 2004. He is a doctor of osteopathic medicine specializing in neurology and has been board certified as a neurologist for over 20 years. Based on his treatment of Barrett, Dr. Himes concluded that he had suffered from a brain injury resulting from exposure to hydrogen sulfide gas.

Appellants' final medical expert was Dr. Anne Talbot, a licensed clinical psychologist with training in neuropsychology. She has practiced in the areas of

psychotherapy and neuropsychotherapy for over 23 years. Dr. Talbot was prepared to testify that Barrett's specific brain injury, dementia, was consistent with hydrogen sulfide gas poisoning. She also intended to testify that Barrett had been exposed to hydrogen sulfide gas in a concentration of 500 to 700 ppm.

Appellants also retained Edward Ziegler, a safety engineer with a degree in petroleum and natural gas engineering. Ziegler visited the ash fixation building at Clean Harbors' Kimball plant and observed the  $P_2S_5$  drums housed there, but did not conduct any testing of the drums or the chemicals involved. Based on his visit to the ash fixation building and his review of the physicians' findings, Ziegler was prepared to testify that defects existed in the  $P_2S_5$  drums supplied by Rhodia, that hydrogen sulfide gas had formed in the drum opened by Wheeland, and that the released gas had caused Barrett's injury.

Rhodia presented an alternative explanation for Barrett's injuries through its own expert, Dr. Michael Fox. Dr. Fox has a Ph.D. in physical chemistry and specializes in chemical accident reconstruction. He conducted drum opening experiments in Clean Harbors' ash fixation building, including gas dispersion calculations, to determine the potential hydrogen sulfide gas exposure to a person twelve to fourteen feet below the  $P_2S_5$  drum. Based on the gas dispersion and drum opening tests, Dr. Fox concluded that the drum opened by Wheeland could not have exposed Barrett to a sufficient concentration of hydrogen sulfide, 500 to 700 ppm, to cause serious injury. Once the hydrogen sulfide gas reached the second level, its concentration was too weak to cause injury. Based on his findings, Dr. Fox concluded that Barrett, who had not been wearing a protective breathing apparatus at the time of the incident, had inhaled  $P_2S_5$  dust when he attempted to open the chute. The  $P_2S_5$  dust then converted into hydrogen sulfide gas when it reached Barrett's lungs, causing his injuries.

Prior to trial Rhodia filed a motion in limine challenging the qualifications of the expert witnesses retained by Barrett and Clean Harbors. Rhodia asserted that the proffered experts lacked the experience and scientific foundation to testify about the cause or concentration of Barrett's toxic exposure. The district court granted Rhodia's motion in part. It concluded that Dr. Janss, Dr. Himes, Dr. Talbot, and Edward Ziegler were not qualified through their education, experience, or otherwise to render an opinion about the dispersal of hydrogen sulfide gas, the concentration level of Barrett's exposure to the gas, or whether his injuries were caused by hydrogen sulfide gas released from the opened P<sub>2</sub>S<sub>5</sub> drum. See Fed. R. Evid. 702; Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579 (1993).

The district court did rule, however, that Dr. Janss was qualified to testify about Barrett's symptoms and whether his symptoms were consistent with exposure to particular levels of hydrogen sulfide gas. The court concluded that Dr. Himes was qualified to testify about Barrett's symptoms and injury. Dr. Talbot was permitted to testify about Barrett's condition and whether it was consistent with exposure to hydrogen sulfide gas. Appellants' safety expert, Ziegler, was qualified to testify about Clean Harbors' monitoring and safety practices as they related to the June 27 incident.

Rhodia subsequently moved for summary judgment, asserting that the court's exclusion of this expert testimony left Barrett and Clean Harbors unable to prove causation, a required element for a prima facie case of strict liability. The district court agreed and granted summary judgment to Rhodia. Barrett and Clean Harbors appeal, challenging both the district court's ruling limiting their expert testimony and the court's adverse grant of summary judgment.

## II.

We review a district court's ruling regarding the admissibility of expert testimony under Daubert for an abuse of discretion. Hickerson v. Pride Mobility Prod. Corp., 470 F.3d 1252, 1256 (8th Cir. 2006) (citing Daubert, 509 U.S. at 579). We will

not reverse a district court's ruling on the admissibility of expert testimony "absent a clear and prejudicial abuse of discretion." Ahlberg v. Chrysler Corp., 481 F.3d 630, 635 (8th Cir. 2007). Federal Rule of Evidence 702 provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based on sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

When considering expert testimony, a district court must ensure that "all scientific testimony is both reliable and relevant." Marmo v. Tyson Fresh Meats, Inc., 457 F.3d 748, 757 (8th Cir. 2006). To satisfy the reliability requirement, the party offering the expert testimony "must show by a preponderance of the evidence both that the expert is qualified to render the opinion and that the methodology underlying his conclusions is scientifically valid." Id.; Daubert, 509 U.S. at 589–90. To satisfy the relevance requirement, the proponent must show that the expert's reasoning or methodology was applied properly to the facts at issue. Marmo, 457 F.3d at 757.

The plaintiff in a toxic tort strict liability case needs to establish causation through expert testimony. Bonner v. ISP, 259 F.3d 924, 928 (8th Cir. 2001). In this case, Barrett and Clean Harbors were required to present expert testimony showing: (1) that hydrogen sulfide gas exposure was capable of causing Barrett's injuries, and (2) that Barrett was exposed to hydrogen sulfide gas which dispersed from the P<sub>2</sub>S<sub>5</sub> drum manufactured by Rhodia in a sufficient concentration to cause his injuries. Id.

Barrett and Clean Harbors engaged experts in various fields to testify on their behalf. Dr. Janss, an allergist board certified in toxicology, was retained to testify about injury and causation. She examined Barrett in March 2005, nearly two years

after the incident. During the exam Dr. Janss consulted a standard toxicology textbook and reviewed a medical article for symptoms of hydrogen sulfide exposure. Based on the symptoms disclosed by Barrett and his wife and her review of medical literature, Dr. Janss concluded that Barrett had suffered an anoxic brain injury as a result of exposure to hydrogen sulfide gas. She also concluded that hydrogen sulfide gas had dispersed from the P<sub>2</sub>S<sub>5</sub> drum opened by Wheeland and had filtered twelve to fourteen feet down to Barrett in a high concentration of 500 to 700 ppm.

Rhodia sought to limit Dr. Janss' testimony, arguing that she had provided no scientific support for her conclusion that hydrogen sulfide gas had dispersed downward from the opened P<sub>2</sub>S<sub>5</sub> drum in a sufficient concentration to cause Barrett's injuries. The district court agreed, concluding that Dr. Janss lacked the education and experience to testify about whether hydrogen sulfide gas had dispersed from the opened P<sub>2</sub>S<sub>5</sub> drum or the concentration level of Barrett's exposure to hydrogen sulfide. The court noted that Dr. Janss had conceded that she did not know how hydrogen sulfide disperses, the distance between Barrett and the P<sub>2</sub>S<sub>5</sub> drum alleged to be the source of the gas, or the concentration of hydrogen sulfide gas, if any, in the drum. In respect to her opinion that Barrett was exposed to hydrogen sulfide gas in a concentration of 500 to 700 ppm, Dr. Janss explained that she had assumed the gas had reached Barrett at a sufficient concentration to cause him to pass out.

Appellants argue that Dr. Janss' medical credentials and her reliance on medical literature provide a sufficient foundation for her expert testimony about the cause of Barrett's injury and concentration of his toxic exposure. They assert that the deficiencies in the foundation for her opinions should go to the weight of her expert testimony, rather than its admissibility. A district court functions as a gatekeeper by excluding unreliable expert testimony. Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 147 (1999). Here appellants seek to have Dr. Janss testify that Barrett was injured by hydrogen sulfide gas dispersed from the P<sub>2</sub>S<sub>5</sub> drum opened by Wheeland. Dr. Janss has conceded, however, that she lacks significant scientific knowledge

underpinning this opinion and that she did not rule out alternative causes of Barrett's injury, such as inhalation of P<sub>2</sub>S<sub>5</sub> dust, prior to forming her opinion. Her opinion concerning the concentration of Barrett's toxic exposure was admittedly based on assumption, without any scientific testing or exposure analysis. Expert testimony is inadmissible where, as here, it is excessively speculative or unsupported by sufficient facts. Concord Boat Corp. v. Brunswick Corp., 207 F.3d 1039, 1056–57 (8th Cir. 2000). The district court did not abuse its discretion by limiting Dr. Janss' testimony.

Barrett and Clean Harbors retained Dr. Talbot to offer an expert opinion on causation and injury. Dr. Talbot is a clinical psychologist with over 20 years experience in psychotherapy and neuropsychotherapy. Based on her meeting with Barrett and her review of Dr. Janss' findings, Dr. Talbot diagnosed Barrett as having suffered from cerebral anoxia, lack of oxygen to the brain, followed by toxic encephalopathy or permanent brain damage caused by chemical exposure. She intended to testify that Barrett's injury was caused by exposure to hydrogen sulfide gas in the range of 500 to 700 ppm.

Rhodia moved to preclude Dr. Talbot from testifying about the concentration of Barrett's exposure to hydrogen sulfide and the source of his exposure. The district court concluded that Dr. Talbot was qualified through her education and experience to testify about Barrett's injuries and whether they were consistent with hydrogen sulfide exposure. The court concluded that she was not qualified, however, to testify about the source and concentration of Barrett's toxic exposure. The court emphasized that Dr. Talbot had no training in toxicology and that she had never before evaluated a patient exposed to hydrogen sulfide gas or P<sub>2</sub>S<sub>5</sub>. The court also noted that her opinion about the source and concentration of Barrett's hydrogen sulfide exposure relied entirely on Dr. Janss' opinion, which was itself too speculative to be admissible. Dr. Talbot had done no independent research or analysis concerning the concentration level of Barrett's exposure, since she believed that she had been engaged to assess Barrett's functional capacity.

We conclude that the district court's decision to limit Dr. Talbot's testimony was not an abuse of discretion. Her opinions about the source and concentration of Barrett's hydrogen sulfide exposure were based entirely on the opinion of Dr. Janss, which had been deemed excessively speculative. Without evidence of any independent investigation or scientific foundation underlying Dr. Talbot's opinion, Barrett and Clean Harbors have failed to show that she was qualified to testify on the subjects excluded by the district court.

Dr. Himes, an osteopath specializing in neurology, had been Barrett's treating physician since August 2004. Dr. Himes was prepared to testify that Barrett had suffered a brain injury resulting in dementia and that the injury had resulted from exposure to hydrogen sulfide gas. His "opinion on causation is subject to the same standards of scientific reliability that govern the expert opinions of physicians hired solely for the purpose of litigation." Turner v. Iowa Fire Equip. Co., 229 F.3d 1201, 1207 (8th Cir. 2000).

Dr. Himes had never before treated a patient suffering from P<sub>2</sub>S<sub>5</sub> or hydrogen sulfide gas exposure. He did no research on either chemical or on toxicology before forming his opinion. The district court precluded Dr. Himes from testifying about the cause of Barrett's toxic exposure after concluding that Dr. Himes had assumed that Barrett had been injured by hydrogen sulfide gas exposure without any scientific verification and without considering any alternative causes. We conclude that the district court did not abuse its discretion by precluding Dr. Himes from offering his opinion on causation. Concord Boat, 207 F.3d at 1056–57.

Ziegler, a safety engineer, was the last expert proffered by Barrett and Clean Harbors. Appellants retained Ziegler to analyze the June 27 incident based on his experience in safety consulting and safety management and to testify about the alleged defects in Rhodia's P<sub>2</sub>S<sub>5</sub> drums. He visited the ash fixation building at Clean Harbors' Kimball plant, observed the P<sub>2</sub>S<sub>5</sub> drums, and reviewed the physicians' findings.

Ziegler was prepared to testify that the P<sub>2</sub>S<sub>5</sub> drum opened by Wheeland had released hydrogen sulfide gas, which had then cascaded down twelve to fourteen feet to the level where Barrett was standing and caused his injury.

Ziegler conceded that he relied entirely on the opinions of appellants' physician experts for his proposed testimony on the dispersal of hydrogen sulfide gas, the concentration of Barrett's exposure to the gas, and the source of that exposure. He did not conduct any chemical analysis, measuring, or dispersion modeling. He had no prior experience with hydrogen sulfide gas or P<sub>2</sub>S<sub>5</sub> and did no research on either chemical, explaining that his role was limited to "looking at regulatory and safety issues" rather than conducting chemical analysis. The court determined that although Ziegler was qualified to testify about the monitoring and safety policies of Clean Harbors, he lacked the necessary experience and scientific foundation to testify about whether Barrett had inhaled hydrogen sulfide gas after the P<sub>2</sub>S<sub>5</sub> drum was opened. Nor was he qualified to discuss the dispersal of the gas or any alleged defects in the drums. Under *Daubert*, an expert's opinion must be "derived by the scientific method" or otherwise "supported by appropriate validation." *Daubert*, 509 U.S. at 590. The district court did not abuse its discretion by concluding that Ziegler's opinion lacked scientific or other appropriate validation.

Barrett and Clean Harbors argue that the *Daubert* standard should not apply to an expert safety consultant when the expert's testimony is based on experience, training, and insight. They rely on a district court case from the Southern District of New York, *Liriano v. Hobart Corp.*, 949 F. Supp. 171, 177–78 (S.D.N.Y. 1996). In *Liriano*, the district court declined to apply *Daubert* because the safety consultant's expert testimony concerned an uncomplicated defect in a piece of machinery about which the witness had sufficient experience and training to testify. *Id.*

*Liriano* has little relevance here where Ziegler's proposed testimony involved an opinion on the cause of Barrett's injuries, including the alleged dispersion of

hydrogen sulfide gas from the opened P<sub>2</sub>S<sub>5</sub> drum. The issues here are more complex than simple product defect, and Daubert is the appropriate standard. Given that part of Ziegler's proposed testimony was based primarily on assumptions instead of testing, measurement, or scientific analysis, the district court did not abuse its discretion in limiting it. Daubert, 509 U.S. at 589–90.

As a result of the court's rulings, Drs. Janss and Talbot would have been able to testify about Barrett's symptoms and condition and whether they were consistent with hydrogen sulfide exposure. Dr. Himes was qualified to testify about Barrett's symptoms and Ziegler about Clean Harbors' monitoring and safety policies as relevant to the June 27 incident. None of appellants' experts were qualified, however, to testify about whether hydrogen sulfide gas existed in Rhodia's P<sub>2</sub>S<sub>5</sub> drum, whether hydrogen sulfide gas was released from the drum when it was opened, and if so, whether the gas dispersed to Barrett's location in a sufficient concentration to cause his injuries.

### III.

After ruling on the admissibility of expert testimony, the district court granted summary judgment to Rhodia, concluding that Barrett and Clean Harbors could not establish the cause of Barrett's toxic exposure or the concentration of that exposure. Appellants challenge the judgment, arguing that despite the limitations on their expert testimony, they had presented sufficient evidence to withstand dismissal. We review a grant of summary judgment de novo, affirming if the record shows that there is no genuine issue of material fact and the prevailing party is entitled to judgment as a matter of law. Pro Serv. Auto., LLC v. Lenan Corp., 469 F.3d 1210, 1213 (8th Cir. 2006). Nebraska law applies in this diversity action. Lindsay v. Safeco Ins. Co. of Am., 447 F.3d 615, 617 (8th Cir. 2006).

To recover on a claim of strict liability under Nebraska law, a plaintiff must prove by a preponderance of the evidence that the defendant's alleged product defect or failure to warn "is the proximate cause of plaintiff's injury." Stahlecker v. Ford

Motor Co., 667 N.W.2d 244, 257–58 (Neb. 2003). Expert evidence is required to establish the elements of causation and defect. Schafersman v. Agland Coop., 681 N.W.2d 47, 56 (Neb. 2004).

In a toxic tort case, the plaintiff's expert evidence must show that the "toxin was the cause of the plaintiff's injury." Mattis v. Carlton Elec. Products, 295 F.3d 856, 860 (8th Cir. 2002). In establishing causation, the plaintiff need only make a "threshold showing" that he was "exposed to toxic levels known to cause the type of injuries he or she suffered," id., and that the defendant's action "probably caused the harm about which they complain." Bednar v. Bassett Furniture Mfg. Co., 147 F.3d 737, 740 (8th Cir. 1998).

The district court concluded that Barrett and Clean Harbors had presented sufficient evidence as to general causation, that is, they produced proof that exposure to hydrogen sulfide gas was capable of causing Barrett's symptoms and injuries. The court concluded, however, that they had presented insufficient evidence, and no expert evidence, on specific causation. They had not shown that hydrogen sulfide gas released from Rhodia's P<sub>2</sub>S<sub>5</sub> drum was the source of Barrett's injuries. The court also noted that appellants had offered no evidence to refute Rhodia's expert, who had testified in his deposition on the basis of chemical analysis and modeling that Barrett had actually inhaled P<sub>2</sub>S<sub>5</sub> dust as a result of not wearing any protective equipment.

Barrett and Clean Harbors challenge the court's conclusions. They assert that the totality of their nonexpert evidence satisfied their burden to show that Rhodia's actions "probably caused the harm" that Barrett suffered. Appellants point to the temporal relationship between Wheeland's death, which was ruled an accidental death with contributing factors of underlying heart disease, and Barrett's unconsciousness; the fact that Terracon found hydrogen sulfide in the remaining unopened Rhodia drums of P<sub>2</sub>S<sub>5</sub> at Clean Harbors; and the fact that their experts were prepared and qualified to testify that Barrett's injuries were consistent with hydrogen sulfide gas exposure.

The evidence presented by Barrett and Clean Harbors was not sufficient under Nebraska law to satisfy the plaintiff's burden in a strict liability claim, whether the claim is based on product defect or failure to warn. Nebraska courts have clearly and consistently held that expert evidence is required to establish both general and specific causation. Schafersman, 681 N.W.2d at 56; Grant v. Pharmative, LLC, 452 F.Supp.2d 903 (D. Neb. 2006). Expert testimony "based on possibility or speculation is insufficient [to establish causation]; it must be stated as being at least 'probable,' in other words, more likely than not." Fackler v. Genetzky, 638 N.W.2d 521, 527–28 (Neb. 2002).

Here, appellants' experts were deemed qualified to testify about Barrett's symptoms and whether those symptoms were "consistent with" exposure to hydrogen sulfide gas. This was not sufficient to establish causation under Nebraska law. Fackler, 638 N.W.2d at 527–28. Nor did Barrett and Clean Harbors present admissible expert testimony on Barrett's level of exposure to hydrogen sulfide gas, which was a required element under their toxic tort strict liability claim. Mattis, 295 F.3d at 860. Although a mathematically precise quantification of exposure level is not required, Barrett and Clean Harbors were required to present expert evidence that Barrett was exposed to toxic levels of hydrogen sulfide gas, as opposed to P<sub>2</sub>S<sub>5</sub> dust. None of their experts were qualified to offer that opinion. On the other hand, the defense presented an alternative cause for Barrett's injury which was supported by Dr. Fox's expert testimony.

Because expert testimony is required to prove causation under Nebraska law and appellants' expert testimony was properly excluded by the district court, they were unable to make out a prima facie case of strict liability based on product defect or failure to warn. The district court properly granted summary judgment to Rhodia.

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