

MOTION FOR POST CONVICTION RELIEF

NEWLY DISCOVERED EVIDENCE DEMONSTRATES THAT THE FIRE INVESTIGATORS RELIED ON FLAWED ANALYSES IN DETERMINING THAT THE FIRE WAS ARSON

- 1) Mr. Xxx repeats and realleges as if fully set forth herein each and every allegation set forth above in paragraphs 1- 20, inclusive.
- 2) Pursuant to Gen. Stat. § *****, a defendant may, at any time after verdict, “by a motion for post conviction relief, raise the ground that evidence is available which was unknown or unavailable to the defendant at the time of trial, which could not with due diligence have been discovered or made available at that time, . . . and which has a direct and material bearing upon the defendant’s . . . guilt or innocence.”
- 3) To obtain a new trial on the basis of that new evidence, the defendant must establish that the evidence is competent, material and relevant and probably true; that due diligence was used and proper means were employed to procure the testimony at trial; the new evidence is not merely cumulative, and that it does not tend only to contradict a former witness or to impeach or discredit him/her; and the new evidence must be of such a nature as to show that on another trial a different result would have probably been reached.
- 4) In this case, significant new evidence exists, that, if presented in a new trial, a different result would undeniably likely be reached. Indeed, given this new evidence, the charge of arson would probably never have been filed.
- 5) In the investigation of Mr. Xxx’s claim of innocence, ‘*Innocence Organization A*’ sought the opinions of several prominent experts in fire investigation and analysis. Dr. Gerald Hurst, a world-recognized scientist and consultant in fire investigation and explosives, and Christopher and Eileen Wood, both certified fire and explosion investigators, agreed to conduct thorough assessments of the fire in the deceased’s house.
- 6) Drs. Hurst and Wood reviewed all of the available information, including the fire department investigative report, the deceased’s autopsy report, ATF lab report, a floor plan of the deceased’s house, and the trial testimony of fire department personnel on the scene.
- 7) As their reports make plain, since the time of the deceased’s death, the process of fire investigation has undergone profound and substantial change. Through extensive scientific experimentation and analysis, it has been determined and confirmed that the “art” of fire investigation, as practiced by virtually all fire investigators before 1992, and traditionally passed down from one fire investigator to another, was fundamentally wrong.

- 8) Current day scientific fire investigators widely criticize the old knowledge, methods, and procedures of fire investigators – that many of them embraced themselves at the time. The continuing developments in arson “science” have revealed that the beliefs and practices relied on by the fire investigators in Mr. Xxx’s case – both the fire department and ATF investigators – are scientifically invalid.
- 9) This new knowledge regarding fire investigation was unavailable at the time of Mr. Xxx’s trial, as all of the scientific development post-dated the 1991 direct appeal.
- 10) The National Fire Protection Association (“NFPA”) is the recognized authoritative body on the science of fire investigation in the United States. In response to a deep concern about the validity of arson investigations, the NFPA Technical Committee on Fire Investigations was formed in 1985, and, in 1992, published the first edition of the NFPA’s Standard 921, *Guide for Fire and Explosion Investigations*.

Footnote:

(In 1993, the NFPA published Standard 1033, which established the minimum qualifications for a fire investigator, including having and maintaining current knowledge of a range of subjects, including fire science, fire chemistry, thermodynamics, fire dynamics, fire investigation, and eight more related topic areas. Knowledge in these areas is the base, minimum knowledge required, according to the NFPA, to conduct professional, scientific, and reliable fire investigations. Given that there were no such requirements – or even recommendations – in the late 1980s, it is highly unlikely that any of the fire department investigators was even minimally qualified, according to the NFPA criteria.)

- 11) Although this standard was immediately adopted in the United Kingdom, it was not immediately embraced and accepted by the extant fire investigation community in the United States. It was not until 2000 that the US Department of Justice released its own research report – *Fire and Arson Scene Evidence: A Guide for Public Safety Personnel* – that identified NFPA 921 as the standard for determining the origin and cause of fires. In 2000, the International Association of Arson Investigators also endorsed the adoption of NFPA 921.
- 12) As discussed in the case background section above (¶¶ aa - bb), early in the investigation, the fire department sought assistance from the ATF, a practice that was not uncommon at the time. As the ATF reports reveal, ATF Agent Yyy became the fire investigator “in fact” in the case, with his analysis reportedly proving the fire was intentionally set and otherwise helping to identify Mr. Xxx as a plausible suspect and convict him. Despite his role, Agent Yyy was not called to testify at trial; a fire department Captain was the only fire investigator who testified.
- 13) Even if he had testified, however, Agent Yyy – a recognized “expert” and experienced fire investigator at the time – could not have been knowledgeable about the findings and understandings that true fire science would subsequently produce, because they had not yet been discovered. He, too, was relying on the now widely discredited beliefs and practices embraced by fire investigators at the time.

Footnote:

(Steve Carman, a former ATF Senior Special Agent and fire investigator, who now serves as an expert and consultant in fire science and investigation, has said that ATF agents were not provided scientific fire training until 1991, and that his paper regarding post-flashover fire behavior, published in 2005, was the first ever published by ATF.)

- 14) Today, using the scientifically verified understandings and “truths” of fire science, Drs. Hurst and Wood have both stated that, without question, the fire in this case was a “severe post-flashover” event. “Flashover” is the phenomenon in which the temperature at the ceiling in a room containing a burning object (e.g., a sofa, mattress, chair) reaches a level of approximately 1,100° F, causing all combustible contents of the room to spontaneously ignite at the same time. This process can take less than 5 minutes from the time that a flame first erupts on the initial burning object.
- 15) When flashover happened here, all combustible items in the southeast bedroom ignited
- 16) “Flashover” was not realized and understood until 1991, when renowned fire scientist John Lentini conducted his seminal experiment now commonly known as “the Lime Street fire.” (See John Lentini, “*Nightmare on Lime Street - How a ghastly Jacksonville fire forever changed arson science in America*”)
- 17) Ongoing research in “post-flashover” fires has resulted in a substantial change in the consensus views of the fire investigation community, including the following:
 - a. It is now known that post-flashover fires reach sufficiently high temperatures and radiation levels that they can mimic points of origin for conventional fires at places where the fire did not, in fact, originate.
 - b. It is now known that a fire investigator can no longer rely on the speed of the fire in a flashover fire, as Detective Zzz testified he did in this fire.
 - c. It is now known that post-flashover fires can eliminate the true point of origin and can reproduce typical signs of a conventional fire’s point of origin at other locations within a room where the fire, in fact, did not start.
 - d. It is now known that, in a post-flashover fire, even experienced fire investigators cannot accurately identify the fire’s point of origin; indeed, in a 2005 study, only 3 of 53 experienced investigators were able to accurately identify the quadrant of the room in which the post-flashover fire started – none correctly identified the point of origin.

Footnote:

(In the study, a furnished “test” room was set on fire at a single ignition point and allowed to achieve flashover. Approximately 3 minutes after reaching flashover, the fire was extinguished, after burning for a total of 7 minutes. Then 53 experienced fire investigators, who did not witness the fire, were tasked with inspecting the fire scene and determining in

which quadrant of the room the fire originated. The 53 investigators used the “traditional” methods, techniques, and teachings of fire inspection.)

- 18) The Hurst and Wood Reports also noted several areas in which the investigation in this case were inadequate and insupportable, even under then-current methods, techniques, and understandings. For example, relying on “negative corpus reasoning” to determine the cause of a fire, i.e., determining a fire is “incendiary” (was intentionally set) when no accidental cause was found. Such reasoning/analysis is strongly and specifically forbidden by NFPA921 and was, in fact, even proscribed by fire investigation protocols at the time of the investigation.
- 19) As with advances in forensic DNA testing and other areas of science, advances in the science of fire investigation are “newly discovered evidence.” The “materiality” of that new evidence is plain from, among other things, the Carman study that showed the total failure of the fire investigators using the former investigation methods in a post-flashover fire.
- 20) In this case, the State used flawed scientific methods no longer accepted in the fire investigation community and the resulting conclusion is no longer valid. Indeed, the new evidence is of “such a nature as to show that on another trial a different result would have probably been reached.” Mr. Xxx is therefore entitled to a new trial.