F25 The Intersection of Science, Standards, and the Law in Fire Litigation

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After attending this presentation, attendees will understand: (1) how scientific knowledge and methodologies are being embodied in consensus standards in fire investigations; (2) the legal issues that affect the admissibility of or the weight given to standards in court; and, (3) strategies to help lawyers and experts make optimal use of standards in a court case.

This presentation will impact the forensic science community by explaining the rules from the worlds of standards and the law necessary for lawyers, judges, and experts to make science matter in striving for justice in a litigation setting.

How many injustices result from faulty fire science admitted in court? No one knows; however, from what we know and can reasonably infer, this is a huge problem demanding serious attention. This presentation summarizes the nature of this problem, then explains why science-based documentary standards for fire investigations (such as those produced by the National Fire Protection Association and the American Society for Testing and Materials (ASTM)) are an important part of the solution; however, making effective use of such standards can be complicated by legal rules that limit their admissibility in court. The first step in overcoming this hurdle is appreciating the relationships among: (1) fire science and reliable methodologies; (2) consensus standards within the fire investigation field; and, (3) legal rules relating to the admissibility of standards in court. This presentation examines the intersection of science, standards, and the law so the significance of relevant standards are fully appreciated and can be better utilized by all concerned.

First, injustices in fire cases will be discussed. In recent times, scores of people convicted of serious fire crimes, such as murder or arson, have been exonerated because the conviction was based, at least in part, on discredited methods or disproven scientific assumptions. The *National Registry of Exonerations* details such exonerations, described as "cases in which a person was wrongly convicted of a crime and later cleared of all the charges based on new evidence of innocence."[1] This registry documents dozens of cases of erroneous murder or arson convictions based, at least in part, on "false or misleading forensic evidence" from fire investigations.[2] Another factor in several cases was inadequate assistance of counsel, which was caused by counsel's failure to seek or adequately utilize expert assistance or well-known standards, for example.

As horrendous as it is that faulty fire science has played a role in unjustly convicting so many people, these cases represent the mere tip of the iceberg. They do not account for criminal cases in which defendants are charged or tried based on faulty fire science or whose cases are still in the long, arduous processes of post-conviction relief. Nor do these numbers include those who may have been convicted of (or convinced to plead guilty to) fire crimes based on disproven science or unreliable methodologies — cases which do not rise to the seriousness that merit the attention of innocence projects.

Last, but not least, are the injustices that have occurred in civil cases. The same fire investigation science and methodologies are applied in both civil and criminal cases. There is no way of tracking how many bad decisions in civil cases result from disproven fire science or unreliable methodologies.

This presentation describes the development of industry standards relevant to fire investigations that promote the knowledge and methods of science. Next, the legal rules relating to the use of standards in court are summarized, including legal hurdles to admissibility. Attendees are then introduced to the hierarchy of the standards world and the rules governing standards development processes relevant to the admissibility or weight a court will give standards that are proffered. Finally, attendees are shown how to correlate the information regarding the interplay between science and standards to the legal rules of admissibility, so that science-based standards can be more fully employed in the interests of justice.

Reference(s):

1. *The National Registry of Exonerations – Mission.* http://www.law.umich.edu/special/exoneration/Pages/mission.aspx.
2. *The National Registry of Exonerations – Glossary.* http://www.law.umich.edu/special/exoneration/Pages/glossary.aspx#A.

Fire Investigation, Consensus Standards, NFPA Standards

*Presenting Author