

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF NEBRASKA**

<b>DAVE BARRETT and CLEAN HARBORS</b>	)	
<b>ENVIRONMENTAL SERVICES, INC.,</b>	)	
	)	
<b>Plaintiffs,</b>	)	<b>7:07CV5014</b>
	)	
<b>vs.</b>	)	<b>ORDER</b>
	)	
<b>RHODIA, INC.,</b>	)	
	)	
<b>Defendant.</b>	)	

This matter is before the court on the defendant's Motion for Summary Judgment ([Filing No. 90](#)).<sup>1</sup> The defendant filed a brief ([Filing No. 92](#)) and an index of evidence ([Filing No. 91](#))<sup>2</sup> in support of the motion. The plaintiffs filed a brief ([Filing No. 96](#)) and an index of evidence ([Filing No. 97](#)) in opposition to the motion. The defendant filed a brief ([Filing No. 101](#)) in reply.

**BACKGROUND**

This is a products liability action following Dave Barrett's collapse on June 27, 2003, after working near an open 55 gallon drum of phosphorus pentasulfide (P<sub>2</sub>S<sub>5</sub>). See [Filing No. 19](#) - Second Amended Complaint ¶¶ 3, 7-8. At that time, Mr. Barrett was employed by Clean Harbors Environmental Services, Inc. (Clean Harbors) as an ash technician. *Id.* ¶ 3. The plaintiffs allege the drums of P<sub>2</sub>S<sub>5</sub> sold to Clean Harbors by the defendant were defective because the drums allowed condensation inside the drums resulting in the creation of hydrogen sulfide, a gas. *Id.* ¶¶ 4-5. The plaintiffs further allege that when a particular drum was opened on June 27, 2003, Dave Barrett was exposed to a sufficient concentration of hydrogen sulfide to cause him injury. *Id.* ¶ 8. Additionally, the plaintiffs

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<sup>1</sup>On December 21, 2007, this matter was transferred from Chief Judge Joseph F. Bataillon to the undersigned magistrate judge pursuant to [28 U.S.C. § 636\(c\)](#) and consent of the parties. See [Filing No. 35](#).

<sup>2</sup>The defendant's index of evidence relies entirely on evidence previously filed with its Motion to Exclude Expert Opinion and Testimony ([Filing No. 45](#)) and with its Motion *in Limine* ([Filing No. 77](#)). Such evidence is found at Filing Nos. [47](#), [48](#), [49](#), and [78](#).

allege the P<sub>2</sub>S<sub>5</sub> drums were sold without a warning about the risk related to condensation, a risk then-known to the defendant. *Id.* ¶ 6.

The defendant denies liability. The defendant contends, based on its own expert witness, Mr. Barrett could not have been exposed to a sufficient concentration of hydrogen sulfide from the P<sub>2</sub>S<sub>5</sub> drum to cause his injuries. In contrast, the defendant's expert witness opines Mr. Barrett inhaled P<sub>2</sub>S<sub>5</sub> dust. Once such dust is inhaled, the moisture in the lungs converts the chemical to hydrogen sulfide. Mr. Barrett's symptoms could have been caused by inhalation of a small amount of P<sub>2</sub>S<sub>5</sub> dust, according to the defendant. The defendant argues there are no allegations that any defects in the defendant's product or packaging created dust. Instead, the defendant states Clean Harbors' own dangerous procedures must have created the dust. Furthermore, the defendant denies the plaintiffs have shown any defect existed in the P<sub>2</sub>S<sub>5</sub> drum.

### PROCEDURAL HISTORY

The plaintiffs filed the instant action on May 21, 2007. **See [Filing No. 1](#)**. On July 19, 2007, the plaintiffs filed the Second Amended Complaint alleging claims for negligence, strict liability and loss of consortium. **See [Filing No. 19](#)**. The plaintiffs' claims for strict liability are based on 1) the defendant's defective design, manufacture, and assembly of the drum; and 2) the defendant's failure to provide adequate warnings to foreseeable users of its drums. *Id.* ¶¶ 12-13. On November 24, 2008, the plaintiffs voluntarily dismissed the negligence claim. **See [Filing No. 63](#)**. Clean Harbors claims an interest in this matter for subrogation of benefits paid pursuant to the Nebraska Workers' Compensation Act, [Neb. Rev. Stat. § 48-118](#). **See [Filing No. 19](#) ¶ 1**.

On September 30, 2008, the defendant filed a Motion to Exclude Expert Opinions and Testimony. **See [Filing No. 45](#)**. The plaintiffs opposed the motion. However, on January 12, 2009, the court granted the defendant's motion by limiting the testimony of the plaintiff's expert witnesses Dr. Gerti Janss, Dr. Terry Himes, Dr. Anne Talbot, and Edward Ziegler. **See [Filing No. 71](#)**.

On March 12, 2009, the defendant filed the instant motion for summary judgment. **See [Filing No. 90](#)**. The defendant argues that based on the court's January 12, 2009,

ruling with respect to the plaintiffs' expert witnesses, the plaintiffs do not have competent or admissible expert testimony to establish each link of the causal chain to prove the strict liability claims. See [Filing No. 92](#) - Brief p. 1-2. Specifically, the defendant argues:

1. there is no competent scientific or medical evidence that Mr. Barrett inhaled an injurious amount of hydrogen sulfide from the  $P_2S_5$  drum, and thus the plaintiffs cannot establish the specific causation necessary under Nebraska law;
2. there is insufficient evidence to show the defendant's product was defective, or that a defect cause Mr. Barrett's injury; and
3. there is no evidence the alleged lack of adequate warning is the proximate cause of Mr. Barrett's injuries.

*Id.* p. 2.

The plaintiffs oppose summary judgment contending the defendant has failed to meet its burden of proving judgment should be entered against the plaintiffs. Specifically, the plaintiffs rely on the cumulation of evidence from the plaintiffs' witnesses, the defendant's witnesses, and the circumstances surrounding Craig Wheeland's death near the same time as Mr. Barrett's collapse.

### UNDISPUTED FACTS<sup>3</sup>

Mr. Barrett was employed by Clean Harbors as an ash technician. [Filing No. 19](#) - Complaint ¶ 3. As part of the ash fixation process, Mr. Barrett worked with 55 gallon drums of solid  $P_2S_5$ . *Id.* The  $P_2S_5$  drums were manufactured and sold to Clean Harbors by the defendant. *Id.* ¶ 4. A risk associated with  $P_2S_5$  drums is the production of hydrogen sulfide, an odorless, colorless, lethal gas, created when water combines with the  $P_2S_5$ . *Id.* ¶ 5. The  $P_2S_5$  drums were sold in 1998 without a warning about the risk related to "moist air," a risk then-known to the defendant. *Id.* ¶ 6; [Filing No. 97 Ex. 1](#) - Sager Depo. p. 108-109, 120. On June 27, 2003, a  $P_2S_5$  drum was opened in Mr. Barrett's vicinity. [Filing No.](#)

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<sup>3</sup>In lieu of providing an enumeration of the undisputed facts, the defendant states its reliance on a previous brief ([Filing No. 46](#)) and the court's January 12, 2009, Order ([Filing No. 71](#)) on the defendant's Motion to Exclude Expert Opinions and Testimony ([Filing No. 45](#)). The plaintiffs do not explicitly oppose the defendant's reliance on previous documents or any of the specific facts. The court has added other unopposed material facts supplied by the parties which are relevant to the instant motion.

[19](#) - Complaint ¶ 7. There was hydrogen sulfide in the drum. *Id.* ¶ 8; **see, e.g.**, Filing No. 48 [Ex. D\(1\)](#) - Terracon Report p. 21.

At the time of the P<sub>2</sub>S<sub>5</sub> drums' purchase, the defendant provided Clean Harbors with a 1995 version of the P<sub>2</sub>S<sub>5</sub> Material Safety Data Sheets (MSDS). **See** Filing No. 97 [Ex. 12](#) - MSDS effective Dec. 18, 1995. The 1995 MSDS was different from an earlier 1993 version which included a warning about protecting P<sub>2</sub>S<sub>5</sub> from exposure to "moist air." **See** Filing No. 97 [Ex. 1](#) - Sager Depo. p. 108-109, 120; [Ex. 11](#) - MSDS effective Dec. 20, 1993. The 1995 MSDS does not contain a warning about hydrogen sulfide existing in the P<sub>2</sub>S<sub>5</sub> drums' headspace, the possibility the drums may be pressurized, or the shelf life of the P<sub>2</sub>S<sub>5</sub> drums. *Id.* [Ex. 1](#) - Sager Depo. p. at 121, 125.

The safety manager at Clean Harbor's Kimball facility, Daryl D. Magers, developed a safety plan that required monitoring for hydrogen sulfide during the ash fixation process. **See** Filing No. 89 [Ex. 2](#) - Magers Depo. p. 5-6, 17-18. The site specific health and safety plan was developed prior to June of 1997 based on discussions with the defendant. *Id.* at 12, 15. The plan was based on Magers' knowledge of the possibility of hydrogen sulfide liberation or formation upon opening P<sub>2</sub>S<sub>5</sub> drums. **See** *id.* at 12, 15-16. As part of their initial training, all members of the ash fixation crew were told that when the P<sub>2</sub>S<sub>5</sub> drums were opened hydrogen sulfide escaped the drums, which requiring monitoring. *Id.* at 15-16. Alex Blanche, who worked for Clean Harbor's Kimball facility as the Laboratory Manager, and later as the General Manager, indicated he knew the safety plan for working with P<sub>2</sub>S<sub>5</sub> included constant monitoring for hydrogen sulfide, and that the safety plan was reviewed with employees working with P<sub>2</sub>S<sub>5</sub> drums. **See** Filing No. 89 [Ex. 4](#) - Blanche Depo. p. 7-9, 78-79. Mr. Barrett knew working with P<sub>2</sub>S<sub>5</sub> drums required special precautions to prevent exposure to harmful gas. **See** Filing No. 89 [Ex. 3](#) - Barrett Depo. p. 12-14. Specifically, Mr. Barrett admitted he had been advised that hydrogen sulfide could be a byproduct of P<sub>2</sub>S<sub>5</sub>. *Id.* at 11.

The ash fixation process occurred inside a building at the Clean Harbors plant with a three floor platform: a ground floor where a roll-off collects the ash, a second floor with a mixer, and a third floor where the 55 gallon drums of P<sub>2</sub>S<sub>5</sub> were placed and could be poured into a chute leading to the mixer on the second floor. The floors of the platform are

made of open steel gratings. Clean Harbors developed a funnel to fit the top of the 55 gallon drums. Once the funnel was in place, the drum would be lifted by chain hoist, inverted, and inserted into the chute.

Four workers participated in the ash fixation process on June 27, 2003. Clean Harbors' employees had not used  $P_2S_5$  drums in approximately one year. However, Craig Wheeland was on the third floor switching the drums of  $P_2S_5$ . Mr. Wheeland had opened and closed one drum of the  $P_2S_5$  and removed one near-empty drum from the third floor chute. Tom Sohlberg, Jim Webb, and Mr. Barrett were on the second floor approximately 12-14 feet below the third floor. They were about to open the chute assembly because of a perceived problem with a valve in the assembly. The three stood very close together. Mr. Barrett was next to the chute assembly, with Mr. Webb standing at his shoulder on the right and Mr. Sohlberg approximately one step away from Mr. Barrett.

As Mr. Barrett started to put a wrench to a bolt on the chute assembly, he "went down." Mr. Webb could not get a response from Mr. Barrett, and then Mr. Webb felt something "take his breath". Sensing something wrong, Mr. Webb and Mr. Sohlberg helped Mr. Barrett out a door on the second level. It took about 20 seconds for the three to evacuate. Mr. Webb later had a headache he attributed to stress. Mr. Sohlberg had no symptoms. Both men went to the emergency room, were evaluated and released without problems.

Mr. Wheeland was later found dead on the third floor. Mr. Wheeland's autopsy report initially stated he died of natural causes. Several months later, the report was amended as follows.

The manner of death is being reclassified on this case due to information received concerning co-workers['] exposure to phosphorous pentasulfide and/or its decompositional elements. The death is reclassified as an accidental death with contributing factors of underlying heart disease.

See [Filing No. 58](#) Ex. A.

Clean Harbors hired Terracon, an independent environmental company, to conduct forensic industrial hygiene and safety services and to investigate the facts surrounding the

June 27, 2003, incident. Terracon issued a report of its findings on January 8, 2004, which noted:

Phosphorus pentasulfide will not react to form hydrogen sulfide without water. The source of moisture could be from when the drum was packaged, when the drum was opened and exposed to air, or a potential leak or opening in the drum (e.g., broken or worn seal) that allowed moist air or water to enter the drum.

**See** Filing No. 48 [Ex. D\(1\)](#) - Terracon Report § 2.4.1 at p. 5.

Terracon inspected and tested the drum the plaintiffs claim was the source of hydrogen sulfide on June 27, 2003. “Terracon did not observe cracks or holes in the drum that would allow contaminants to enter, or [P<sub>2</sub>S<sub>5</sub>] or hydrogen sulfide to leak out of the drums.” *Id.* §3.2 at p. 11. Terracon performed a leak test on the subject drum and found it to be air-tight. *Id.* § 3.4 at p. 12-13. Terracon weighed the drum and found no weight loss in the drum and no degradation of the contents. *Id.* § 3.3 at p. 12. Terracon measured the concentration of hydrogen sulfide in the 55 gallon drums of P<sub>2</sub>S<sub>5</sub> at Clean Harbors and concluded that the subject drum may have had a maximum concentration of 5,500 parts per million (ppm). *Id.* § 4.3 at p. 21. Terracon reviewed available models and estimation methods to calculate potential exposure concentrations from the subject drum. *Id.* Terracon’s exposure concentration estimations assumed a concentration level of 5,500 ppm and a single release of hydrogen sulfide from the drum rather than a continuous release. *Id.* Terracon prepared a table of exposure concentrations for hydrogen sulfide from the subject drum at different distances, which showed a range of 2.3 ppm to 120 ppm at a distance of 12 feet from the drum. *Id.* § 4.4 at p. 21-22 & Appendix J to Report.

The defendant retained Dr. Michael Fox to conduct a chemical accident reconstruction of the June 27, 2003, incident. Dr. Fox has a Ph.D. in physical chemistry and as part of his chemical accident reconstruction, attempted to determine the dispersion concentrations of hydrogen sulfide (H<sub>2</sub>S) from a 55 gallon drum. **See** Filing No. 47 [Ex. C](#) - Dr. Fox Aff. ¶¶ 1-2. Dr. Fox determined Mr. Barrett was 12-14 feet below the place where the P<sub>2</sub>S<sub>5</sub> drum was opened. *Id.* ¶ 3. Dr. Fox conducted drum opening tests to assess the hydrogen sulfide exposure to a person 12-14 feet below the top of a P<sub>2</sub>S<sub>5</sub> drum containing hydrogen sulfide. *Id.*

Dr. Fox conducted several different types of experiments. First, Dr. Fox used an empty 55 gallon drum, similar to the drums containing the  $P_2S_5$ , with a starting concentration of 4,000 to 5,000 ppm of hydrogen sulfide. *Id.* ¶ 4. The lids on the drums were opened and the air around the drums was monitored for hydrogen sulfide. *Id.* The hydrogen sulfide concentration within 18 inches of the drum did not exceed 130 ppm at any time. *Id.* Monitors at the floor level just outside the drum showed zero hydrogen sulfide. *Id.* & Attach. C at 7-4.

Second, Dr. Fox conducted drum opening experiments using the actual Clean Harbors  $P_2S_5$  drums. *Id.* ¶ 5. These drums were identical to the subject drum and contained between 5,000 and 7,000 ppm of hydrogen sulfide. *Id.* Using hydrogen sulfide monitors, Dr. Fox opened the drums to determine how hydrogen sulfide dispersed from them. *Id.* The highest concentration measured was 3 ppm at 18 inches from the drum at drum level. *Id.* & Attach. D at 8-2 to 8-3. Dr. Fox explained the different results in the two tests based on the containment of hydrogen sulfide by volume in the drum headspace. *Id.* ¶ 6.

In addition to experimental measurements of the dispersion of hydrogen sulfide out of 55 gallon drums, Dr. Fox performed gas dispersion calculations and modeling. *Id.* ¶ 7. In his dispersion model he assumed 10,000 ppm of hydrogen sulfide in the headspace of the drum and that the gas only dispersed downward in a 1/4th spherical cone, to give the plaintiffs the benefit of any doubt. *Id.* Additionally, Dr. Fox used the “balloon model,” which mathematically overestimates the concentration of gas at any given distance from the drum. *Id.* The result of his dispersion modeling indicates the maximum concentration of hydrogen sulfide at 12-14 feet from the drum was less than 10 ppm. *Id.*

Dr. Fox computed the density of dispersed hydrogen sulfide. *Id.* ¶ 8. Air has a density of 1.0 and pure hydrogen sulfide has a density relative to air of 1.2. *Id.* When hydrogen sulfide with a concentration level of 5,000 ppm combines with air the density is reduced to 1.001. *Id.* A relative gas density of 1.001 would not be affected by gravity. *Id.* Other forces of nature, such as thermal gradients and air movements counter the affect of gravity in most natural situations. *Id.*

Based on the rapid dispersion of the hydrogen sulfide in the drum opening tests and dispersion modeling, Dr. Fox concluded Mr. Barrett could not have been exposed to 500 to 700 ppm level of hydrogen sulfide or an amount which would cause serious injury. *Id.* ¶ 9. Rather, Dr. Fox concluded Mr. Barrett inhaled P<sub>2</sub>S<sub>5</sub> dust. *Id.* ¶ 10. The inhalation of 6.75 mg of dust, an extremely small particle, can cause unconsciousness. *Id.* Once P<sub>2</sub>S<sub>5</sub> is inhaled, the moisture in the lungs converts the chemical to hydrogen sulfide. *Id.*

### STANDARD OF REVIEW

Pursuant to the Federal Rules of Civil Procedure, summary judgment is appropriate when, viewing the facts and inferences in the light most favorable to the nonmoving party, “there is no genuine issue as to any material fact and . . . the movant is entitled to judgment as a matter of law.” [Fed. R. Civ. P. 56\(c\)](#); see [Schmidt v. City of Bella Villa, 557 F.3d 564, 571 \(8th Cir. 2009\)](#). When making this determination, a court’s function is not to make credibility determinations and weigh evidence, or to attempt to determine the truth of the matter; instead, a court must “determine whether there is a genuine issue for trial.” [Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 249 \(1986\)](#). A court must “look to the substantive law to determine whether an element is essential to a case.” [Chambers v. Metro. Prop. & Cas. Ins. Co., 351 F.3d 848, 853 \(8th Cir. 2003\)](#). Additionally, “[o]nly disputes over facts that might affect the outcome of the suit under the governing law will properly preclude the entry of summary judgment.” [Hervey v. County of Koochiching, 527 F.3d 711, 719 \(8th Cir. 2008\)](#) (quoting [Anderson, 477 U.S. at 248](#)). “One of the principal purposes of the summary judgment rule is to isolate and dispose of factually unsupported claims or defenses, and [the rule] should be interpreted in a way that allows it to accomplish this purpose.” [Celotex Corp. v. Catrett, 477 U.S. 317, 323-24 \(1986\)](#).

Additionally, Rule 56(e)(2) provides:

When a motion for summary judgment is properly made and supported, an opposing party may not rely merely on allegations or denials in its own pleading; rather, its response must--by affidavits or as otherwise provided in this rule--set out specific facts showing a genuine issue for trial. If the opposing party does not so respond, summary judgment should, if appropriate, be entered against that party.



See [Fed. R. Civ. P. 56\(e\)\(2\)](#). A party seeking summary judgment bears the burden of informing a court “of the basis for its motion, and identifying those portions of ‘the pleadings, depositions, answers to interrogatories, admissions on file, together with the affidavits, if any,’ which it believes demonstrate the absence of a genuine issue of material fact.” [Celotex, 477 U.S. at 323](#) (quoting [Fed. R. Civ. P. 56\(c\)](#)); see [Rodgers v. City of Des Moines, 435 F.3d 904, 908 \(8th Cir. 2006\)](#). Specifically, the moving party “must show that ‘there is an absence of evidence to support the nonmoving party’s case.’” [Nitro Distrib., Inc. v. Alitcor, Inc., 565 F.3d 417, 427 \(8th Cir. 2009\)](#) (quoting [Celotex, 477 U.S. at 325](#)). In the face of a properly supported motion, the burden then shifts to the nonmoving party to “set out specific facts showing a genuine issue for trial.” [Fed. R. Civ. P. 56\(e\)\(2\)](#); [Border State Bank, N.A. v. AgCountry Farm Credit Servs., 535 F.3d 779, 782 \(8th Cir. 2008\)](#). A motion for summary judgment places an affirmative burden on the non-moving party to go beyond the pleadings and, by affidavit or otherwise, produce specific facts that show that there is a genuine issue for trial. See [Fed. R. Civ. P. 56\(e\)](#); [Janis v. Biesheuvel, 428 F.3d 795, 799 \(8th Cir. 2005\)](#).

Under this court’s local rules,

The moving party must include in the brief in support of the summary judgment motion a separate statement of material facts about which the moving party contends there is no genuine issue to be tried and that entitles the moving party to judgment as a matter of law. Failure to submit a statement of facts may be grounds to deny the motion.

See [NECivR 56.1\(a\)\(1\)](#) (emphasis in original).

Additionally,

The party opposing a summary judgment motion should include in its brief a concise response to the moving party’s statement of material facts. The response should address each numbered paragraph in the movant’s statement and, in the case of any disagreement, contain pinpoint references to affidavits, pleadings, discovery responses, deposition testimony (by page and line), or other materials upon which the opposing party relies. Properly referenced material facts in the movant’s statement are considered admitted unless controverted in the opposing party’s response.

See [NECivR 56.1\(b\)\(1\)](#) (emphasis in original).

In the instant case, the plaintiffs resist the defendant's motion as to all issues. Accordingly, the court must proceed to consider whether there is any material fact in dispute and whether the defendant is entitled to judgment as a matter of law.

## ANALYSIS

The parties agree Nebraska law applies to this diversity action. See [Leonard v. Dorsey & Whitney LLP, 553 F.3d 609, \(8th Cir. 2009\)](#) (citing [Erie R.R. Co. v. Tompkins, 304 U.S. 64 \(1938\)](#)). Accordingly, this federal court is bound by the decisions of the state's highest court when determining the merits of the parties' claims. See *id.* The defendant seeks summary judgment on each of the plaintiffs' claims. Specifically, the plaintiffs allege the defendant is strictly liable to them because the defendant's P<sub>2</sub>S<sub>5</sub> drum was defectively designed or manufactured and inadequate warnings existed about its dangerousness. See [Filing No. 19 ¶¶ 12-13](#). The court will evaluate the defendant's motion first with regard to the plaintiffs' strict liability claim generally, then with regard to the specific allegations.

### A. Causation

Under Nebraska law, to recover on a claim of strict liability, a plaintiff must prove the following by a preponderance of the evidence:

- (1) The defendant placed the product on the market for use and knew, or in the exercise of reasonable care should have known, that the product would be used without inspection for defects;
- (2) the product was in a defective condition when it was placed on the market and left the defendant's possession;
- (3) the defect is the proximate or a proximately contributing cause of plaintiff's injury sustained while the product was being used in the way and for the general purpose for which it was designed and intended;
- (4) the defect, if existent, rendered the product unreasonably dangerous and unsafe for its intended use; and
- (5) plaintiff's damages were a direct and proximate result of the alleged defect.

[Stahlecker v. Ford Motor Co.](#), 667 N.W.2d 244, 257-58 (Neb. 2003) (quoting [Kudlacek v. Fiat S.p.A.](#), 509 N.W.2d 603, 610 (1994)). Therefore, under Nebraska law, a plaintiff must show, *inter alia*, the defendant's product caused injury to a plaintiff.

In toxic tort cases, such as the present case, a plaintiff must show "the toxin was the cause of the plaintiff's injury." [Junk v. Terminix Int'l. Co.](#), 577 F. Supp. 2d 1086, 1091 (S.D. Iowa 2008) (quoting [Bonner v. ISP Tech., Inc.](#), 259 F.3d 924, 928 (8th Cir. 2001) (interpreting Missouri law)). Although a plaintiff must show causation, "it is sufficient for a plaintiff to prove that [the plaintiff] was exposed to a quantity of the toxin that exceeded safe levels." *Id.* (quoting [Bonner](#), 259 F.3d at 931). For this reason, "[s]cientific knowledge of the harmful level of exposure to a chemical plus knowledge that plaintiff was exposed to such quantities are minimal facts necessary to sustain the plaintiff's burden." [McNeel v. Union Pac. R.R. Co.](#), 753 N.W.2d 321, 333 (Neb. 2008) (alteration in original) (citing [Savage v. Union Pac. R.R. Co.](#), 67 F. Supp. 2d 1021, 1035 (E.D. Ark. 1999)); see also [Mattis v. Carlon Elec. Prods.](#), 295 F.3d 856, 860-61 (8th Cir. 2002) (interpreting South Dakota law) (indicating a plaintiff must "make a threshold showing that he or she was exposed to toxic levels known to cause the type of injuries he or she suffered"). Accordingly, expert testimony is required to establish causation "[w]here the claimed injuries are of such a character as to require skilled and professional persons to determine the cause and extent thereof." [Eiting v. Godding](#), 214 N.W.2d 241, 244 (Neb. 1974). Further, an "expert's opinion must be sufficiently definite and relevant to provide a basis for the fact finder's determination of an issue or question." [Nebraska v. Kuehn](#), 728 N.W.2d 589, 598 (Neb. 2007). In sum, under these circumstances a plaintiff's experts must be able "to establish a crucial causal link between a victim's injuries and a defendant's actions." *Id.* (internal quotation and citation omitted).

The plaintiffs argue they need not prove, with mathematical certainty, the quantity of gas inhaled by Mr. Barrett. Further, the plaintiffs contend legally sufficient facts support their theory of the case, such as: (1) there were lethal quantities of hydrogen sulfide in the P<sub>2</sub>S<sub>5</sub> drums; (2) "the quantity of [hydrogen sulfide] found in the drums would easily kill Mr. Wheeland and cause toxic encephalopathy **to workers in the vicinity**;" and (3) Mr. Barrett's symptoms are consistent with such exposure. See [Filing No. 96](#) - Brief p. 29

(emphasis added). Specifically, the plaintiffs contend permitted expert testimony, when coupled with the circumstantial evidence that Mr. Wheeland collapsed and died at the same time Mr. Barrett collapsed, creates a genuine issue of material fact as to whether the hydrogen sulfide that allegedly killed Mr. Wheeland also caused Mr. Barrett's injuries. **See [Filing No. 96](#)** - Brief p. 23, 28.

The defendant contends the plaintiffs are unable to show exposure to hydrogen sulfide from the P<sub>2</sub>S<sub>5</sub> drum caused Mr. Barrett's injuries. **See [Filing No. 101](#)** - Brief p.1 The plaintiffs' expert witnesses are permitted to testify regarding Mr. Barrett's current condition and symptoms as well as the effects of exposure to hydrogen sulfide, but they are not permitted to testify regarding Mr. Barrett's level of exposure to hydrogen sulfide, or that Mr. Barrett inhaled hydrogen sulfide. **See [Filing No. 71](#)** - Order p. 12, 14, 16, 18-19. The plaintiffs' expert witnesses are also prohibited from testifying regarding the dispersal of hydrogen sulfide. **See [id.](#)** The defendant argues that with such limited expert testimony, the plaintiffs do not have sufficient admissible evidence to prove Mr. Barrett was exposed to hydrogen sulfide. **See [Filing No. 92](#)** - Brief p. 9. Additionally, based on the limited expert testimony such experts cannot rule out the possibility that Mr. Barrett inhaled P<sub>2</sub>S<sub>5</sub> dust. **[Id.](#)** The defendant further argues that without such proof, the plaintiffs are unable to satisfy the element of causation required for recovery in a strict liability claim. **See [Filing 101](#)** - Brief p.5.

The plaintiffs' argument assumes exposure to hydrogen sulfide based on the dispersal of the gas in assumed quantities. Due to the nature of the injuries claimed by the plaintiffs, expert testimony is necessary to show Mr. Barrett was exposed to hydrogen sulfide, Mr. Barrett's injuries were caused by that gas, and to establish a causal link between Mr. Barrett's injuries and a defendant's actions. The plaintiffs' expert testimony is limited to indicating Mr. Barrett's injuries are consistent with exposure to hydrogen sulfide. **See [Filing No. 71](#)** - Order p. 12, 14, 16, 18-19. Mr. Barrett's injuries, however, are also consistent with the defendant's alternate theory that Mr. Barrett was exposed to P<sub>2</sub>S<sub>5</sub> dust that converted to hydrogen sulfide when exposed to moisture in Mr. Barrett's lungs. Thus, expert testimony that Mr. Barrett's injuries are consistent with exposure to hydrogen

sulfide is insufficient to satisfy the requisite element of causation – that the defendant’s actions caused the injury.

Furthermore, the court determined previously that neither Dr. Janss nor Mr. Ziegler are permitted to testify regarding the dispersal of hydrogen sulfide. **See [id.](#)** at 12, 18-19. Dr. Himes and Dr. Talbott are prohibited from testifying regarding the amount, concentration, volume, or level of hydrogen sulfide they believe Mr. Barrett to have inhaled. **See [id.](#)** at 14, 16. Due to the physical distance between Mr. Barrett and the opened drum alleged to contain hydrogen sulfide, the plaintiff is required to establish hydrogen sulfide can travel 12-14 feet below the opening of the drum to where Mr. Barrett was standing in sufficient concentration to cause injury. The plaintiffs offer no evidence, expert or otherwise, to suggest any quantity of hydrogen sulfide found in the drum could disperse to workers in the vicinity. The undisputed facts show high levels of hydrogen sulfide were in the P<sub>2</sub>S<sub>5</sub> drums; Mr. Wheeland died after opening, using, and closing a P<sub>2</sub>S<sub>5</sub> drum; and Mr. Barrett collapsed on the level below Mr. Wheeland. In contrast to the plaintiffs’ position, the undisputed evidence presented by the defendant indicates hydrogen sulfide would be unable to drift down to where Mr. Barrett was standing in a concentration sufficient to cause injuries consistent with those sustained by Mr. Barrett. Specifically, after conducting dispersion modeling, Dr. Fox concluded the maximum concentration of hydrogen sulfide at 12-14 feet from the drum would be less than 10 ppm, far less than the concentration necessary to cause Mr. Barrett’s injuries. **See** Filing No. 47 - **[Ex. C](#)** Dr. Fox Aff. ¶¶ 2, 7, 9. Thus, the only expert testimony regarding hydrogen sulfide dispersion available as evidence in this case contradicts the plaintiffs’ argument that exposure to hydrogen sulfide caused Mr. Barrett’s injuries. Without expert testimony regarding the dispersal of hydrogen sulfide and the concentration of hydrogen sulfide likely to reach Mr. Barrett, the plaintiffs are unable to create a genuine issue of material fact or to establish causation in this case.

## **B. Defect**

As a basis for strict liability, the plaintiffs allege defects in the defendant’s P<sub>2</sub>S<sub>5</sub> drums created unsafe levels of hydrogen sulfide. In order to recover on this claim, the

plaintiffs must show the product was defective when placed on the market; the defect rendered the product unreasonably dangerous and unsafe for its intended use; and the defect caused the plaintiffs' injuries. **See** [Stahlecker, 667 N.W.2d at 257-58](#). Assuming *arguendo* the plaintiffs had shown show causation, which they have not, as discussed above, the court will examine whether the plaintiffs have sufficient evidence of defect.

"[T]he notion of a defective product embraces two separate concepts." [Jay v. Moog Auto., Inc., 652 N.W.2d 872, 880 \(Neb. 2002\)](#) (citing [Freeman v. Hoffman-La Roche, Inc., 618 N.W.2d 827, 833 \(Neb. 2000\)](#)). A manufacturing defect "is one in which the product differs from the specifications and plan of the manufacturer." *Id.* In contrast, a design defect "is one in which the product meets the specifications of the manufacturer but the product nonetheless poses an unreasonable risk of danger." *Id.* In either instance, where a product's defect is not obvious to a lay person or a matter of common knowledge, expert testimony is required to show a product is defective. **See** [Durrett v. Baxter Chrysler-Plymouth, Inc., 253 N.W.2d 37, 39-40 \(Neb. 1977\)](#).

The defendant contends the plaintiffs are unable to show the P<sub>2</sub>S<sub>5</sub> drum contained either a manufacturing defect or a design defect. **See** [Filing No. 92](#) - Brief p. 13. In any event, the defendant contends such defects would not be obvious with respect to the drum alleged to have caused Mr. Barrett's injuries, and such defects would be outside the realm of common knowledge and would require expert testimony. **See** *id.* The defendant further asserts that because the plaintiffs have no available expert testimony to show the drum was defective, the plaintiffs cannot make a prima facie case for strict liability based upon a theory that the P<sub>2</sub>S<sub>5</sub> drum in question was defective. **See** *id.*

The plaintiffs allege two defects. **See** [Filing No. 96](#) - Brief p. 31-32. First, the plaintiffs argue the drum was defective because it did not have a liner to prevent P<sub>2</sub>S<sub>5</sub> within the barrel from exposure to moisture. **See** *id.* Second, the plaintiffs argue the drum was defective because it had a foam seal, which could react with acid gas in the drum and deteriorate, leading to additional formation of hydrogen sulfide. **See** *id.* The plaintiffs also contend that although the court excluded Mr. Zeigler's testimony regarding defects in the drum ([Filing No. 71](#) - Order p. 18), the plaintiffs will be able to show the drum was defective through the testimony of Phillip G. Retallick, Clean Harbors' Senior Vice-President for

Compliance and Regulatory Affairs. See [Filing No. 96](#) - Brief p. 30-31. Specifically, Mr. Retallick, who has not been designated as an expert, would testify based on his experience and observations in the industry and working with sulfides. *Id.* Relevant to the plaintiffs' alleged defects, Mr. Retallick would describe whether the defendant's P<sub>2</sub>S<sub>5</sub> drum complied with U.S. Department of Transportation (DOT) standards, which requires liners when shipping certain classes of hazardous materials. See *id.* (citing Filing No. 97 Ex. 2 - Retallick Depo. [Part 2](#) at p. 62, 65; and [Part 3](#) at p. 169-171). Additionally, the plaintiffs rely on the testimony of one of the defendant's employees, John C. Sager, regarding the use of a foam seal that could possibly crack or fissure to allow hydrogen sulfide to form in P<sub>2</sub>S<sub>5</sub> drum. See *id.* (citing Filing No. 97 [Ex. 1](#) - Sager Depo. p. 68, 70, 133).

Expert testimony is required to show a defect in the P<sub>2</sub>S<sub>5</sub> drum alleged to have caused Mr. Barrett's injuries because the alleged defects are neither obvious, nor a matter of common knowledge. The plaintiffs do not argue standards regarding design or manufacture of containers for shipping P<sub>2</sub>S<sub>5</sub> are matters of common knowledge. Both the plaintiffs and the defendant indicate the standards for shipping containers containing P<sub>2</sub>S<sub>5</sub> are regulated by the DOT. See [Filing No. 92](#) - Defendant Brief p. 12; [Filing No. 96](#) - Plaintiffs Brief p. 31. The need for specific regulations regarding containers for shipping P<sub>2</sub>S<sub>5</sub> indicate standards for design and manufacture of such containers is not a matter of common knowledge.

Additionally, the facts of this case indicate no obvious defect in the P<sub>2</sub>S<sub>5</sub> drum existed. Specifically, Terracon inspected and tested the drum the plaintiffs claim was the source of hydrogen sulfide on June 27, 2003. See Filing No. 48 [Ex. D\(1\)](#) - Terracon Report § 3.2 at p. 11. "Terracon did not observe cracks or holes in the drums that would allow contaminants to enter, or [P<sub>2</sub>S<sub>5</sub>] or hydrogen sulfide to leak out of the drums." See *id.* The seal (gasket) did not appear to be from the subject drum's original lid. *Id.* Terracon performed a leak test on the subject drum and found it to be air-tight. *Id.* § 3.4 at 12-13. A lay person will be unable to identify obvious defects in the drum after experts were unable to find such obvious defects when conducting an in-depth inspection of the drum. Therefore, expert testimony will be required in this case to establish a defect in the drum.

In the plaintiffs' expert witness disclosure, Mr. Zeigler is the only expert witness



disclosed or identified to testify regarding liability issues. **See** [Filing No. 32](#). The court excluded Mr. Zeigler's testimony regarding defects in the P<sub>2</sub>S<sub>5</sub> drum because Mr. Zielger did not test, inspect or scientifically evaluate the drum or drum lid, and he failed to do more than merely look at the P<sub>2</sub>S<sub>5</sub> drum. **See** [Filing No. 71](#) - Order p. 18. The argument that the plaintiffs can show a defect in the P<sub>2</sub>S<sub>5</sub> drum through Mr. Retallick's testimony fails. The plaintiffs did not timely identify him as an expert witness. The deadline for disclosing rebuttal expert witnesses in this case was July 10, 2008. **See** [Filing No. 44](#) - Progression Order p. 2. Because the deadline for disclosing expert witnesses has passed, Mr. Retallick will not be permitted to testify as an expert witness for the plaintiffs. In any event, Mr. Retallick's testimony would be inadequate to show a defect in the drum because no evidence indicates Mr. Retallick conducted any inspection or testing on the drum. In fact, he was unaware whether the drum had a liner and acknowledged he did not look at the drum. **See** Filing No. 97 Ex. 2 - Retallick Depo. [Part 3](#) p. 170. The plaintiffs' reliance on the defendant's witnesses is similarly unavailing. While the defendant may have admitted the drum was unlined and that it is possible the foam seal may have cracked, such evidence alone does not establish a defect in the P<sub>2</sub>S<sub>5</sub> drum.

In any event, the plaintiffs provide no evidence to show Mr. Barrett's injuries were caused by a defect in the P<sub>2</sub>S<sub>5</sub> drum. Expert testimony is required to show a defect exists in the P<sub>2</sub>S<sub>5</sub> drum alleged to have caused Mr. Barrett's injuries. Even assuming the defendant failed to comply with DOT standards or failed to use a more effective seal, the plaintiff lacks scientific evidence to show such failure rendered the drums unreasonably dangerous, such as creating unsafe levels of hydrogen sulfide in the P<sub>2</sub>S<sub>5</sub> drum. In contrast, the Terracon Report suggests additional sources for the hydrogen sulfide such as moisture entering the drum during packaging or during opening and exposure to air. **See** Filing No. 48 [Ex. D\(1\)](#) - Terracon Report § 2.4.1 at p. 5. Therefore, the plaintiffs provide insufficient evidence to create a genuine issue of material fact regarding whether the P<sub>2</sub>S<sub>5</sub> drum in question was defective.

### **C. Failure to Adequately Warn**



The plaintiffs allege the defendant failed to give adequate warning of the dangers of P<sub>2</sub>S<sub>5</sub> drums to users of the products as another basis for the plaintiffs' strict liability claim. See [Filing No. 19](#) - Complaint ¶ 13. Manufacturers may be liable for failing to warn of the dangers associated with their products. See [Freeman 618 N.W.2d at 833](#) (citing [Rahmig v. Mosley Mach. Co.](#), 412 N.W.2d 56 (Neb. 1987)). Under this theory a product is defective "when the foreseeable risks of harm posed by the product could have been reduced or avoided by the provision of reasonable instructions or warnings by the seller . . . and the omission of the instructions or warnings renders the product not reasonably safe." See [Freeman, 618 N.W.2d at 841](#) (quoting RESTATEMENT (THIRD) OF TORTS: PROD. LIAB. § 2(c) (1998)). Accordingly, "a product may be defective and unreasonably dangerous because the manufacturer sold the product without sufficient warnings or instructions." [Haag v. Bongers](#), 589 N.W.2d 318, 329 (Neb. 1999). "Unreasonably dangerous' means that a product has the propensity for causing physical harm beyond that which would be contemplated by the ordinary user or consumer who purchases it, with ordinary knowledge common to the foreseeable class of users as to its characteristics." *Id.* Therefore,

[I]f a user actually knows of the danger, a failure to warn cannot be a proximate cause of the injury. This is because one who suffers an injury while using a product that he knows may cause personal injury cannot complain that the seller failed to warn him of that which he already knew.

[Crook v. Farmland Indus., Inc.](#), 54 F. Supp. 2d 947, 958 (D. Neb. 1999) (citing [Strong v. E. I. DuPont de Nemours Co.](#), 667 F.2d 682, 688 (8th. Cir. 1981)); see [Jordan v. NUCOR Corp.](#), 295 F.3d 828, 837 (8th Cir. 2002).

The plaintiffs contend the defendant failed to adequately warn Clean Harbors and other foreseeable users of the dangers associated with P<sub>2</sub>S<sub>5</sub> drums. See [Filing No. 96](#) - Brief p. 33-37. The plaintiffs argue the MSDS provided by the defendant were misleading regarding the possibility of P<sub>2</sub>S<sub>5</sub> drum contents being pressurized. See *id.* at 36. Additionally, the plaintiffs argue neither the MSDS nor training provided by the defendant warned of the possibility that hydrogen sulfide could be present in P<sub>2</sub>S<sub>5</sub> drums or that exposure of the drums to moist air could cause hydrogen sulfide buildup inside the P<sub>2</sub>S<sub>5</sub>

drums. **See *id.*** at 33-37. The defendant contends any failure of the defendant to warn of the hazard of hydrogen sulfide in the headspace or upon opening of P<sub>2</sub>S<sub>5</sub> drums was not a proximate cause of Mr. Barrett's injury. **See [Filing No. 92](#)** - Brief p. 17. Specifically, the defendant argues Clean Harbors and Mr. Barrett were both aware of the dangers of hydrogen sulfide when working with P<sub>2</sub>S<sub>5</sub> drums, as well as the possibility of the presence of hydrogen sulfide when opening P<sub>2</sub>S<sub>5</sub> drums. **See *id.***

Nebraska law is clear, indicating where a user of a product actually knows of the dangers associated with using the product, a manufacturer's failure to warn of that danger cannot be the proximate cause of the user's injury. The issue, therefore, is not whether the MSDS or training provided by the defendant failed to adequately warn Clean Harbors or users of possible dangers related to P<sub>2</sub>S<sub>5</sub> drums. Rather, the issue is whether Clean Harbors and Mr. Barrett, as a member of the ash fixation team using the P<sub>2</sub>S<sub>5</sub> drum, had actual knowledge regarding the possible dangers associated with P<sub>2</sub>S<sub>5</sub> drums.

The undisputed facts of this case clearly indicate both Clean Harbors and Mr. Barrett had actual knowledge regarding the dangers of working with P<sub>2</sub>S<sub>5</sub> drums and specifically the possibility hydrogen sulfide being liberated from a P<sub>2</sub>S<sub>5</sub> drum when opened. Clean Harbor's safety manager, Mr. Magers, knew of the possibility of hydrogen sulfide liberation or formation upon opening P<sub>2</sub>S<sub>5</sub> drums before June of 1997, during discussions with the defendant about developing a site specific health and safety plan. **See [Filing No. 89 Ex. 2](#)** - Magers Depo. p. 5-6, 12, 15-16. Accordingly, Mr. Magers developed a safety plan that required monitoring for hydrogen sulfide during the ash fixation process. **See *id.*** at 17-18. Additionally, all members of the ash fixation crew were told during their initial training that hydrogen sulfide was coming out of the P<sub>2</sub>S<sub>5</sub> drums when they were opened, which required monitoring. ***Id.*** at 15-16. Clean Harbor's Laboratory Manager, Mr. Blanche, indicated he knew the safety plan for working with P<sub>2</sub>S<sub>5</sub> included constant monitoring for hydrogen sulfide, and that the safety plan was reviewed with employees working with P<sub>2</sub>S<sub>5</sub> drums. **See [Filing No. 89 Ex. 4](#)** - Blanche Depo. p. 7-9, 78-79. Finally, Mr. Barrett indicated he knew working with P<sub>2</sub>S<sub>5</sub> drums required special precautions to prevent exposure to harmful gas. **See [Filing No. 89 Ex. 3](#)** - Barrett Depo. p. 12-14. Specifically, Mr. Barrett admitted he had been advised that hydrogen sulfide could be a byproduct of

P<sub>2</sub>S<sub>5</sub>. *Id.* at 11. The undisputed evidence shows that even if the MSDS omitted certain relevant warnings, the defendant worked with Clean Harbors to develop a safety plan addressing the liberation of hydrogen sulfide from the P<sub>2</sub>S<sub>5</sub> drums and both Clean Harbors and Mr. Barrett had actual knowledge that the P<sub>2</sub>S<sub>5</sub> drums could and did liberate hydrogen sulfide in potentially lethal concentrations. Because the plaintiffs in this case were aware of the possible dangers associated with P<sub>2</sub>S<sub>5</sub> drums, the defendant's alleged failure to give adequate warning of those dangers cannot be the proximate cause for the plaintiffs' injuries under Nebraska law. Therefore, the plaintiffs fail to create a genuine issue of material fact regarding whether the defendant's failure to include additional warnings in the MSDS provided to Clean Harbors in 1997 rendered the P<sub>2</sub>S<sub>5</sub> drums unreasonably dangerous. Upon consideration,

**IT IS ORDERED:**

1. The defendant's Motion for Summary Judgment ([Filing No. 90](#)) is granted.
2. This action and the plaintiff's Second Amended Complaint are dismissed with prejudice.
3. Pursuant to [Fed. R. Civ. P. 58](#), a separate judgment will be entered on this date in accordance with this Order.

DATED this 11th day of August, 2009.

BY THE COURT:

s/Thomas D. Thalken  
United States Magistrate Judge

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