

**UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF LOUISIANA**

ANTHONY ARNOLD, JR.,

Plaintiff

VERSUS

CANAL BARGE COMPANY, INC.

Defendant

CIVIL ACTION

NO. 13-4966

SECTION "E"

ORDER AND REASONS

The Court has pending before it Defendant Canal Barge Company, Inc.'s motion in limine to exclude and limit expert testimony and for summary judgment.¹ The Court has reviewed Plaintiff's oppositions, the record, and the applicable law, and now issues this Order and Reasons.

BACKGROUND

This case arises out of personal injuries Plaintiff Anthony Arnold, Jr. suffered while on board the M/V HAMILTON, a towboat owned by Defendant. Plaintiff was employed by Defendant as a deckhand aboard the HAMILTON. On May 8, 2013, Plaintiff was assigned to clean the wheelhouse. He was provided a solution of one part household ammonia product to twelve parts water prepared by David Claiborne, his supervisor. Plaintiff was informed that respirators were not available to be used during the cleaning. The cleaning took approximately twenty to thirty minutes, during which time Plaintiff contends the door and windows to the wheelhouse were closed; Defendant disputes the latter fact.

¹ R. Docs. 34, 35.

Approximately twelve hours after completing the cleaning, Plaintiff woke up with difficulty breathing. He was taken off ship, diagnosed with acute respiratory failure secondary to chemical-induced pneumonitis, and spent approximately a week hospitalized. He filed suit in this Court against Defendant, asserting claims under the Jones Act and general maritime law for his allegedly ongoing injuries.

Plaintiff has retained Russell F. Lee, a meteorologist and air modeling expert, to opine regarding the concentration of ammonia in the wheelhouse to which Plaintiff was exposed.² In his report, Lee outlines how he calculated the amount of ammonia which evaporated in the enclosed space of the wheelhouse and concludes that the concentration of ammonia to which Plaintiff was exposed "was likely in the vicinity of 443 ppm." The variables in Lee's calculation include (1) the amount of ammonia in the product used, (2) the amount of water used to dilute the ammonia, (3) the volume and surface area of the wheelhouse, (4) the amount of diluted solution required to clean that surface area, (5) the rate at which the ammonia would evaporate, and (6) the effect, if any, of ventilation.

Defendant now moves to exclude that opinion testimony, contending that Lee does not rely on sufficient facts or data or apply a reliable methodology in arriving at his opinion. Defendant also moves to limit the expert testimony of Dr. Patricia Williams, Plaintiff's expert toxicologist, to the extent that she relies on Lee's calculation of ammonia concentration in opining about the effect the ammonia exposure had on Plaintiff. And finally, Defendant moves for summary judgment on the basis that Plaintiff cannot prove liability on any theory without Lee and Williams's testimony.

STANDARD OF LAW

² R. Doc. 34-3 at 1.

The Federal Rules of Evidence permit an expert witness with “scientific, technical or other specialized knowledge” to testify if such testimony “will help the trier of fact to understand the evidence or to determine a fact in issue,” so long as “the testimony is based upon sufficient facts or data,” “the testimony is the product of reliable principles and methods,” and “the expert has reliably applied the principles and methods to the facts of the case.” Fed. R. Evid. 702. Courts, as “gatekeepers,” are tasked with making a preliminary assessment whether expert testimony is both reliable and relevant. *See Pipitone v. Biomatrix, Inc.*, 288 F.3d 239, 243-44 (citing *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 592-93 (1993)). The party offering the expert opinion must show by a preponderance of the evidence that the expert’s testimony satisfies Rule 702. *Mathis v. Exxon Corp.*, 302 F.3d 448, 459-60 (5th Cir. 2002).

As a general rule, questions relating to the bases and sources of an expert’s opinion affect the weight of the evidence rather than its admissibility, and should be left for the finder of fact. *See Primrose Operating Co. v. Nat’l Am. Ins. Co.*, 382 F.3d 546, 562 (5th Cir. 2004). Thus, “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Pipitone*, 288 F.3d at 250 (quoting *Daubert*, 509 U.S. at 596). The Court is not concerned with whether the opinion is correct, but whether the preponderance of the evidence establishes that the opinion is reliable. *See Johnson v. Arkema, Inc.*, 685 F.3d 452, 459 (5th Cir. 2012). “It is the role of the adversarial system, not the court, to highlight weak evidence.” *Primrose*, 382 F.3d at 562.

The dispute in this case largely turns on the facts, data, and assumptions underlying Lee's opinion. Rule 702 requires an expert to base his or her testimony on "sufficient facts or data." This requires exclusion of opinions based on "insufficient, erroneous information." *See Moore v. Int'l Paint, L.L.C.*, 547 F. App'x 513, 515 (5th Cir. 2013) (quoting *Paz v. Brush Engineered Materials, Inc.*, 482 F.3d 383, 389 (5th Cir. 2009)). But experts may rely on one version of a disputed fact, and "reliable expert testimony often involves estimation and reasonable inferences from a sometimes incomplete record." *See id.* at 515, 516. Thus, the presence of unknown variables in an expert's opinion do not necessarily render that opinion unreliable or unhelpful to the jury. *See Bocanegra v. Vicmar Servs., Inc.*, 320 F.3d 581, 589-90 (5th Cir. 2003).

ANALYSIS

A. Qualification

Defendant first challenges Lee's qualification to opine regarding indoor air quality modeling. According to Lee's CV and deposition testimony, he is a meteorologist with expertise in air pollution and air quality modeling.³ Lee testified that while most of his experience has been in outdoor air quality modeling, he has performed "one or two" indoor modeling analyses in his career and that his expertise in "basic physics" qualifies him to opine regarding indoor air dispersion.⁴

Defendant's challenge to Lee's qualifications is conclusory and unconvincing. Defendant does not articulate how expertise in air quality modeling generally fails to translate reliably into the context of indoor air quality modeling. The Court is satisfied that Lee is qualified to offer his opinions in this case; any purported deficiencies in his

³ R. Doc. 39-1 at 1; R. Doc. 34-4 at 6.

⁴ R. Doc. 34-4 at 6-7, 22.

qualifications or experience may be raised on cross-examination.

B. Reliability

Defendant next disputes the reliability of Lee's testimony. Lee opines that Plaintiff was likely exposed to 443 ppm of ammonia while cleaning the wheelhouse. That conclusion is the output of a formula with several variable inputs, including the amount of ammonia used to clean the wheelhouse, the size and volume of the wheelhouse, the evaporation rate of ammonia, and the effect of ventilation.

Defendant challenges the values Lee used in his calculation, rather than the formula itself. According to Defendant, Lee made arbitrary assumptions and relied on incomplete record evidence in calculating the concentration of ammonia in the wheelhouse. Specifically, Defendants challenge Lee's premises regarding (1) the amount of ammonia in the household cleaning product, (2) the amount of the ammonia-water solution needed to clean a given area, (3) the surface area and volume of the wheelhouse, (4) the evaporation rate of ammonia, and (5) the effect of ventilation.⁵ Tying these arguments to the text of Rule 702, Defendant contends that Lee's opinion is not based on "sufficient facts or data" and must be excluded. In response, Plaintiff defends Lee's selected inputs as supported by record evidence which the jury could believe, and as reasonable in circumstances in which the record is silent.

The Court has reviewed the parties' arguments and the applicable law. Defendant's criticism of Lee's choice of data and assumptions underlying his opinion are substantial, but the Court concludes that these criticisms go to the weight of his testimony and not to its admissibility. This is not the kind of case in which "the universe

⁵ R. Doc. 34-1 at 14-26. Defendant also identifies a small mathematical error in Lee's calculation of the dilution of the ammonia. This is proper grist for cross-examination and may well undermine Lee's credibility before the jury, but "a few scattered errors in an expert report are not necessarily grounds for exclusion." *Moore*, 547 F. App'x at 516.

of facts assumed by the expert differs frequently and substantially from the undisputed record evidence." *Moore*, 547 F. App'x at 516. Rather, it is the kind of situation in which "reliable expert testimony . . . involves estimation and reasonable inferences from a sometimes incomplete record." *Id.* The shakiness of Lee's opinion is properly the subject of cross-examination and contradictory evidence.

Defendant's specific issues with Lee's assumptions or data do not reach the level of unreliability under the specific circumstances of this case. For example, Lee started from the premise that the household ammonia product at issue in this case contained 10% ammonia by weight because there is apparently no direct evidence of the ammonia content and because, in Lee's research of other household ammonia products, "in *most cases* it was in the vicinity of 10 percent [ammonia] or slightly less."⁶ While open to debate, Lee's starting point is not entirely arbitrary or biased, as Defendant contends.

Likewise, Lee's use of a proxy for the application rate of ammonia-water solution to a surface is open to criticism but not so fanciful or arbitrary as to undermine the reliability of his opinion as a whole. At his deposition, Lee explained how he searched for and selected a proxy application rate for a different cleaning product, how he conducted an empirical test to check that the proxy application rate was not inconsistent with an ammonia-water solution, and his expectation of the potential error rate between the two application rates.⁷ All of these aspects may be attacked on cross-examination, but the Court cannot say that the underlying data reaches the level of "altered facts and speculation" designed to bolster Plaintiff's position. *See Moore*, 547 F. App'x at 515 (citing *Guillory v. Domtar Indus., Inc.*, 95 F.3d 1320, 1331 (5th Cir. 1996)).

⁶ R. Doc. 34-4 at 29 (emphasis added).

⁷ R. Doc. 34-4 at 17-19.

Defendant's remaining arguments about the values Lee plugged into his calculation for different variables likewise go to the weight to be given to the opinion by the jury. With respect to the evaporation rate of ammonia in water, Lee relied on a published EPA report.⁸ With respect to the amount of water used to dilute the ammonia and the size and ventilation of the wheelhouse, Lee relied on deposition testimony. While Lee certainly could have personally measured and inspected the wheelhouse, and that would have improved the data underlying his opinion, Rule 702 requires only *sufficient* data and facts, not *perfect* data and facts. Certainly, the jury may conclude that the disputed facts of the case do not conform to Lee's factual premises, such as with respect to the dimensions of the wheelhouse or whether the door or windows were open; if so, the jury would be entitled to disregard his conclusion as inaccurate. But where, as here, those premises are not "completely unsubstantiated factual assertions," it is for the jury to decide those underlying facts. *See Moore* 547 F. App'x at 515.

To reiterate, the Court is not concerned with the accuracy of Lee's opinion, but rather that he has reliably applied principles and methods to sufficient facts. Fed. R. Evid. 702. Although it is a close call, the Court finds that Lee's opinion passes the Rule 702 gatekeeping threshold. His opinion is the kind of "shaky but admissible" testimony that can be presented to the jury—and subjected to vigorous cross-examination and contrary opinion testimony. Accordingly, the motion to exclude Lee's testimony is denied.

The remainder of the issues raised in Defendant's motions rise and fall with the admission of Lee's testimony. Because Lee's testimony is not excluded, Plaintiff's toxicologist Dr. Williams may rely on his opinion, subject to all other applicable rules of

⁸ R. Doc. 34-3 at 2.

evidence. And because Lee's testimony is not excluded and Williams's testimony is not limited, Defendant's summary judgment motion contingent on that exclusion⁹ must be denied as well.

CONCLUSION

For the foregoing reasons, **IT IS ORDERED** that Defendant's motion to exclude and limit expert testimony is **DENIED**. **IT IS FURTHER ORDERED** that Defendant's motion for summary judgment is **DENIED**.

New Orleans, Louisiana, this 2nd day of June, 2014


SUSIE MORGAN
UNITED STATES DISTRICT JUDGE

⁹ R. Doc. 35-1 at 5.