

FISC Bulletin Board

TEST YOUR STANDARDS KNOWLEDGE

We are in the midst of a worldwide trend towards standardization. Standards and guidelines are becoming increasingly important for fire investigators. There are three general categories of standards. The first type of standards prescribe how fire investigators are to do their jobs or what qualifications are required for investigators. The obvious examples of these types of standards are *NFPA 921 Guide for Fire and Explosion Investigations* and *NFPA 1033 Standard for Professional Qualifications for Fire Investigator*, both developed by the National Fire Protection Association. Another category of standards relate to fire safety and fire protection, and are relevant to investigating how fire or explosions occurred, or why damage or bodily injury from fires or explosions were not prevented or minimized. These types of standards are developed by many different organizations and generally regulate fire safety or fire protection for industrial and residential buildings, products, and services that involve

the risk of fire or explosion. Finally, a third category of standards pertains to the fire service: their training, response, safety, and equipment.

In order for fire investigators to do a competent job, it is incumbent on fire investigators to stay current with relevant standards and guidelines. The first place to start in monitoring such documents is by knowing which government and private organizations are involved with developing standards and guidelines that concern fire and explosion investigators. The following table lists some of the leading organizations whose standards and guidelines are relevant to fire investigation and litigation. Once you are familiar with these organizations, you can search their websites to learn their roles in the standards-making world and to identify standards and guidelines that might be germane to your career or to a given investigation. The organizations are listed in alphabetical order.

Name of Website	Website and Scope of Standards or Guides
American National Standards Institute (ANSI)	<p>www.ANSI.org</p> <p>“As the voice of the U.S. standards and conformity assessment system, the American National Standards Institute (ANSI) empowers its members and constituents to strengthen the U.S. marketplace position in the global economy while helping to assure the safety and health of consumers and the protection of the environment.</p> <p>The Institute oversees the creation, promulgation and use of thousands of norms and guidelines that directly impact businesses in nearly every sector: from acoustical devices to construction equipment, from dairy and livestock production to energy distribution, and many more. ANSI is also actively engaged in accrediting programs that assess conformance to standards – including globally-recognized cross-sector programs such as the ISO 9000 (quality) and ISO 14000 (environmental) management systems.” http://www.ansi.org/about_ansi/overview/overview.aspx?menuid=1</p> <p>Other organizations in this table such as ASTM, ESA, and NFPA are ANSI-accredited and produce ANSI standards. For example, <i>NFPA 921</i> and <i>NFPA 1033</i> are ANSI standards. All ANSI standards have procedures whereby members of the general public can have input. See, for example, the information on the NFPA below.</p>



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ASTM International (ASTM)	<p>http://www.astm.org</p> <p>“ASTM International, formerly known as the American Society for Testing and Materials (ASTM), is a globally recognized leader in the development and delivery of international voluntary consensus standards. Today, some 12,000 ASTM standards are used around the world to improve product quality, enhance safety, facilitate market access and trade, and build consumer confidence. . . . ASTM members deliver the test methods, specifications, guides, and practices that support industries and governments worldwide.” (http://www.astm.org/ABOUT/aboutASTM.html)</p> <p>ASTM has been ANSI accredited for a broad scope of subjects, including characteristics and performance of materials, products, systems and services. It has a series of forensic science standards created by the ASTM Committee E30 on Forensic Sciences, relevant to collection, preservation, and testing of evidence, including laboratory testing. Many of the ASTM standards relevant to fire investigations are listed in <i>NFPA 921</i>.</p>
Electronic Security Association, Inc. (ESA)	<p>www.ESAweb.org</p> <p><i>Scope of ANSI Accreditation:</i></p> <p>“Participate in the oversight of electronic security industry standards activities, including those activities related to all products and services associated with the design, production, distribution, installation, monitoring, maintenance, and other treatment or aspects of electronic security equipment, including alarm and non-alarm equipment, such as law enforcement response and telecommunications signaling. Coordinate the standards activities of participating SDOs (currently the Central Station Alarm Association [CSAA], the National Burglar and Fire Alarm Association [NBFAA] and the Security Industry Association [SIA]) to ensure that the organization with the greatest expertise develops a standard. Advise on direction and priorities of standards projects for the security industry. Identify and include any additional Interest Segments in the security industry or Standards Developing Organizations (SDOs) developing standards for the industry. Identify related organizations with relevant expertise for SDO assistance and coordination in their individual standards projects.”</p> <p>(http://publicaa.ansi.org/sites/apdl/Documents/Standards%20Activities/American%20National%20Standards/ANSI%20Accredited%20Standards%20Developers/JULY2012_2_ASD.pdf)</p>
Factory Mutual Global FM	<p>www.fmglobal.com/Default.aspx</p> <p>“FM Global provides comprehensive global commercial and industrial property insurance, engineering-driven underwriting and risk management solutions, groundbreaking property loss prevention research and prompt, professional claims handling.” (http://www.fmglobal.com/page.aspx?id=01000000)</p> <p>FM Approvals offers worldwide certification and testing services of industrial and commercial loss prevention products. . . .”</p> <p>“FM Approvals offers certification services to manufacturers of fire protection equipment, electrical equipment, hazardous location equipment, fire detection, signaling and other electrical equipment, materials, roofing products and smoke detection.” (http://www.fmglobal.com/page.aspx?id=50010000)</p>
International Society of Automation ISA	<p>http://www.isa.org/</p> <p>“ISA Standards help automation professionals streamline processes and improve industry safety, efficiency, and profitability. Over 150 standards reflect the expertise from over 4,000 industry experts around the world. Since 1949, ISA has been recognized as the expert source for automation and control systems consensus industry standards.”</p> <p>(http://www.isa.org/Template.cfm?Section=Standards2&Template=/customsource/isa/Standards/AutomationStandards.cfm)</p>

Name of Website	Website and Scope of Standards or Guides
National Burglar & Fire Alarm Association (NBFAA)	www.alarm.org As suggested by its name, NBFAA creates standards regarding residential and commercial electronic security and life safety systems. The standards address installation, maintenance, testing and the ongoing operation of such systems.
National Fire Protection Association (NFPA)	http://www.nfpa.org/ NFPA has more than 300 standards, codes, guides, and recommended practices that cover a broad range of fire protection issues, including life safety, building code, fire safety in commercial and industrial processes, and the fire service. NFPA is the ANSI accredited standards development organization authorized to deal with a broad range of issues in the fire protection field. As an ANSI standard, anyone can have input to revisions of NFPA standards. For example, both <i>NFPA 1033</i> and <i>NFPA 921</i> are currently in a revision cycle. To track proposed revisions or make suggestions for change (within the time limits permitted), go to www.NFPA.org , click the “Codes and Standards” link, click the “Standards Development Process” link, and learn how to participate.
National Institute of Standards and Technology / Information Technology Laboratory (NIST/ITL)	http://www.nist.gov “Founded in 1901, NIST is a non-regulatory federal agency within the U.S. Department of Commerce . NIST's mission is to promote U.S. innovation and industrial competitiveness by advancing measurement science, standards, and technology in ways that enhance economic security and improve our quality of life.” (http://www.nist.gov/public_affairs/general_information.cfm) NIST produces standards and guidelines for information exchange relating to automatic data processing and related systems.
Society of Fire Protection Engineers (SFPE)	http://www.sfpe.org “The Society of Fire Protection Engineers was established in 1950 and incorporated as an independent organization in 1971. It is the professional society representing those practicing the field of fire protection engineering.... The Society supports the development of the annual Professional Engineer licensing exam in fire protection and the grading of those exams under the auspices of the National Council of Examiners for Engineering and Surveying. Several volunteer committees and task groups work under the Society’s auspices on technical projects to further advance the state of the art.” (http://www.sfpe.org/AboutUs.aspx) SFPE develops standards relevant to “matters of fire protection engineering,” and conducts research and publishes guides dealing with the use of fire protection technology in understanding fire and promoting fire and life safety. (http://www.sfpe.org/Portals/sfpepub/docs/pdfs/standardsdevelopmentprocedures_002.pdf)
Standards Council of Canada (SCC)	www.scc.ca/en “Standardization is the development and application of standards publications that establish accepted practices, technical requirements and terminologies for products, services and systems. Standards help to ensure better, safer and more efficient methods and products, and are an essential element of technology, innovation and trade. The Standards Council carries out a variety of functions intended to ensure the effective and coordinated operation of standardization in Canada. It also represents Canada's interests on standards-related matters in foreign and international forums.” “The Standards Council of Canada (SCC) is a federal Crown corporation. It has its mandate to promote efficient and effective standardization in Canada.” (http://www.scc.ca/en/about-scc) SCC “coordinates the efforts of Canadians in the development and use of national and international standards.” SCC has partnered with Techstreet (www.techstreet.com) to distribute in Canada standards from the world’s leading authorities, including ANSI, ASTM, and NFPA. (http://www.scc.ca/en/events/press-releases/press-release-standards-council-of-canada-and-techstreet-partner-to-facilitate-sale-of-standards-i)



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Society of Automotive Engineers (SAE)	http://www.sae.org SAE issues standards for the automotive industry, including standards addressing fire safety issues.
Technical Working Group for Fire and Explosions/ Scientific Working Group for Fire and Explosions (TWGFEX/SWGFEX)	http://ncfs.ucf.edu/twgfex/index.html TWGFEX: "The mission of TWGFEX-Scene is to establish and maintain nationally accepted programs for the forensic investigation of fire, arson, and explosion scenes and devices. Further, to promote and maintain dialogue among personnel in the public safety and legal communities." This mission is accomplished, in part by, "Promoting professional development in fire and explosion investigations" and "Developing and maintaining guidelines for fire and explosion investigations, scene examinations, and documentation," "Identifying job requirements for investigators' knowledge, skills, and abilities," and "Establishing quality assurance guidelines to promote the reliability of the investigation and the results." SWGFEX: "The mission of SWGFEX is to make recommendations for nationally accepted guidelines for the forensic examination of fire and explosive materials and residues." This mission is accomplished, in part by, "Providing guidelines for fire and explosives investigations, examinations, and reporting," "Specifying requirements for analysts' knowledge, skills, and abilities," and "Establishing quality assurance guidelines." One way that SWGFEX honors its mission is by contributing to the development of relevant ASTM standards.
Underwriters Laboratories, Inc. (UL)	http://www.ul.com/global/eng/pages/ "UL is a global independent safety science company offering expertise across five key strategic businesses: Product Safety, Environment, Life & Health, Knowledge Services and Verification Services. Our breadth, established objectivity and proven history mean we are a symbol of trust and enable us to help provide peace of mind to all." (http://www.ul.com/global/eng/pages/corporate/aboutul/) UL has a broad range of standards for safety. Best known in fire litigation are standards for fire testing products.
Underwriters Laboratories of Canada (ULC)	http://www.ul.com/canada/eng/pages/ "Underwriters Laboratories of Canada (ULC) is an independent product safety testing, certification and inspection organization. [ULC has] tested products for public safety for 90 years and [it is] accredited by the Standards Council of Canada. Founded in 1920, ULC is a key architect of the Canadian National Safety System, administered by the Standards Council of Canada. ULC's time-tested system supports governmental product safety regulations, and it complements federal, provincial, and municipal public safety initiatives. ULC also works with other governments and international safety systems to help further international trade with adherence to local and international safety requirements." (http://www.ul.com/canada/eng/pages/)
United States Fire Administration (USFA)	http://www.usfa.fema.gov/index.shtm USFA publishes reports on statistics and other issues relating to the fire service and the fire problem in the US that cite relevant industry standards. See http://www.usfa.fema.gov/statistics/ and https://apps.usfa.fema.gov/publications/ .

In closing, here is a litigation tip. As an attorney, if I were hiring an expert in a fire or explosion case or if I was preparing to challenge an expert on the other side of a matter, a starting point would be to identify all relevant standards and guidelines. The above websites are central to this endeavor. Once the pertinent documents are identified, it is easy to question a potential expert or evaluate the investigation and report of an expert to see if they have adequately addressed the requirements of such documents. This makes for fruitful grounds of examination. Don't get caught short. Check out these websites today!