

THE LIME STREET FIRE: ANOTHER PERSPECTIVE

By John J. Lentini, C.F.I., Applied Technical Services of Marietta, Georgia. A video tape describing the site inspection and test burn is available from the author. Article submitted by the author.

"Each and every count of the indictment filed herein is predicated on an assumption that arson was committed on October 15, 1990. If arson cannot be demonstrated, each count of the indictment must fail and is subject to a motion to dismiss."

The above pleading was filed shortly after the Public Defender assigned to the Lime Street fire case learned that the State's chemical evidence, which initially indicated that gasoline was present on the suspect's clothing and shoes, was seriously flawed. This paragraph lies at the heart of many similar motions filed by attorneys representing defendants in arson/homicide cases. If this fire was set using flammable liquids, the suspect was obviously guilty. The question that began to bother the prosecutors assigned to the case was whether or not they could prove beyond a reasonable doubt that the fire was, in fact, of incendiary origin (The conclusion by the State's chemist were reviewed by ten nationally respected forensic scientists. The results were unanimous: his conclusions were erroneous).

Because some of their most compelling evidence turned out to be not so convincing, the prosecutors decided over the next month to seek a second opinion on the fire scene inspection, in order to more carefully assess the chances of proving the case. The author was honored to be selected for this assignment.

The first and most important impression conveyed to the author by the prosecutors, Frank Ashton and George Bateh, was that they did not want to bring a bad case to trial. This was really refreshing. How many of us have dealt with attorneys who wanted anything other than to win at all costs? It was clear right away that the defendant had a knowledgeable attorney, and that proving this case would be very hard.

We knew that defense counsel had been in touch with the defense attorneys in two Arizona "flashover" cases, and that the "flashover defense" would be raised. When the suggestion was made that we bring in yet another outside expert to look at this aspect of the case, the prosecutors' answer was, "do whatever it takes." Thus it happened that we were able to obtain the services of John DeHaan to assist in the investigation. The California Department of Justice had allowed Mr. DeHaan to work on the Arizona cases, and we were honored to have his expertise in this investigation.

THE EVIDENCE

The initial review of Captain Powell's report led to the five conclusions outlined in his article, "Testimony Tested by Fire." We knew, however, that these conclusions would not go unchallenged, and had already been challenged by the expert hired by defense counsel. We still had an overall burn pattern which tended to contradict the defendant's description of events. The burn patterns appeared to place the origin in the hallway and at the living room doorway, rather than on the other side of the living room where the couch was located. There were burn patterns on the ceiling which corresponded to burn patterns on the floor, and there was a "classic" flammable liquid pour pattern leading from the doorway of the living room toward the stairs and the front door. The firemen's account of burning in the hallway was pretty much what we would expect if there had been gasoline burning on the floor. Finally, the carbon monoxide levels indicated that the victims were attacked by a very energetic fire, and except for one of the victims who was protected from the flames, all died from heat and/or burns, rather than smoke inhalation. Putting all of this evidence together, Captain Powell's initial call that this was an arson fire seemed pretty reasonable.

The case was not without its problems, however. Much of what the suspect said was supported by the physical evidence. For instance, pans which apparently had water in them during the fire were found in the debris from the hallway. The remains of a garden hose which the defendant stated he had used in an attempt to suppress the fire were found on the front porch. We had a difficult time in developing a scenario which included fire fighting on the part of the defendant. To this day, a credible arson scenario supported by any evidence which includes fire fighting on the defendant's part has not been put forward.

The gasoline found in the suspect's non-functional car was in a plastic Clorox jug. The question arises, "Why did he put it back in his car?" The jug was not empty, and the question arises, "Why did he not use all the gasoline?" The handling of this jug containing gasoline prior to its being taken into custody also presented problems. There was a possibility that the officer who seized it would testify that it was somewhere between one-quarter and three-quarters full. Obviously, the State would have argued that three quarts were used, while the defense would have argued that only one quart could have been missing.

Despite the fact that the defendant was not known for his industriousness, his claim that he had cut the grass on the day prior to the fire had some credibility, as there were piles of freshly cut grass in the yard. There were no discernible differences between the gasoline from the lawnmower and the gasoline from the jug.

The "classic" pour pattern on the hallway floor did not fit the context of this fire. There is no doubt that at some point a flashover did occur in the hallway, and such a flashover would have destroyed all of the paint on the floor. The intact condition of the paint on either side of the "trail" therefore suggested that the paint was somehow protected from the fire, and this protection could account for the trail. Captain Powell's initial theory was that the trail was caused by a flammable liquid burning on the floor, and that the paint survived intact simply because it did not have gasoline on it. Laboratory analysis of debris from the unburned painted surface, however, revealed the presence of plastics and fibers consistent with clothing having been present on the floor. It was known that the suspect's sister-in-law had moved into the house on the weekend prior to the fire and had brought all of her worldly possessions, including bags of clothing, with her. It is likely, therefore, that the pattern on the floor was in fact caused by a trail being cleared through clothing which protected either side.

There was going to be testimony from State's witnesses that the suspect was very calm when interviewed, but local television stations captured him in a clearly agitated state while the fire was going on. It was also anticipated that there would be testimony that the suspect did not smell like smoke, thus refuting his assertions that he had helped to fight the fire. When we went to examine the suspect's clothing for smoke particles, however, we determined that the clothing had been scorched during the chemical analysis, so this evidence could not be confirmed (It is doubtful that the testimony of a person at a fire scene regarding the absence of a smoke smell on a particular individual would be very credible anyway).

Another aspect of the State's case was the suspect's failure to call for help. Later investigation revealed that he had jumped in front of a moving car to get someone to call the Fire Department. The identity of the driver of the car was known to defense counsel, so the argument about not calling for help was not going to stand.

THE TEST FIRE

Taking into account these and other problems with the case, it was the determination of the prosecutors that "something else" was needed to make the case more convincing. The "something else" turned out to be a demonstration on a nearly identical house, which was next door to the suspect's house, had an identical floor plan, and was apparently built at the same time by the same builder. It was our hope that we would be able to use the results of the test burn, along with the evidence already developed, to allow us to say, to a reasonable degree of scientific certainty, that the fire was intentionally set, and that the evidence remaining after the fire was not consistent with the suspect's story.

It is always risky to run tests, especially after a case has been laid out, as this one was. We informed the prosecutors of the risks, and they indicated a willingness to take them (As to the costs of this investigation, they were inconsequential

compared to what it takes for the State to finally resolve a death penalty case). In any reconstruction, the party for whom the test results are unfavorable will attack the test methodology. That happened in this case.

We, of course, had the option of not running the test, but this was not considered to be viable. Just imagine the line of cross-examination by the defense attorney who found out that we could have run a test but declined to do so. The case was not strong enough to take to a jury as it was, and "favorable" test results, showing that the defendant's description of events was not possible, would have made it possible to win the case.

The original scene was reconstructed as faithfully as possible (we knew that the defense attorney would attack any dissimilarities if the results hurt his client). We obtained a duplicate of the couch where the defendant said the fire started. We resurfaced the entire living room and hallway with the same 3/8" sheetrock found in the suspect's house. We carpeted with the same type of carpet, wallpapered the living room walls, and used curtains of similar type. Eyewitnesses were brought in to verify that our reconstruction in fact looked like the suspect's residence.

We set the fire on the couch to simulate a juvenile firesetter. No attempt at extinguishment was made, simply because of the number of variables involved. Every attempt was made to design the test so that discrepancies would favor the suspect's version of events. Otherwise, test results would probably not have been admissible as evidence. While we expected flashover to occur at some point, the general consensus was that it would take fifteen or twenty minutes, given the size of the room, the height of the ceiling, and the substantial amount of ventilation. We were wrong.

The living room went to flashover in 4 1/2 minutes, only 60-90 seconds after we surmised it would have been necessary to evacuate the living room and cease any fire fighting activities. There were firemen in the hallway outside the living room breathing fresh air only fifteen seconds before the fire flashed over and extended into the hallway. Additionally, the carbon monoxide levels at the victims' location did not go up more rapidly than the temperature. The smoke traveled with the fire, and the flashover scenario, as it turned out, was consistent with the low carbon monoxide levels found in the victims.

Had the victims been found in the room of origin, high carbon monoxide levels would likely have been present in their blood, since flashover generally occurs in rooms fully charged with smoke. Following this train of thought, it would be expected that victims of a flashover fire should demonstrate high CO levels. It turns out, however, that this assumption is not valid if the victims are not in the room of origin. Low CO levels in victims found in the room of origin would have been significant. The victims of the Lime Street fire had CO levels which were consistent with a rapidly spreading fire, no matter whether a flashover or gasoline fire.

As a result of the test fire, in the hall we observed a burn pattern which went all the way to floor level at the living room doorway. With only three minutes of active burning in the hallway, there was charring on the floor. Granted, this was fairly uniform charring at the early stages, but as a result of draft and ventilation it may not have remained so uniform had we let the fire burn longer.

It was the hope of the prosecution team that the test burn would support the conclusion that this was an intentionally set fire. By the time this "safe fire" had burned for seven minutes, however, it was clear that this was not going to be the case. One observer at the fire scene who walked by an open microphone on the video camera was heard to say, somewhere around five minutes into the fire, "That may prove the defendant's case!"

The prosecutors were present during the burn exercise, and shortly after it, called a halt to the legal proceedings which were scheduled to go on the following day, specifically, the author's deposition. Captain Powell had already been deposed on the case, and had testified in no uncertain terms regarding his opinions, as he has expressed in his article. The day after the test, however, when the prosecution team met, the State's lead witness stated, "I could not give the same deposition today that I gave two days ago." None of the other members of the prosecution team, including the author, were in favor of proceeding with the case. The charges were dropped a week later.

POST-INVESTIGATION RESULTS

While the investigation and test burn were very educational, it was perhaps more educational to watch the reaction of the fire investigation community to the dropping of this case. While many fire investigators, on viewing video tapes of the scene and the test burn, found a reason to question the conventional wisdom which we use daily in calling fire scenes, others have criticized the prosecutor's decision to drop the charges, and have criticized the methodology employed by the investigative team. This was to be expected. As was stated earlier, whichever side is hurt by the test results will criticize the methodology.

What has been particularly interesting about this case, however, is the extent to which some investigators will go in reading meaning into evidence which may or may not be actually there. A very interesting example occurred when a group of investigators was shown the "classic pour pattern" discussed earlier. Even conceding that the edges of the burn pattern were caused by the protection afforded by clothing or other materials on top of the floor, several investigators were able to look deep into the charred area and discern within it the subtle outlines of a "flammable liquid pour pattern". Even after having been instructed by the district attorney on the meaning of "reasonable doubt," and after hearing about all of the problems with the case, a substantial number of fire

investigators still thought that the suspect was guilty beyond a reasonable doubt.

This is the frame of mind which leads to wrongful convictions. Every one of us would agree that, in the American system of justice, a defendant is innocent until Proven guilty. Agreement would be less widespread, however, to the proposition that every fire is accidental until proven incendiary. In fact, the presumption of innocence of an individual and the presumption of accidental origin of a fire are exactly equivalent. If this fire was set, the suspect set it. All the State needed to do was prove beyond a reasonable doubt that this was an intentionally set fire, and they would have proven beyond a reasonable doubt that the suspect was guilty. This scenario has been played out on more than one occasion in the past. Ray Girdler was wrongly convicted in Arizona based on testimony that the fire in his house was intentionally set. Certainly, if it was intentionally set, Mr. Girdler set it, but the proof fell far short of "a reasonable degree of scientific certainty." Unfortunately, the jury which heard the case was unable to discern that fact.

In Pennsylvania, there is currently a man serving life in prison for killing his daughter, because the State's experts opined that he set eight or nine separate fires in a 1,000 square foot cabin using sixty gallons of fuel oil, none of which was detected in the laboratory. Low carbon monoxide levels in the victim convinced the State's investigator that he had a crime scene, rather than a fire scene, and everything he saw from that point on was "consistent" with arson. Again, the failure to presume a fire accidental robbed the defendant of his presumption of innocence.

When stories such as Ray Girdler's and Han Tak Lee's are told in the press, our profession as a whole is discredited. Making a few bad cases will probably result in a number of good cases not being fully prosecuted, or not resulting in convictions where appropriate and justified.

The suspect may well have set the fire, but the State was simply not able to prove it beyond a reasonable doubt. The evidence developed during the investigation indicated that the fire could just as easily have been caused by his four-year-old son playing with matches or a cigarette lighter. The suspect is not the type of person who arouses a lot of sympathy, and his wrongful imprisonment or execution might have been perceived as no great loss to the citizens of Florida. He was, nonetheless, entitled to his presumption of innocence, and his fire was equally entitled to a presumption of accidental origin.

Fire investigators who wish to second guess the prosecutor's decision based on only half of the evidence should keep in mind the final words in our code of ethics, "It is more important to protect the innocent than to convict the guilty." If you don't believe that, it's time to find another line of work.

