2017 Year in Review – Decisions Involving Admissibility of Fire Expert Opinions

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Courts issued a variety of opinions during 2017 dealing with objections to the admissibility of the opinions of fire investigators in civil and criminal cases.

Pennsylvania - NFPA Advances in Fire Science Were Not "Newly Discovered Evidence"

Letitia Smallwood was convicted of arson and murder in 1973 and received a life sentence. In 2014, she brought a motion for post-conviction relief arguing that advances in fire science since her conviction raised newly discovered evidence warranting a new trial.   At hearing, she called Jason Sutula as an expert. Applying the methodology of NFPA 921 to the case, Dr. Sutula took issue with the original investigator's conclusions 1) that the fire was arson; and 2) that there were two points of origin. Dr. Sutula pointed out that the investigator's classification of the fire as incendiary was "premature." He explained that pursuant to NFPA 921, a fire cannot be classified as incendiary until other potential causes have been considered and ruled out. Potential causes in the case included a malfunction of the building's electrical system as well as an accidental ignition of discarded furniture and trash in the halls due to carelessly discarded smoking materials. Applying the principles of NFPA 921 to the available evidence, Dr. Sutula concluded that the cause of the fire must be classified as "undetermined." The Court found that NFPA was first adopted in 1992 and that Smallwood became aware of the Guide in 1999. While speculating that a jury hearing the evidence today might reach a different conclusion as to her guilt, it nevertheless found that her 2014 petition was untimely and it was denied.

Commonwealth v. Smallwood, 2017 PA Super 25, 155 A.3d 1054, 1058–59 (2017), reargument denied (Apr. 6, 2017). See also: Keyes v. State, 899 N.W.2d 740 (Iowa Ct. App. 2017) (General acceptance of NFPA 921 held not to be a "watershed development." Evidence found to be cumulative or impeaching, not newly discovered evidence.) Compare: *State v. Awe*, Decision and Order, Case No. 07 CF 54 (Marquette Cty, Wisc. Mar. 21, 2013) (New trial ordered where court held that NFPA changes constituted new evidence).

Texas - Failure to Collect Evidence Does Not Require Fire Expert's Exclusion

While much attention is focused on the destruction of evidence and spoliation, the obligation of a fire investigator to collect evidence has received less review. When a fire damaged an operations building at Harris Caprock in Houston, investigators pointed to a UPS device located on a cart in the middle of a room. Harris filed suit against the UPS maker, Trippe. In a motion to exclude, Trippe argued that the opinions of one of Harris' investigators, Ellington, were unreliable because he failed to comply with standard fire investigation protocol when he "bagged and tagged" evidence selectively and without cause. The Court noted that NFPA 921 specifically contemplates the alteration and movement of evidence, including collecting and removing physical evidence in order to test items or to ensure their preservation and

affords discretion to the fire investigator in determining what physical evidence to collect. It observed that at a joint inspection Trippe's experts had the opportunity to—and in fact did—identify as additional evidence items Ellington had not originally "bagged and tagged." The Court held that Ellington's judgment as to which evidence to collect went to the weight, not the admissibility, of his testimony and denied the motion to exclude.

Harris Caprock Commc'ns, Inc. v. Trippe Mfg. Co., No. 4:15-CV-0130, 2017 WL 496070 (S.D. Tex. Feb. 7, 2017)

Utah – Federal Court - Case Dismissed Due to Spoliation By Fire Experts

A subrogated homeowner's insurer brought suit against Ford Motor Co. following a house fire that was allegedly caused by a speed control deactivation switch (SCDS) in a Ford F-150 truck. Investigator Tad Norris was assigned by the insurer to conduct an origin and cause investigation. Certain evidence relating to the switch, including the hexport and housing, was recovered but was then lost by the Plaintiff before it could be inspected by Ford. A scene examination was conducted but no notice was given to Ford, arguably in violation of NFPA 921 §15.2.8.2. Further, the court found that the scene was not properly documented by the investigator. Various electrical items that may have been potential ignition sources were not collected. The loss of the hexport was also a significant factor in the Court's decision. Although subjected to SEM analysis before it was lost, the Court found the SEM analysis was inadequate and unreliable because elemental analysis, which would have identified copper from alleged arcing of the switch, was not conducted. The Court found that "as a result of Plaintiff's failure to document and preserve the electrical housing, Ford has been denied the opportunity to analyze evidence that could conclusively eliminate the SCDS, and therefore the Ford F–150, as the cause of the fire." It held that the actions of the experts involved were sufficient to impose the ultimate penalty for spoliation – dismissal of the Plaintiff's case.

Bear River Mut. Ins. Co. v. Ford Motor Co., No. 2:12-CV-731, 2017 WL 2241505 (D. Utah May 22, 2017).

Wisconsin - Fire Investigator's Opinion Found Unreliable

When a fire in a basement bedroom in Wisconsin caused the death of a young man, his parents and their insurer sought to establish that the fire was caused by a laptop computer equipped with lithium ion batteries which experienced thermal runaway. The laptop was found on the bed without its battery cell. Original investigators had unknowingly shoveled the battery cell and other debris into two large piles and their pre-fire location could not be determined. The cause of the fire was listed as undetermined. Plaintiff hired several experts, including Michael Hill, who opined that the fire stated on the bed. He found the most likely cause to be the laptop battery. Defendants moved to exclude his opinion. Hill had found a gas can in the basement, which he felt had been moved, but did not preserve it or try to determine why or how it had been moved. He opined that the bedroom did not reach flashover. He agreed that while there is an equation which allows an investigator to determine the heat release rate necessary to cause flashover, he did not know what inputs were needed to perform the equation, and did not try. On deposition, he could not credibly rule out smoking materials as the cause. Further, he had ruled out a printer in the bedroom based on information provided by the young man's father that the printer was not plugged in. On deposition, the father testified that he was not sure on the point and his wife testified that the printer had been plugged in. The Court criticized Hill's conclusion that the room had entered flashover based on other evidence in the record and Hill's failure to perform available calculations. It noted that Hill had made no investigation as to whether the fire could have been accidentally or purposefully set. The Court found the exclusion of the printer by Hill not supported by the witness testimony. Finally, the Court found that Hill's opinion was based in part on the opinion of a second expert whose testimony the Court had found unreliable. ill's testimony was found to be inadmissible.

Gopalratnam v. Hewlett-Packard Co., No. 13-CV-618-PP, 2017 WL 1067768(E.D. Wis. Mar. 21, 2017), aff'd, 877 F.3d 771 (7th Cir. 2017)

Connecticut – Fire Investigators' Alleged Expectation Bias Goes to Weight, Not Admissibility, Of Opinion

"A fire in a home's office/exercise room prompted an insurance claim which was denied on the basis of arson, and later fraud. The insurer's fire investigator determined that the fire had been started with kerosene spread throughout the room and was an incendiary fire. The local fire marshal had found that the fire was electrical based upon burn patterns and beads of melted copper caused by arcing. Called at trial by the homeowner, he testified that there was a short circuit caused by rodent damage. He had observed a kerosene heater in the room and a kerosene container, which firefighters spilled during suppression. He saw no evidence of an accelerated fire. A second fire investigator hired by the homeowner examined the scene and reviewed the fire marshal's investigation. He agreed the fire was electrical and opined that there was insufficient damage to the room and no burn patterns on the floor to suggest a set fire using kerosene. The homeowner sued and the jury found in his favor. The insurer appealed. It argued that the investigations of the fire marshal and the plaintiff's second investigator were not conducted in strict accordance with NFPA 921 and were tainted by "expectation bias" as they examined only that evidence which supported their theory that the fire was electrical. The Court found that the insurer's argument that investigators "were not thorough and that they did not do all that could or should have been done goes to the weight of their testimony, not its admissibility." The insurer's own employees conducted an investigation of the fire and were themselves accused of "confirmation bias." The trial court noted that:

"The jury had evidence from which it could have concluded that, despite the town of Pomfret fire marshal's finding that the fire was accidental in origin, [the defendant's] principal fire investigator ... Schoener, almost immediately suspected the plaintiff of having intentionally set the fire, and set out to prove his suspicion. This 'rush to judgment,' or working backward from a predetermined conclusion of arson rather than following the evidence to a logical conclusion, was a central theme of the plaintiff's case. The jury heard evidence, which, if believed, would have supported a determination that during the course of [the] investigation, Schoener 'fabricated' evidence to establish arson. Moreover, even without finding that evidence was intentionally fabricated, the jury could have reasonably inferred that the [the defendant's] investigation was plagued by 'confirmation bias'—the tendency to overly weigh evidence that agrees with one's preconceived notions and downgrade the importance of evidence that disagrees with one's preconceived notions.

"The jury heard evidence that Schoener contacted the town of Pomfret fire marshal and forcefully urged him to change his conclusion of an accidental fire and classify the fire as intentionally set. The jury also heard evidence that Schoener approached the plaintiff's fire investigator ... Mullen, and through an 'interrogation technique' involving falsehood and subterfuge, attempted to acquire information about the plaintiff's investigation of the fire. The jury also heard that during that conversation with Mullen, Schoener denigrated the state of the plaintiff's marriage, believing that to be a possible motive for the arson. The jury could reasonably have inferred from these extraordinary efforts to disparage and harm the plaintiff—efforts which appeared to be well outside the realm of a normal fire investigation—that (as [the] plaintiff's counsel argued) Schoener was 'out to get' the plaintiff and that a denial of coverage based on an accusation of arson—whether or not it was actually true—was the inevitable outcome of such a biased and flawed investigation.

The verdict rendered in favor of the homeowner, which included $1,000,000 in damages for emotional distress, was affirmed.

Riley v. Travelers Home & Marine Ins. Co., 173 Conn. App. 422,163 A.3d 1246(2017)

Michigan – Investigator's Use of Negative Corpus Rendered Conclusion Inadmissible

Audrey Pruitt was convicted of arson and fraud in the burning of her home. The fire's origin was found to be a 33 gal. trash can located between the refrigerator and the stove, which were ruled out as causative. A distinct V-pattern was found above the trash can. A can of ether starting fluid with scorch marks around its nozzle was found in the living room. Pruitt was observed by neighbors driving from the home while smoke billowed from the roof. Fire investigator Row testified that

"I have been able to establish that there is no electrical, mechanical or chemical causation for this fire, so the only other plausible explanation is there had to be some kind of an introduction of an open flame to this trashcan and the contents of this trashcan in order for it to be able to ignite." At trial, there was significant evidence of financial motive presented. On appeal, Pruitt challenged the opinion of Row, arguing that he used a negative corpus methodology. The Court of Appeals agreed, citing NFPA 921 §18.6.5 (2011). While not excluding Row's testimony as to his investigation, trash can burn testing or origin determination, the Court found his ultimate conclusion inadmissible. It found, however, that its admission was not plain error because there was ample other evidence to support the jury's guilty verdict. In her later habeas corpus petition in Federal court, Pruitt again raised Row's use of negative corpus as grounds for her release. The Court found that given the ample other evidence of guilt, the admission of Row's conclusion did not deprive Pruitt of a fair trial. Her petition was denied.

People v. Pruitt, No. 313065, 2014 WL 1320253 (Mich. Ct. App. Apr. 1, 2014); *Pruitt v. Stewart*, No. 2:15-CV-10812, 2017 WL 2276983 (E.D. Mich. May 25, 2017)

Minnesota – Arsonist's Negative Corpus Argument Fails

The owner of a townhouse which burned appealed his arson conviction arguing that an investigator's conclusion of incendiary fire was based on negative corpus. The fire was found to have started at the top of stairs leading to the basement. A wire ran under the stairs and there was conflicting testimony as to whether the wire could be ruled out as causative. As all other causes had been ruled out, the state's investigator opined that the fire was caused by a match or open flame lit by the last person in the house. he owner, who was involved in a costly divorce, was threatened by foreclosure, and had other financial problems, had given statements about when he left the home on the morning of the fire that conflicted with other witnesses' testimony. He argued that the state relied on negative corpus to reach a determination of arson. The Court analyzed all of the evidence and gave significant weight to the jury's ability to sort through conflicting evidence to reach its verdict. While not excluding the expert's testimony or ultimate conclusion, it found that the entire constellation of circumstances proved was consistent with the owner intentionally setting fire to his townhouse. It was noted that the owner had been several months behind on his homeowner's insurance payments but on the day before the fire, he made a payment of his arrears to the insurer so that he was current on his payments at the time of the fire. The owner's appeal was denied.

State v. Rassmussen, No. A16-1215, 2017 WL 3013212 (Minn. Ct. App. July 17, 2017), review denied (Sept. 19, 2017)

Georgia – Expert's Manipulated Tests Found Unreliable In Fatal Fire Case

A fire in a living room entertainment center containing a television resulted in the death of a father and son. Suit was filed against the manufacturer of the television based upon the family's expert's conclusion that the cause of the fire was a defect in the television. The expert, Judd Clayton, an electrical engineer, had designed a protocol to test his fire theory. However, he found it necessary to repeatedly manipulate the variables, such as removal of a safety fuse trigger the venting of a capacitor's wings even though there was no evidence the safety fuse was missing from owner's television. He used a different brand of capacitor than the one in the television, and used a lighter at vents to ignite vapors when he could not get the vapors to ignite on their own. At every step of the expert's experiment, the results failed to trigger the next event of his expected chain reaction unless he forced the result he desired and proceeded to the next step. The manufacturer sought to exclude the expert's testimony. The trial court granted the motion and entered summary judgment for the manufacturer. The family appealed. The Court of Appeals examined the expert's testing in detail and found it unreliable. It noted that the expert, when asked if his methods were generally accepted in the scientific community, testified that he was a member of the scientific community, and he had created the test, and then he boldly claimed that his test "will pass muster." The Court noted that "The issue is not whether the expert's opinion about the source of the fire is correct, but rather whether the methodology he employed to reach that conclusion is reliable." It affirmed summary judgment for the manufacturer.

Cash v. LG Elecs., Inc., 342 Ga. App. 735, 804 S.E.2d 713 (2017)