

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF KENTUCKY
CENTRAL DIVISION
(at Frankfort)

KENTUCKY FARM BUREAU)
MUTUAL INSURANCE COMPANY,)
)
Plaintiff,)
)
V.)
)
HITACHI HOME ELECTRONICS)
(AMERICA), INC.,)
)
Defendant.)

Civil Action No. 3: 08-30-DCR

**MEMORANDUM OPINION
AND ORDER**

*** **

On November 14, 2006, a house in Bedford, Kentucky, caught fire and burned to the point of total loss. Plaintiff Kentucky Farm Bureau Mutual Insurance Company (“KFB”) claims the fire was caused by a television manufactured by Defendant Hitachi Electronics (“Hitachi”). After reimbursing the homeowners, KFB filed a products liability action against Hitachi asserting claims for negligence, strict liability, and breach of warranty. KFB seeks to recover \$164,490.00 in damages to cover the amount paid in reimbursement to the homeowners.

Hitachi has filed a motion to exclude the testimony of Eric Evans, KFB’s proposed fire investigation expert, on the basis that his opinions are not reliable. However, after reviewing the parties’ briefs on this issue, the Court concludes that: (i) Evans possesses relevant expertise in the area of fire investigations, (ii) Evans’ opinions are sufficiently reliable, and (iii) Evans’ opinions are relevant to KFB’s claims. Therefore, Hitachi’s motion to exclude will be denied.

I. Background

A fire began in the family room of the subject home during early morning of November 14, 2006. Although there were no fatalities, at least two of the seven people in the home sustained serious injuries during their escape from the fire. Later that day, KFB retained the Forensic Fire Investigation Bureau to perform a cause and origin investigation.

The following day, forensic fire investigator Eric Evans performed an on-scene origin and cause investigation of the destroyed home. Along with his inspection of the interior and exterior of the home, Evans interviewed Bedford Fire Department Chief Josh Jameil and a neighbor.¹ Based on this investigation, Evans concluded the fire originated along “the east wall of the family room at the location of the projection television,” and that “the ignition source was the television.” In his investigation report, Evans explained:

As with all fires, at least three components must be present for a fire to occur. These components are oxygen, heat in the form of a competent ignition source and a fuel. Oxygen exists in a sufficient percentage (21%) in normal air to support open burning. The fuel was the television cabinet and its components and then the east wall of the family room. The exact electrical malfunction of the television could not be determined in the field by normal observation because of the extensive damage to the television caused by the fire.

[Fire Origin & Cause Report, p. 11]

During his deposition, Evans further explained how his investigation led him to conclude the fire originated from the area around the TV. He also explained why he eliminated certain items near the area of origin as possible ignition sources. After eliminating all other items he

¹ Evans was unable to interview the homeowners before the inspection due to their hospitalization.

observed in or near the area of origin, Evans testified that he conclude the television was the “greatest probable thing that caused this fire.”

Despite his conclusions concerning origin and cause, Evans conceded that he could not identify the specific malfunction that caused the fire due to the extensive damage to the television. In addition, he explained his expertise was in determining fire cause and origin, and that he was not qualified to determine specific defects in a television. However, Evans opined in his deposition testimony that:

I cannot identify a defect, but I can say that I don't think the manufacturer manufactures that TV with defects that'll cause fires. In order for a fire to occur, there had to be something wrong with the TV in some way, shape or form. They didn't sell that TV to burn a house down.

[Evans Depo., p. 156]

KFB argues that Evans' conclusions should be admitted as expert opinions, because he possesses expertise in the area of determining the origin and cause of fires, his opinions are based on reliable and proven scientific methodology, and his opinions are highly relevant to the ultimate issues in this case. Conversely, Hitachi argues Evans' opinions concerning causation must be excluded, because his conclusion that the television caused the fire is not based on reliable investigation techniques.

II. Legal Analysis

A proposed expert's opinion testimony is admissible, at the district court's discretion, if three requirements are met. First, the witness must be qualified as an expert by knowledge, skill, experience, training, or education. FED. R. EVID. 702; *In re Scrap Metal Antitrust Litig.*, 527 F.3d 517, 529 (6th Cir. 2008). Second, the testimony must be reliable. *Id.* Finally, as with all

evidence, the proposed expert testimony must be relevant in that it will assist the trier of fact to understand the evidence or to determine a fact in issue. *Id.* See also FED. R. EVID. 402.

(A) Evans Possess Expertise in Forensic Fire Investigations

Evans has worked for the Forensic Fire Investigation Bureau for the past decade and has nearly 30 years of experience in fire-related professions. He is also nationally certified as both a fire investigator and a fire investigator instructor. In addition, Evans has hundreds of hours of specialized training in a number of relevant areas including “Fire Investigation (Origin and Cause).” Based on his training and experience, Evans has sufficiently demonstrated that he possess the expertise necessary to provide opinion testimony concerning the origin and cause of the fire in this case.

(B) Reliability

Opinions provided by a qualified expert must be reliable to be admissible. There are multiple factors a district court can use to evaluate the scientific principles upon which an expert’s opinions are based. See *In re Scrap Metal*, 527 F.3d at 529 (citing *Daubert v. Merrell Dow Pharm., Inc.*, 509 U.S. 579, 593–94 (1993)). However, evaluating the reliability of the scientific principles of fire investigation is not needed in this case. These principles, upon which the professional standards outlined in the National Fire Protection Agency 921 publication (“NFPA 921”) are based, have been recognized as the generally accepted standard in the fire investigation community. See, e.g., *Royal Inc. Co. v. Daniel*, 208 F. Supp. 2d 423, 426 (S.D.N.Y. 2002); *Travelers Prop. & Cas. Corp. v. Gen. Elec. Co.*, 360, 366 (D. Conn. 2001).

Therefore, the issue becomes whether Evans properly followed the professional standards in NFPA 921 when investigating the fire and reaching his conclusions.

Hitachi does not dispute the reliability of Evans' conclusion that the fire *originated* at the site of the television. However, Hitachi argues Evans' conclusion that the television *caused* the fire is not reliable, because Evans failed to follow the standards for eliminating other possible ignition sources within the origination area of the fire. NFPA 921 § 18.2.1 state:

Any determination of fire cause should be based on evidence rather than on the absence of evidence; however, when the origin of the fire is clearly defined, it is occasionally possible to make a credible determination regarding the cause of the fire, even when there is no physical evidence of the ignition source available. This finding may be accomplished through the credible elimination of all other potential ignition sources, provided that the remaining ignition source is consistent with all known facts.

[Record No. 10, Ex. 4]

During his deposition, Evans admitted he was unaware the DVD player, the satellite receiver, and their cords were sitting on top of the television at the time of the fire.² He also admitted he had not located the power cords or extension cords for the television, DVD player, or satellite receiver, but explained their absence was not unusual since cords burn off devices in a fire. Evans acknowledged that if there were power cords or extension cords in the area of origin at the time of the fire, then he could not rule those cords out as being the cause of the fire. As he explained in his deposition, "If I can't see them, I can't eliminate them.

² By the time Evans conducted his investigation, the DVD player and satellite receiver had either fallen or been removed from the top of the television. Evans located these two items in the family room and explained in his investigation report that these items were eliminated as possible ignition sources, because they had burn patterns going from the exterior inward.

Hitachi claims Evans' investigation did not follow the standards set out in § 18.2.1, because he did not eliminate all potential ignition sources that were in the area of origin at the time of the fire. Since he acknowledged he cannot eliminate the unlocated power or extension cords as being the cause of the fire, Hitachi argues his conclusion regarding causation is unreliable.

However, the fact that Evans was unable to eliminate possible ignition sources he did not locate during the course of his investigation does not necessarily make his investigation, or his subsequent causation conclusion, inherently unreliable. Although Hitachi highlights § 18.2.1 to show Evans did not comply with the standards in NFPA 921, his investigation does seem to follow the § 18.2.1 standards. Based on the wall stud burn patterns, Evans concluded the area of origin was the wall behind the television. Prior to concluding that the television was the ignition source, Evans' investigation report demonstrates that he systematically analyzed and eliminated all other possible ignition sources observed in the family room. His deposition testimony further explains why these other possible ignition sources were eliminated as the cause of fire. This left the television, which was the most severely damaged device in the family room, as being the "greatest probable thing" that caused the fire.

Because Evans' investigation followed the standards outlined in NFPA 921 § 18.2.1 for eliminating possible ignition sources, his conclusion that the television caused the fire is sufficiently reliable. Although his expert testimony will not be excluded based on his failure to eliminate possible ignition sources he did not locate during his investigation, Hitachi will have the opportunity cross-examine Evans on this point at trial.

Hitachi also notes Evans has not tested his theory and can only speculate as to how the fire occurred. The Defendants note in their motion to exclude:

Ordinarily, “a key question to be answered in determining whether a theory or technique is scientific knowledge that will assist a trier of fact will be whether it can be tested.” *Daubert*, 509 U.S. at 593. “The testability requirement is a threshold requirement aimed at excluding pseudoscience from the courtroom. A theory that is untested is unfalsifiable and of no practical value in the courtroom.” *Brumley v. Pfizer, Inc.*, No. C-00-106, 2001 U.S. Dist. LEXIS 8130, *17 (S.D. Tex. June 7, 2001).

Hitachi claims Evans’ causation opinion does not meet this threshold requirement, because he never tested his theory that the television caused the fire. Thus, Hitachi argues his testimony must be excluded due to its unreliability.

This argument is misplaced. The theory that must be testable is not Evans’ causation theory, but rather the theories underlying the forensic fire investigation standards in NFPA 921, which Evans used to form his causation conclusion. As the *Daubert* Court explains, “Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified; indeed, this methodology is what distinguishes science from other fields of human inquiry.” *Daubert*, 509 U.S. at 593. As previously mentioned, NFPA have been recognized as the generally accepted standard in the fire investigation community. Thus, these scientific theories underlying the forensic fire investigation techniques have already been tested and deemed reliable.

As Hitachi notes, NFPA 921 establishes a six step process in which the investigator must: (1) recognize that a need exists to determine what caused the fire; (2) define the problem; (3) collect data; (4) analyze data; (5) develop a hypothesis; and (6) test hypothesis. *See Royal*, 208

F. Supp. 2d at 426. As Evans admitted in his deposition, he is not qualified to physically test the television to determine if it could have caught fire. However, he tested his hypothesis that the television was the ignition source by systematically eliminating the other possible ignition sources he located in the and around the area of origin in accordance with NFPA 921 § 18.2.1.

As the Six Circuit has noted, “[T]he *Daubert* Court instructed district courts that their primary function as ‘gatekeepers’ is to determine whether the principles and methodology underlying the testimony itself are valid – not to second guess the validity of conclusions generated by otherwise valid methods, principles, and reasoning.” *Pride v. BIC Corp.*, 218 F.3d 566, 577 (6th Cir. 2000) (citation and internal quotations omitted). Evans’ generated his conclusions regarding origin and causation based on a generally accepted methodology. Therefore, his testimony will not be excluded on the basis of reliability.

(C) Relevance

Finally, a court must determine that proposed expert opinions are relevant prior to allowing the opinions to be admitted. FED. R. EVID. 702; *In re Scrap Metal*, 527 F.3d at 529. Evidence is relevant if it has any tendency to make the existence of any fact that is of consequence more or less probable. FED. R. EVID. 401. Evans’ opinions regarding the origin and cause of the fire are highly relevant in this case where the ultimate issue is whether a manufacturing and/or design defect in the television caused the fire that destroyed the home.

III. Conclusion

Forensic Fire Investigator Eric Evans possesses expertise in investigating fires and is qualified to provide expert testimony in this area. In addition, his proposed testimony is both

reliable and relevant to this case. Therefore, it is

ORDERED that Defendant Hitachi Home Electronics motion to exclude [Record No. 10] is **DENIED**.

This 20th day of August, 2009.



Signed By:

Danny C. Reeves DCR

United States District Judge