NFPA 921 AND NFPA 1033 IN COURT

By Terry-Dawn Hewitt, Esq. &
Wayne J. McKenna, Esq.
October 2008

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1. Introduction[i]

Every fire and explosion investigator must be prepared to appear as a witness in court. Some will be lay or fact witnesses, whose testimony is limited to facts based on their perceptions. For example, lay witnesses may testify about evidence they saw, heard, smelled, or collected at a fire or explosion scene. This might include areas of heavy fire damage observed, rug samples collected, or the smell of gasoline noticed on the clothing of a bystander. However, lay witnesses are not to render any opinions or conclusions from those facts based on scientific, technical, or other specialized knowledge. An investigator not recognized as an expert by the court in a given case may not explain to a jury the significance of the fire patterns in determining the progression of the fire or the area of fire origin.

Other investigators will strive to be qualified as expert witnesses. Expert witnesses are entitled to testify more broadly. They may testify about their own observations at a fire scene or elsewhere and explain their relevant experiences. More importantly, they may also testify as to their opinions about issues in a given case that fall within their field of expertise. Unless a fire is small and contained and the origin and cause is obvious, or there is a reliable eye witness who saw how it started, the testimony of one or more experts in fire and explosion investigations is often critical to the successful outcome of a court case.

Whether an investigator expects to testify as a lay witness or an expert, and regardless of whether one is in the public or the private sector, one document has become essential to either challenge or support the evidence of fire and explosion investigators across America. That document is NFPA 921 *Guide for Fire and Explosion Investigations* ("NFPA 921"). Its companion, NFPA 1033 *Standard for Professional Qualifications for Fire Investigator* ("NFPA 1033") also has significant potential to become a vital tool in court.

This paper summarizes the courtroom use of NFPA 921 and NFPA 1033. For fire or explosion investigators and experts, it is important to understand the use of these two documents in litigation. This understanding is also critical for attorneys handling civil or criminal fire cases.

To begin this paper takes a brief look at some statistics that reflect the surprising frequency that NFPA 921 has been cited by courts across America. Next, is a summary of the purpose and scope of NFPA 921 and NFPA 1033 and a description of the way these documents inter-relate. While NFPA 1033 lags behind its companion publication in court case citations, the authors outline the reason why they expect its importance in litigation to grow. Finally, the paper outlines the various ways each of these documents impact court cases, which apply to both civil and criminal matters.

1.1. A Note About References

This paper contains conclusions reached after years of research and legal analysis by the authors culminating in a lengthy and tightly referenced work, *NFPA 921 In Court: A Fire Litigation Handbook for Investigators & Attorneys*.[ii] . The statements made here summarize the main conclusions from their *Handbook*. The authors have generally avoided using extensive footnotes in this paper except for direct quotes and the citation for referenced cases. These referenced cases are not required reading for the CFITrainer.net module this paper supplements.

Note also that this paper is relevant for both fire and explosion investigations. For brevity, the authors use the term "fire investigations" intending to include explosions.

1.2. Statistics: NFPA 921 and NFPA 1033 Cited in Reported Court Decisions

When the second edition of NFPA 921 was published in 1995, there was not a single reported case in America giving it specific mention. By the time the sixth edition hit the streets in 2008, NFPA 921 appeared in approximately 80 reported cases in varying legal contexts. This is an amazing statistic.

NFPA 921 is not a legal book. Many in the fire investigation community recognize it as a reference guide and use it as a training tool. It is common for experts to rely on leading reference publications in their reports or testimony in virtually every field of expertise. It is much less common for judges to quote such books in their reasons for decisions. For the decision of an appellate or supreme court to turn on a publication of this nature is even more unusual.

With this in mind, consider the import of the growing use of NFPA 921 in court from the following data compiled as of October 2008:

- Approximately 80 reported cases in the United States from state and federal jurisdictions specifically mention NFPA 921;
- State appellate court decisions account for 16 of these decisions;
- Four cases are from state supreme courts (the highest court in these states);
- In the federal courts, cases making specific reference to NFPA 921 include decisions of the 2nd Circuit, the 4th Circuit, the 7th Circuit, the 8th Circuit, and the 11th Circuit;
- One U.S. Court of Appeals decision from the 4th Circuit was appealed to the United States Supreme Court, but the Petition for Writ of Certiorari was denied;
- Most of the decisions resulted not from trials, but from preliminary court motions such as motions to qualify an expert or exclude expert testimony;
- Scores of other cases from state and federal courts did not expressly mention NFPA 921, but relied on cases that do mention NFPA 921;
- Over 1000 motions, briefs, and expert reports in both state and federal case place specific reliance on NFPA 921;
- A large majority of states in America have reported decisions citing NFPA 921 from the state or federal level. Even in states where no case yet reported cites NFPA 921, a review of court filings shows that it is being cited by attorneys in legal briefs and by experts in reports and testimony.

Considering that references by experts to authoritative texts rarely find their way into court decisions, these figures are extraordinary.

In evaluating the meaning of this data, a number of factors are relevant. For example, the vast majority of civil and criminal cases do not go to trial. Further, only a small percentage of decisions made by courts result in written reasons. Legal reporting services like Westlaw and Lexis Nexis pick up only a few of these written decisions and publish them in law reports and legal databases. Remember, too, that juries render verdicts, not written decisions. Thus, these statistics cannot reflect the influence that expert testimony based on NFPA 921 has had on juries. Therefore, notwithstanding the great volume of court decisions and jury verdicts rendered in this country, very few are reported and readily available to track.

Because of all of these factors, no one can fully trace the full extent of NFPA 921's impact in court in the United States. However, from the case reports available, it is clear that NFPA 921 is making its mark in fire litigation. The following sections of this paper provide an overview of the variety of uses experts and attorneys are making of NFPA 921 in civil and criminal litigation.

NFPA 1033 has been slower to make its mark in courtrooms across America. Only one reported case expressly cites the NFPA 1033 Standard. However, when one searches the expert reports and court documents that are available online, one can see that experts and attorneys are increasingly relying on this document.

Probably most significant in the future court use of NFPA 1033 are the important changes in the 2009 edition. This new edition significantly raises the minimum qualifications required for fire investigators from the requirements in earlier editions. The authors predict that once experts and attorneys fully realize the potential impact of these changes, NFPA 1033 will begin to feature more prominently in fire litigation. When combined with NFPA 921, NFPA 1033 has the makings of an effective device to test if a person is adequately qualified to testify as an expert witness at trial.

2. Defining NFPA 921, NFPA 1033 and Their Inter-Relationship

To understand the ever-growing popularity of NFPA 921 and NFPA 1033 in court, it is important first to recognize key aspects of each document, including their purpose and scope, their relationship to each other, and their development process. First, a brief look at purpose and scope of NFPA 921 and NFPA 1033. Then, a brief description of and how these two documents inter-relate. This information provides the context for their use in court.

NFPA 921 was developed "as a model for the advancement and practice of fire and explosion investigation, fire science, technology and methodology."[iii] Its purpose is to "establish guidelines and recommendations for the safe and systematic investigation or analysis of fire and explosion incidents,"[iv] for both public sector and private sector investigators.[v] Its scope is, ". . . to assist individuals who are charged with the responsibility of investigating and analyzing fire and explosion incidents and rendering opinions as to the origin, cause, responsibility, or prevention of such incidents."[vi]

A lengthy document, NFPA 921 covers a myriad of topics relating to fire and explosion investigations. Topics range from the basic methodology for the conduct of investigations, employing the scientific method, to specialty topics such as building systems, electricity and fire, building fuel gas systems, appliances, and motor vehicle fires, to name a few. NFPA 921 references numerous other industry standards, of which over 100 are part of its guidelines.[vii] Importantly, NFPA 921 recognizes every incident is different and acknowledges that it is not designed to cover all necessary components of an investigation. However, NFPA 921 does say, "The scientific method [in the Basic Methodology chapter] should be applied in every instance."[viii]

NFPA 921 contains no mandatory requirements, and does not tell investigators what knowledge they "shall" maintain, nor what procedures and methods they "must" follow. However, arguably the knowledge, procedures, and methods rise to the level of a mandatory requirement when read together with NFPA 1033 for the reasons stated below.

NFPA 1033 is the *Standard for Professional Qualifications for Fire Investigator*. Its scope is to "identify the professional level of job performance requirements [JPRs] for fire investigators."[ix] Its stated purpose is to "specify the minimum job performance requirements for service as a fire investigator in both the private and public sectors.[x] [*Emphasis added.*] The JPRs in NFPA 1033 have four essential features:[xi]

- ✓ They identify each task to be performed in the job of fire investigator;
- ✓ They define the tools, equipment, or materials that must be provided to successfully complete each task;
- ✓ They contain evaluation parameters and/or performance outcomes which define how well one must perform each task, and;
- ✓ They contain "requisite knowledge and skills" for each task, which are the foundation for task performance.

The relationship between NFPA 1033 and NFPA 921 is such that NFPA 1033 specifies what minimum level of skills or knowledge are mandatory for each task involved in the job of a fire investigator. NFPA 921 either describes the skills or contains the knowledge component for the JPRs set forth in NFPA 1033. Almost every knowledge requirement addressed by NFPA 1033 can be found in one or more sections of NFPA 921. Further, NFPA 1033[xii] expressly cross-references NFPA 921 as containing the basic methodology for fire investigations, which is the scientific method.

Both documents are publications of the National Fire Protection Association ("NFPA"). NFPA 921 and NFPA 1033 are both developed and revised through a highly regulated codes and standards development process. They are two of over 300 documents that constitute NFPA's *Fire Codes*.

By NFPA's definitions, NFPA 921 is a "Guide" while NFPA 1033 is a "Standard." In the standards-making world this essentially means that the main text of NFPA 1033 is written in mandatory language, using the word "shall" for its requirements. By contrast, as a "guide," NFPA 921 is informative in nature, couched in non-mandatory language. It contains information, advice, and recommendations much like other reference books. What distinguishes it from other textbooks or reference publications is the method through which it was created and undergoes ongoing review and revision.

While defined by NFPA as a "guide" NFPA 921 is approved by the American National Standards Institute (ANSI) as an ANSI standard. The same is true of NFPA 1033. This means they are developed and revised through a process designed to facilitate and publish a consensus of the fire investigation community's understanding of the topics they address. A balanced group of experts is charged with the responsibility of overseeing each document. The open-consensus building process that is responsible for creating these documents is one of the reasons experts, attorneys, and judges consider them authoritative in court, as described later in this paper.

A new edition of NFPA 921 has been published approximately every three years since its initial publication in 1992. The 2008 edition represents the growing knowledge base underlying fire and explosion investigations. Every edition has seen new chapters added and revisions, sometimes substantial, to pre-existing chapters.

NFPA 1033 has been on a five-year revision cycle since its first publication in 1998. While the impact of the most recent, 2009 edition has yet to be tested in court, the authors predict that it will soon begin to play a more important role in the qualification process of expert witnesses for trial. The reason for this prediction is that in earlier editions, the requirements for a fire investigator to be qualified were minimal. A person had to be at least 18 years of age with a high school diploma or equivalent. An investigator was also required to remain current with investigation methodology, fire protection technology, and code requirements.[xiii]

In the 2009 edition, the following mandatory requirement was added:

> 1.3.8 The investigator shall have and maintain at a minimum an up-to-date basic knowledge of the following topics beyond the high school level at a post-secondary education level:
>
> (1) Fire Science
> (2) Fire Chemistry
> (3) Thermodynamics
> (4) Thermometry
> (5) Fire dynamics
> (6) Explosion dynamics
> (7) Computer fire modeling
> (8) Fire investigation
> (9) Fire analysis
> (10) Fire investigation methodology
> (11) Fire investigation technology
> (12) Hazardous materials
> (13) Failure analysis and analytical tools.

NFPA 1033 goes on to say that such "basic up-to-date information on these topics can be found in the current edition of NFPA 921 *Guide for Fire & Explosion Investigations.*"[xiv]

In conclusion, NFPA 1033 and NFPA 921 work in concert. NFPA 1033 lays out the minimum qualifications for a fire investigator, while NFPA 921 contains the basic knowledge base and methodologies required to comply with the NFPA 1033 requirements. The standards making process that regulates their ongoing development adds to their reliability. The next sections of this paper canvas the impact of these documents in a courtroom setting.

3. Foundations for Using NFPA 921 and NFPA 1033 in Court

Experts and attorneys can employ NFPA 921 and NFPA 1033 in a number of different legal contexts. Some of the legal rules involved are complex. There are also differences in the relevant legal rules among the numerous jurisdictions in the United States. Further, these legal rules often change over time. It is therefore difficult to be brief, yet thorough, in explaining the many ways one may use these documents in litigation. The following legal principles summarize the current law in the federal courts, except where otherwise stated. Most states have similar rules. One should check with an attorney in the jurisdiction where a given case is filed to check on the relevant rules in a given case.

3.1. Expert Evidence

The general rule is that a witness may testify as to the facts of which he or she has personal knowledge, but may not offer an opinion. A person may give evidence covering one's perception of the relevant events, but not the factual inferences to be made. This is so because it is the role of the judge or jury to draw inferences from facts.

Certain exceptions to this rule have unfolded over time. In situations where fact and inference have become intertwined, the law allows a lay person who is not an expert to testify as to his or her opinion. Other exceptions to the rule against opinion evidence include the identification of persons, handwriting, drunkenness, or speed.

One exception to the rule against a witness giving opinion evidence relates to the role of the expert witness. The rationale behind allowing experts to give opinion evidence is that it is sometimes necessary, due the technical nature of the facts in issue, to have someone furnish the court with scientific, technical, or specialized information which is outside of the common knowledge of the judge or jury, but which is necessary to interpret those facts.

Though the law varies among jurisdictions, essentially, the following tests determine the admissibility of expert evidence:

(1) The evidence must be relevant (*Federal Rules of Evidence ("FRE") 401* and *402* or the state equivalent).

(2) Even relevant evidence will be excluded if its probative value is outweighed by a danger of unfair prejudice, that it might confuse or mislead the jury, or it is duplicative or a waste of time (*FRE 403* or the state equivalent).

(3) The expert must be qualified as an expert in a matter that fits an issue in the case (*FRE 702* or the state equivalent).

(4) The issue must fall within the witness' area of expertise.

(5) The evidence given is outside the common stock of knowledge.

(6) The opinion may not be based on a question of mixed fact and law.

(7) Most states and the federal court require the opinion to be reliable, though the tests for determining reliability differ among jurisdictions.

The fourth and seventh tests, above, relating to an expert's qualifications and the reliability of an expert's opinion are particularly important in the context of NFPA 921 and NFPA 1033. To appreciate the current state of the law relating to expert qualifications and reliability of expert opinions, it is necessary to briefly review the evolution of the law surrounding two key cases known as the *Frye* decision and the *Daubert* decision.

3.2. *Daubert* & *Frye* – Admissibility of Expert Opinion Evidence

The body of law governing the admissibility of expert evidence has grown exponentially since the decision in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*[xv] marked a turning point in 1993. In federal court, before *Daubert*, admissibility of expert evidence turned on qualifying an expert. The rule governing an expert's qualifications is *Federal Rule of Evidence* 702, which prior to *Daubert*, provided:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise.

To be admissible, expert testimony based on novel scientific theories or techniques had to pass a test that came from a 1923 federal appellate court decision in *Frye v. United States*, known as the *Frye* "general acceptance" test. Pursuant to the *Frye* test, evidence was necessary to show that the principle or technique on which the opinion was based "was sufficiently established to have gained general acceptance in the particular field in which it belongs."[xvi]

Overruling *Frye*, the *Daubert* decision propounded several guiding principles:

- The trial judge is a gatekeeper to determine admissibility of expert evidence based on a two-part inquiry consisting of an examination into 1) the reliability, and 2) the relevance of the evidence (the "fit test").

- The "fit test or helpfulness standard "requires a valid scientific connection to the pertinent inquiry as a precondition of admissibility."[xvii] In other words, a showing that the expert's reasoning or methodology can properly be applied to the facts of the particular case. The opinion must be relevant in that it "fits" the facts of the case.

- The admissibility inquiry is a flexible one. This means that a rigid set of factors does not bind the trial judge's discretion as gatekeeper in evaluating the admissibility of an expert's testimony.

- *Federal Rule of Evidence* 702 applies to "scientific knowledge," so an inference or assertion must be derived from the scientific method.

- Finally, with respect to the trial judge's inquiry into the reliability of the evidence, the Court went on to make a non-definitive list of the types of factors a trial judge might want to consider in making the determination of the reliability of the scientific testimony.[xviii] Factors include, but are not limited to the following:[xix]

  (1) Whether or not a theory or technique has been or can be tested, and if the hypothesis underlying the theory or technique can be falsified.

  (2) "Whether the theory or technique has been subjected to peer review or publication."

  (3) Whether the theory or technique has a known or potential rate of error.

  (4) "The existence and maintenance of standards controlling the technique's operation."

  (5) Whether or not there has been general acceptance of the theory or technique in the relevant scientific community.

The Court noted that the focus in determining relevancy and reliability of expert evidence "must be solely on principles and methodology, not on the conclusions they generate."[xx] The Court also made it clear that this decision set out the gate keeping function for all scientific evidence, not just novel or unconventional scientific theories.[xxi] Later, the Supreme Court in the *Kumho Tire Company, Ltd. v. Carmichael*,[xxii] determined that Rule 702 and the *Daubert* tests apply to technical as well as scientific knowledge.

Because of the *Daubert* decision, FRE Rule 702 was amended in 2000 to add the portion shown in italics, below:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, *if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.*

While *Daubert* initially applied to federal cases or those applying the *Federal Rules of Evidence*, over time it has had a profound influence on courts and lawmakers across America. The majority of states have followed *Daubert*, or adopted similar reliability tests at least for some types of expert evidence. Other states still follow *Frye* or a modified *Frye* general acceptance test. In some jurisdictions, the state equivalent of the *Frye* test only applies to scientific or novel scientific evidence. While *Daubert* challenges to the admissibility of expert evidence have become prevalent, a search of the reported cases before and after the *Daubert* decision would suggest an increase in challenges to the admissibility of expert evidence even in *Frye* states.

Now, more than a decade after the changes brought about by *Daubert*, the current state of the practice in fire litigation is as follows.

- ✓ Experts still need to be qualified, but probably because of an increase in the number of challenges to the admissibility of their evidence under *Daubert*,

there appears to be more challenges to the qualification of fire experts than there were before the early 1990s.

- ✓ The expert evidence must still pass the tests under *Federal Rules of Evidence* 401, 402, and 403 or the state equivalents, which in essence, state that irrelevant evidence is not admissible, and relevant evidence is admissible unless it is unduly prejudicial, misleading to the jury, or a waste of time.

- ✓ The big change is that now, expert evidence in fire cases are routinely challenged under *Daubert* in jurisdictions where that decision or a similar ruling applies. Even in states that still operate under the *Frye* general acceptance test or something similar, the admissibility of expert evidence is more often disputed than before *Daubert*.

The *Daubert* decision was rendered in 1993, within a year of the first edition of NFPA 921. In 1995, the testimony of a well-qualified, highly experienced fire investigator who had testified on numerous occasions as an expert in fire cause determination was challenged using the *Daubert* reliability factors. The challenge was framed around a cross-examination of the expert based on NFPA 921. The case involved a small house fire that the expert had determined was incendiary. In cross-examination, the expert acknowledged that he was relying on fire science in coming to his conclusions in this case, and had employed the scientific method, but he could not articulate the scientific method when asked. He further admitted that he had not examined key physical evidence, nor had he conducted laboratory testing to verify his conclusion.

The expert's evidence was excluded at trial and the trial court's decision was ultimately upheld on appeal. This case, *Michigan Millers Mutual Insurance Corp. v. Benfield*[xxiii] became notorious among fire investigators. It made both attorneys and investigators keenly aware of how NFPA 921 could be used in court to contest the reliability of an expert's opinion under the *Daubert* decision.

Since the *Benfield* decision, NFPA 921 has become a popular tool of fire investigators and attorneys in the federal courts and those state courts that follow *Daubert.* NFPA 921 has been used in untold numbers of cases to evaluate if a fire expert's opinion is reliable under the *Daubert* factors. Briefly, here are some ways that NFPA 921 is relevant to some of the *Daubert* factors:

(1) **Testing:** Can the fire expert's theory or technique be tested? In the "Basic Methodology" chapter, NFPA 921 describes cognitive testing as part of the scientific method. Further, a number of situations where tests are available and may be conducted are described. An investigator can use the NFPA 921 recommendations to establish address this *Daubert* factor. Conversely, where NFPA 921 outlines tests that could have been conducted but were not, it can be used to contest the reliability of an expert's conclusions.

(2) **Peer Review and Publication:** Has the theory or technique been subjected to peer review or publication? It is a strong argument to suggest that the standards

development process through which NFPA 921 was developed and is a form of peer review and publication. Therefore, an expert that follows NFPA 921 is applying a peer reviewed and published methodologies, theories, and techniques. For example, in *Travelers Property & Casualty Corp. v. General Electric Co.*[xxiv], the court called NFPA 921 "a peer reviewed and generally accepted standard in the fire investigation community."

(3) **Standards:** Are standards existing and maintained controlling the technique's operation? Again, the standards-development process underlying the creation of NFPA 921 comes into play. NFPA 921 is an ANSI standard. In an oft-quoted case, *McCoy v. Whirlpool*[xxv], the court said that NFPA 921 is the "gold standard" for fire investigations and went on to note, "its testing methodologies are well known in the fire investigation community and to the courts."

(4) **General Acceptance:** Has there been there has been general acceptance of the theory or technique in the relevant scientific community? There is a significant consensus building aspect in the standards-development process utilized to develop NFPA 921. This aspect lends itself to establishing that such documents represent the general consensus of the fire investigation community and are therefore generally accepted. See the quote from *Travelers Property & Casualty Corp. v. General Electric Co.*, above.

3.3. Expert Qualifications

In the federal courts and most of the state courts, a person's qualifications to testify as an expert will depend on their knowledge, skill, experience, training, or education. Sometimes an opposing attorney will stipulate to an expert's qualifications. At other times, the opposing attorney will challenge a witness' qualifications. Both NFPA 921 and NFPA 1033 are available to help to establish a witness' qualifications or to challenge them.

For example, NFPA 921 and NFPA 1033 were both used, though unsuccessfully, to challenge the qualifications of an expert to testify in *McCoy v. Whirlpool, Corp.*[xxvi] In the *McCoy* case, one of the grounds for the challenge to the expert's qualifications was that he failed specifically to mention either NFPA 921 or NFPA 1033 in his report. Interestingly, the expert was a member of the Technical Committee responsible for NFPA 921 and was able to substantiate his opinions relying on methodologies recognized by NFPA 921, without specifically making mention of this document. The challenge to this expert's qualifications was unsuccessful and the court ruled that the expert was qualified to testify at trial.

As mentioned earlier, the authors expect that the changes in the 2009 edition of NFPA 1033 will invite more use of this document in court to evaluate the sufficiency of an expert's qualifications. NFPA 921 is already being employed to do this.

3.4. Credibility and Weight of Expert Testimony

Even once an expert has been qualified and it is determined that his or her evidence is sufficiently reliable to be admissible at trial, the potential use of NFPA 1033 and NFPA 921 is not over. Both documents are effective tools at trial to support an expert's opinion or to challenge the credibility or weight of the opinion through cross-examination. Case decisions demonstrate that NFPA 921 has become a popular tool of cross-examination.

The extent to which an authoritative publication can be used in an expert's direct or cross-examination will depend on the law governing the use of "learned treatises" in the particular jurisdiction where the case is heard. The process that regulates the creation and revision of NFPA 921, along with the expertise of the Technical Committee members responsible for the document, can be used to support its admissibility as a learned treatise pursuant to *Federal Rule of Evidence* 803 (18), or equivalent rules in various states. While a review of the law surrounding the use of learned treatises in court is beyond the scope of this paper, NFPA 921 is used frequently as a learned treatise in depositions or at trial, often to cross-examine an expert.

For example, in *B. Bennett Manufacturing Co., Inc. v. South Carolina Insurance Co.*[xxvii] NFPA 921 was used to cross-examine experts on the weight of their evidence at trial. In that decision an insurer denied coverage, alleging arson by the insured plaintiff. The expert opinion that the fire was caused by an accelerant turned on the interpretation of fire patterns, spalling, and bent metal. The insurer's expert was challenged on cross-examination using the information in NFPA 921 respecting his conclusions concerning these indicators at the fire scene. The result, as observed by the appeal court, was to present the jury with a theory that the fire was caused by something other than the use of an accelerant, which could explain the investigator's findings at the fire scene.

3.5. Conclusion

The *Daubert* decision has helped to popularize NFPA 921 as a tool to support or challenge the reliability and qualifications of expert testimony. This is true in both civil and criminal cases in the federal courts and in state courts that follow *Daubert*. Even in *Frye* states, NFPA 921 is well suited to establishing that an expert who follows the scientific method and its other recommendations is following generally accepted theories and methodologies.

The use of NFPA 921 continues to spread. It operates not only to help determine whether an expert's evidence is admissible, but also to test the weight and credibility of the evidence. Nor is its use confined to dealing with expert witnesses. To the extent that NFPA 921 points to data or facts that are relevant in a fire investigation, it can be effective in testing the thoroughness of an investigation. Therefore, fire investigators who testify not as experts, but as lay witnesses are subject to scrutiny under the guidelines of NFPA 921 to determine if the evidence they collected and documented from a fire scene or other sources is sufficient.

NFPA 1033, by its nature, has more limited uses in court than NFPA 921, but it is still powerful. The authors expect that with the increased minimum requirements NFPA 1033 has imposed on fire investigators in the 2009 edition, it will be increasingly utilized to measure the qualifications of investigators whether they are testifying as experts or lay witnesses.

4. Practical Tips for Using NFPA 921 & NFPA 1033 in Court

Examination and cross-examination on an expert's use of authoritative publications like NFPA 921 or NFPA 1033 is a critical part of forceful advocacy through expert testimony. This is true whether the publications are used in a pre-trial motion to test an expert's qualifications or the reliability of an expert's opinion, or at trial to test the credibility and weight of testimony. The following points contain some practical advice respecting the use of NFPA 921 and NFPA 1033 for fire investigators and other experts who become involved in fire litigation:

- ✓ Purchase your own copy of NFPA 921 and NFPA 1033 and new editions as they are issued.
- ✓ Having obtained NFPA 921 and NFPA 1033 READ THEM! Thoroughly. And then read them again, and again, and yet again. Also, read the parts that do not apply to you, as you may be called upon to explain what does not apply and why not.
- ✓ Dog-ear them, underline them, colour code them, tab them. Do whatever you must do to develop a working knowledge of what these two documents contain. Particularly with NFPA 921, if called upon to do so, you want to be able to justify the way in which you use NFPA 921 or why you did not use parts of it in a particular case.
- ✓ You may want to maintain a second copy of each of these documents that are unmarked if you need to take them to deposition or trial. An attorney may be able to gain an advantage in cross-examination after looking at a person's notations in these documents.
- ✓ Keep current on changes to NFPA 921 and NFPA 1033. Become apprised of new editions, technical interim amendments, formal interpretations, and proposals for change relating to any portion of the document that affects your area of expertise or your investigative responsibilities.
- ✓ Since NFPA 921 and NFPA 1033 are likely to have an impact on you and your profession, take the trouble to have input into the course of its development. Help to make them accurate and authoritative. Participate in the continued evolution of the document, if not as a NFPA Technical Committee member, then as a Task Group member or through the public input opportunities inherent in NFPA's standards development system.

- ✓ Be prepared to justify your decisions and actions in the course of any particular fire case in light of the principles of NFPA 921.
- ✓ Be prepared to explain your qualifications in light of the minimum requirements and JPRs of NFPA 1033 and the corresponding sections of NFPA 921.
- ✓ Never profess reliance on NFPA 1033, NFPA 921, or any other reference work as authoritative for the proposition in issue without carefully checking the document AND any references or definitions contained within it on the point.
- ✓ Never accept NFPA 1033, NFPA 921, or any other reference work presented to you in cross-examination as authoritative on an issue without having read the document carefully with specific reference to that point. If opposing counsel asks if you accept segments from either document as authoritative or correct, you may want to request an opportunity during an adjournment to read carefully the proffered sections of the text, as well as any related portions of the same text.
- ✓ Educate the attorney who will be calling your evidence about NFPA 1033 and NFPA 921 and their status in the fire investigation community. The attorney will then be in a better position to assist you to become familiar with how authoritative treatises like these can be used in the particular jurisdiction and how best to address the document, both in your examination and in cross-examination.
- ✓ If there is some material contained in NFPA 921 or NFPA 1033 that might be raised by opposing counsel in cross-examination, prepare the attorney who will be calling your evidence. This may help you both to prepare strategies to deal with this possibility.
- ✓ If you do not agree with the merit or accuracy of some portion of NFPA 921 that relates to your job, do something about it. For example, propose a change through the NFPA Standards-Making System, or write an article in a fire journal explaining and documenting your point. If later, you are questioned on that issue, you may be in a better position to substantiate your position in court.
- ✓ Work is underway for NFPA 2011 edition. Watch for notice of the deadlines for participating in the revision process. Even if you do not submit a public proposal or public comment, monitor the Report on Proposals and Report on Comments when they are published. The justification for changes that are proposed and the justification for the actions on each proposal and comment by the Technical Committee responsible for NFPA 921 is a valuable source of information.

Knowing that NFPA 921 has assumed a prominent position as an authority in fire litigation, one should give it appropriate attention. The same is true of NFPA 1033. This will be the best armour for any fire investigator or other expert under fire during cross-examination on the content of these books, as well as the best weaponry for your lawyer who will have his turn when cross-examining the opposing expert.

These documents can provide a valuable foundation for one's expert opinion at a preliminary motion or at trial. They are also invaluable for fire investigator who does not intend to give expert testimony. For the lay witness who processes a fire scene, interviews witnesses, or conducts any other aspect of an investigation, NFPA 921 and 1033 provide a wealth of information to structure and guide one's investigation.

5. Conclusion

A lay or an expert witness, who testifies at trial or in any other court proceeding in a fire case, should expect to be asked about NFPA 921 or NFPA 1033. Further, either a lay or an expert witness may need to justify how they conducted an investigation and whether the data gathered was sufficient to form a reliable opinion. NFPA 921 works well as a measuring device for this reliability inquiry. Likewise, both NFPA 921 and NFPA 1033 may be the yardstick used to measure the sufficiency of the witness' qualifications either as an expert or as an investigator conducting any aspect of a fire or explosion investigation.

The questions measuring a person's investigation and conclusions in light of the NFPA 1033 requirements or the NFPA 921 guidelines may occur months or even years after the investigation is complete. In this sense, every day is exam day. Be prepared!

Endnotes

[i] **Disclaimer:** The information in this paper is general in nature and may not apply to particular factual or legal circumstances. This paper contains personal views of the authors for instructional purposes and is not legal advice. Do not act on the information or advice in this paper in specific cases without the advice of legal counsel. Further, this paper addresses legal principles in the United States. While NFPA 921 has been cited by Canadian courts, the Canadian law is different from the law in the United States and is not addressed in this paper.

[ii] Publication pending, 2008. Contact Terry-Dawn Hewitt at TDHewitt@McKennaHewitt.com for information.

[iii] *NFPA 921, 2008 ed.*, § 1.2, at para. 1.2.1.

[iv] *NFPA 921, 2008 ed.*, § 1.2, at para. 1.2.1.

[v] *NFPA 921, 2008 ed., Origin and Development of NFPA 921* at 1.

[vi] *NFPA 921, 2008 ed.*, § 1.3 at para. 1.3.2.

[vii] *NFPA 921, 2008 ed.*, ch. 2.

[viii] *NFPA 921, 2008 ed.*, §1.

[ix] *NFPA 1033, 2009 ed.*, §1.1.

[x] *NFPA 1033, 2009 ed.*, §1.2.

[xi] *See NFPA 1033, 2009 ed.*, Annex B "Explanation of the Standard and Concepts of JPRs."

[xii] *See NFPA 1033, 2009 ed.*, Annex A, para. a.4.1.3.

[xiii] *NFPA 1033, 2003 ed.*, §1.3.

[xiv] *NFPA 1033, 2009 ed.*, Annex A, para. A.1.3.

[xv] *Daubert v. Merrell Dow Pharm.*, 509 U.S. 579 (1993).

[xvi] *Frye v. United States*, 293 F. 1013 (App.D.C. 1923).

[xvii] *Daubert v. Merrell Dow Pharm.*, *supra.* at 592.

[xviii] *Daubert v. Merrell Dow Pharm.*, *supra.* at 592-593.

[xix] *Daubert v. Merrell Dow Pharm.*, *supra.* at 593-595 (*citations omitted.*)

[xx] *Daubert v. Merrell Dow Pharm.*, *supra.* at 595.

[xxi] *Daubert v. Merrell Dow Pharm.*, *supra.* at 593, n.11.

[xxii] 526 U.S. 137 (1999).

[xxiii] 140 F.3d 915 (11th Cir. 1998).

[xxiv] 150 F.Supp. 2d 360, 366 (D. Conn. 2001).

[xxv] 214 F.R.D. 646, 55 Fed.R.Serv.3d 740 (D. Kan. 2003).

[xxvi] 214 F.R.D. 646, 55 Fed.R.Serv.3d 740 (D. Kan. 2003).

[xxvii] 692 So.2d 1258 (La. App. 1997).