

# NFPA NEWS

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The NFPA News is a compilation of codes and standards information and activities. We attempt to cover all important details during the codes and standards cycle process so that the public is aware what is available and what is needed. We want to make the NFPA News an even more valuable tool for you. Please forward your ideas to [nfpa\\_news@nfpa.org](mailto:nfpa_news@nfpa.org) or contact Carolyn Cronin at 617-984-7240.



## Comments sought on proposed Tentative Interim Amendments on NFPA 20, 51A, 70, 407 and 1911.

The following Tentative Interim Amendments (TIAs) have been proposed to NFPA. They are being published for public review and comment. All comments should be filed by the comment closing date indicated on each TIA with the Secretary to the Standards Council, by email at [tias\\_errata\\_fis@nfpa.org](mailto:tias_errata_fis@nfpa.org), by mail at NFPA 1 Batterymarch Park, Quincy, MA, 02169-7471, or by fax at 617-770-3500.

The proposed TIAs have also been forwarded to the responsible technical committees for processing. Each technical committee will consider public comments received by the date indicated below before vote is taken on the proposed TIA. (Please identify the number of the TIA to which the comment is addressed.) Three-fourths of the voting members of each technical committee and/or technical correlating committee, if any, must vote in favor of the TIA on both technical merit and emergency nature as calculated in accordance with 3.3.4.5 of the Regulations Governing Committee Projects to establish a recommendation for approval of the TIA.

The Standards Council will review the technical committees' ballot results, the public comments, and any other information that has been submitted when it considers the issuance of the TIAs at the October 17-18, 2011 Standards Council meeting. In accordance with 1.6.2(c) of the Regulations, a proposed TIA which has been submitted for processing pursuant to 5.1 of the Regulations will be automatically docketed as an appeal on the agenda of the Standards Council, and any party may advocate their position either in writing or in person before the Council. If an automatically docketed appeal has not been pursued by any party, the Council need not consider the matter as an appeal.

A TIA is tentative because it has not been processed through the entire codes- and standards-making procedures. It is interim because it is effective only between editions of the document. A TIA automatically becomes a proposal of the proponent for the next edition of the document. As such, it then is subject to all of the procedures of the codes- and standards-making process.

### NFPA 20-2010 and Proposed 2013 Edition

*Standard for the Installation of Stationary Pumps for Fire Protection*

**TIA Log No.** 1035

**Reference:** 11.4.1.2.4, A.11.4.1.2.1, and A.11.4.3

**Comment Closing Date:** September 2, 2011

**Submitter:** Ken Isman, National Fire Sprinkler Association, Inc.

1. In 11.4.1.2.4, insert “double wall or the tank shall be” so that the section reads as follows:

**11.4.1.2.4** Fuel tanks shall be double wall or the tank shall be enclosed with a wall, curb, or dike sufficient to hold the entire capacity of the tank.

2. Delete annex note A.11.4.1.2.1 as follows:

**A.11.4.1.2.1** Dikes are generally not necessary due to the requirement for double-wall tanks with monitoring.

3. Delete the last three paragraphs of A.11.4.3 as follows:

Research has identified nothing in NFPA 30, Flammable and Combustible Liquids Code, or NFPA 37, *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines*, that prohibits the outlet connection to the engine from the diesel tank from being in the location required by NFPA 20.

The applicable code is NFPA 37, not NFPA 30. The scope of NFPA 30 clearly states that if the installation meets the criteria in NFPA 37, then it satisfies the requirements of NFPA 30.

Therefore, NFPA 37 applies for the fuel tank for the fire pump, as it is considered to be part of the installation of the internal combustion engine. Subsection 6.3.2 of NFPA 37 deals with fuel tanks inside structures for fuels other than Class I liquids. Sections 6.6, 6.7, and 6.8 of NFPA 37 deal with filling, venting, and connections between the engine and the fuel tank, and these sections send the reader back to NFPA 30 for the requirements. A review of the tank chapter in NFPA 30 for fixed tanks with capacity of 119 gallons or more finds no requirement stating that the connection to the engine has to be from the top of the tank, if the tank is on the floor on legs, or otherwise above ground.

**Submitter's Substantiation:** An error occurred in the processing of the 2010 edition of NFPA 20 with respect to Proposal 20-117 and Comment 20-102. The clear intent of the committee at the end of the ROC meeting was to allow single wall tanks with dikes and double wall tanks without dikes. This intent can be found in the committee meeting actions and committee statements on Comments 20-100 and 20-101.

The error was simply in the Committee Meeting Action on Comment 20-102, where a "4" was printed instead of a "1". The Committee Meeting Action was printed as, "Remove the words "double wall" from Section 11.4.1.2.4." Instead, the Committee Meeting Action should have been, "Remove the words "double wall" from Section 11.4.1.2.1." Unfortunately, by coincidence, the words "double wall" also appeared in Section 11.4.1.2.4, so they were removed by the NFPA staff. However, then the sentence did not make sense, so more words were deleted from Section 11.4.1.2.4, which had the effect of changing the intent of the committee. This TIA proposes putting all of the language back that was inadvertently deleted.

The annex note A.11.4.1.2.1 needs to be deleted because it contradicts the base paragraph (11.4.1.2.1) and the rest of section 11.4, which now allows the use of single wall tanks. This was overlooked during the revision cycle, but since we are processing a TIA, it needs to be fixed so that the standard is consistent.

The three paragraphs in annex note A.11.4.3 need to be deleted because they are no longer true. The intent of the standard is not to send the user to NFPA 37 except as noted by 11.4.1.2.3. All of the rules have been placed in NFPA 20 for common sizes of tanks. These annex note sections were supposed to have been deleted by Proposal 20-117, but the proposal was not processed correctly, even after Comment 20-99 was submitted and accepted to clarify the Committee Action on Proposal 20-117.

The three paragraphs in annex note A.11.4.3 need to be deleted because they are no longer true. The intent of the standard is not

to send the user to NFPA 37 except as noted by 11.4.1.2.3. All of the rules have been placed in NFPA 20 for common sizes of tanks. These annex note sections were supposed to have been deleted by Proposal 20-117, but the proposal was not processed correctly by NFPA staff, even after Comment 20-99 specifically reminded the staff that they needed to pay attention to all of the text modifications of Proposal 20-117.

**Emergency Nature:** This issue meets three of the factors used by the NFPA in section 5.3 of the Regulations Governing Committee Projects to define "Emergency Nature" (a, b and f), which are discussed as follows:

a) **The document contains an error that was overlooked during a regular revision process.** Clearly, there was an error in processing the comments on 11.4.1.2.4 and 11.4.1.2.1. In addition, three paragraphs in annex note A.11.4.3 were supposed to have been deleted, but they still appear in the 2010 edition.

b) **The document contains a conflict within the document.** There are two conflicts within the standard the need to be corrected. The first is that section 11.4.1.2.4 requires a dike and section A.11.4.1.2.1 says, "Dikes are generally not necessary due to the requirement for double-wall tanks with monitoring." The second conflict is that section A.11.4.1.2.1 says that double-wall tanks are required, which is not the case. Single wall tanks are permitted by the standard because section 11.4 does not require double-wall tanks and because single wall tanks can be constructed in accordance with the standards listed in 11.4.1.2.1.

f) **The proposed TIA will correct a circumstance in which the revised document has resulted in an adverse impact on a product or method that was without adequate technical justification.** The product or method that is being adversely impacted is the use of a double-wall tank without a dike. The committee agreed that this was adequate protection from a technical perspective, but the standard does not allow this installation due to an error in how all of the sections were put together. We've already had multiple contractors questioning the issue and complaining that they are being made to put dikes around double-wall tanks.

#### **NFPA 51A-2012**

*Standard for Acetylene Cylinder Charging Plants*

**TIA Log No.** 1036

**Reference:** 3.3 (New), 10.6, and 11.2.1.3

**Comment Closing Date:** September 9, 2011

**Submitter:** Larry L. Fluor, Fluor, Inc., representing Compressed Gas Association

[www.nfpa.org/51A](http://www.nfpa.org/51A)

1. Add the following new definitions to Section 3.3 as follows:

**3.3.xx\* Fast Acting Detection System.** A detection system designed to detect a fire more rapidly than standard smoke or heat detectors.

**3.3.xx Fill Valve.** A shutoff valve on the charging system for charging MATS where the acetylene supply first enters the charging connection.

**3.3.xx MATS Building.** A single-story detached building, without an attic, basement, crawl space or false ceiling, used for acetylene trailer(s) or mobile acetylene trailer system (MATS) operations located indoors and the balance of the building is used exclusively

for acetylene operations including storage and use of hazardous materials.

**3.3.xx MATS Fire Area.** The area or footprint occupied by the individual mobile acetylene trailer(s) to include the control system up to the point of the source valve for MATS being discharged or to the point of the fill valve for MATS being charged.

**3.3.xx Source Valve.** A shutoff valve on the piping system serving MATS where the acetylene supply first enters the user's supply line.

**A.3.xx Fast Acting Detection System.** Examples for outdoor installations are optical (UV/IR) systems that detect visible flames and do not rely on products of combustion to be transported by the energy of the heat plume to the location of the detector. For indoor installations, examples include high sensitivity smoke detection (HSSD), optical (UV/IR), or other early detection systems.

2. Revise Section 10.6 as follows:

**10.6\* Mobile Acetylene Trailer Systems (MATS).** In addition to the general requirements of NFPA 51A, MATS charging and discharge stations located at acetylene charging plants shall be in accordance with Section 10.6.

**10.6.1 General.** MATS fire areas used for charging or discharging operations shall be separated from each other by not less than 30 ft (9.1 m) or by fire barriers or fire walls.

**10.6.1.1** Where fire barriers are used to separate outdoor MATS fire areas without weather protection, the fire barriers shall be not less than 2-hour fire resistive construction and shall separate individual fire areas by line of sight.

**10.6.1.2** Where fire barriers are used to separate outdoor MATS fire areas covered by weather protection constructed in accordance with the requirements of NFPA 55, *Compressed Gases and Cryogenic Fluids Code*, the fire barriers shall be full height walls without openings extending from the foundation to the roof constructed of not less than 2-hour fire-resistive construction. The allowable area occupied by weather protection shall be in accordance with the requirements of the building code.

**10.6.1.3** Where MATS are installed indoors in a MATS building, fire walls, fire barriers or 2-hour fire-rated exterior walls are permitted to be used to separate MATS fire areas. Walls shall be constructed in accordance with the requirements of the building code.

#### **10.6.42 MATS Filling Charging Stations.**

**10.6.42.1 Location.** The mobile acetylene trailer, including fill connections, shall be located in accordance with the following criteria:

- (1) Not less than 25 ft (7.6 m) from property lines.
- (2) Not less than 50 feet (15.2 m) from buildings of combustible construction.
- (3) Not less than 15 ft (4.6 m) from buildings of noncombustible construction not associated with the charging filling or discharging of the mobile acetylene trailer.

(4) Not less than 15 ft (7.6 m) horizontal distance from the vertical plane below the nearest overhead electrical utility power lines.

(5) Not less than 15 ft (4.6 m) horizontal distance from the vertical plane below overhead piping containing flammable liquids, flammable gases or oxidizing materials.

(6) Not less than 50 ft (15.2 m) from air intakes.

**10.6.42.1.1** The minimum required distances, except for air intake openings, shall not apply when fire barriers without openings or penetrations having a minimum fire resistance rating of 2 hours interrupt the line of sight between the discharge and the exposure.

**10.6.42.2** Where process needs require removing the heat of solution of acetylene as determined by ambient temperature and cylinder charging rates, provisions shall be made for a cylinder cooling process water spray system and water run-off.

**10.6.42.3** Protection from vehicular damage shall be provided in accordance with NFPA 55, *Compressed Gases and Cryogenic Fluids Code*.

**10.6.42.4** Flexible transfer hoses used for charging of MATS shall have a minimum burst pressure of 10,000 psig (69,000 kPa).

**10.6.42.5** The charging site shall be posted with a sign with the following or equivalent wording:

ACETYLENE – FLAMMABLE GAS – NO SMOKING – NO OPEN FLAMES

**10.6.42.6** Electrical equipment shall be in accordance with NFPA 70®, *National Electrical Code*®.

**10.6.42.6.1** An electrical grounding system for the acetylene piping shall be provided in accordance with NFPA 70, *National Electrical Code*.

**10.6.42.6.2** The trailer chassis shall be connected to the grounding system before connections are made to the piping system.

#### **10.6.23 MATS Discharge Stations.**

**10.6.23.1** The MATS discharge station shall be in accordance with 10.6.2 except that 10.6.2.2 shall not apply.

**10.6.23.2** Acetylene meters, where used, shall be designed for acetylene service and shall operate at a pressure not to exceed 15 psig (103 kPa).

**10.6.23.3** Flexible transfer hoses used for withdrawal of acetylene shall be pressure rated as follows:

(1)\* For pressures greater than 15 psig (103 kPa) hoses shall have a minimum burst pressure of 10,000 psig (69,000 kPa).

(2) For pressures of 15 psig (103 kPa) or less, hoses shall be rated for a minimum working pressure of 125 psig (860 kPa) and a minimum burst pressure of 500 psig (3450 kPa).

**A.10.6.23.3(1)** A 10,000 psi (69,000 kPa) burst pressure for charging leads integral to 10.6.2.3 has been used to withstand a decomposition reaction of acetylene in the charging lead.

**10.6.4 Fire Protection.** Fire protection systems shall be provided in accordance with 11.2.1.3.

3. *Revise Section 11.2.1.3 and delete existing Sections 11.2.1.3.1, 11.2.1.3.2, and A.11.2.1.3 in accordance with the following:*

~~11.2.1.3\* **Mobile Acetylene Trailer Systems (MATS).** At mobile acetylene charging plants a fire sprinkler system in accordance with NFPA 13, extra hazard group 1 shall be installed in the areas occupied by trailers in charging or discharging stations. A deluge sprinkler system shall be provided for mobile acetylene trailer fire areas used as indoor and outdoor charging and discharging stations. The system shall be designed to provide water as a means of cooling the containers located on the trailer that are potentially exposed to fire.~~

~~11.2.1.3.1 Where the public water is not sufficient to meet the requirements for water flow or capacity, the supply shall be subject to approval by the authority having jurisdiction.~~

~~11.2.1.3.2 At least one portable fire extinguisher rated in accordance with NFPA 10, *Standard for Portable Fire Extinguishers*, at not less than 20 B:C shall be mounted on each trailer.~~

11.2.1.3.1 Deluge sprinkler systems shall provide a minimum design density of 0.3 gpm per square foot over the MATS fire area being protected.

11.2.1.3.2 The deluge sprinkler system shall be able to be activated automatically by a fast acting detection system and also by a manual actuator.

11.2.1.3.2.1 Manual activation controls shall be identified and marked with a sign and shall be positioned for use in an emergency.

11.2.1.3.2.2 Fire protection equipment and manual activation controls shall not be blocked or obstructed.

11.2.1.3.3 Existing acetylene charging and discharging stations shall be protected by an automatic deluge sprinkler system meeting the above requirements not later than January 1, 2015. See also Section 1.4.

11.2.1.3.3.1 The above requirements for deluge sprinkler systems shall not apply to existing indoor or outdoor facilities, equipment, structures, or other installations where MATS are charged or discharged that existed or were approved for construction or installation prior to the effective date of this standard providing the MATS are protected with an automatic sprinkler system with a minimum design density of not less than 0.25 gpm per square foot (10.1 L/min per square meter).

11.2.1.3.4 At least one UL listed fire extinguisher with a rating of not less than 20 B:C shall be mounted on the mobile acetylene trailer.

~~A.11.2.1.3 MATS fire protection requirements apply to charging or discharging stations located indoors or outdoors.~~

**Submitter's Substantiation:** The TIA contains compromise language that could not be achieved in the revision cycle. The three CAMs submitted by the Compressed Gas Association were withdrawn in favor of a TIA as a TIA was viewed as a viable approach

for the committee. The language in the TIA is more technically complete and is believed to be acceptable to all interested parties.

The provisions included in the 2011 Edition for sprinkler systems for Mobile Acetylene Trailer Systems (MATS) as incorporated into Section 11.3.1.3 have been recognized as being inadequate and incomplete as a means to address the unusual hazards of fire in systems of this nature. Acceptance of this change will resolve the technical problem by providing a fire protection system that has been designed to address the special hazards identified with systems of this nature. The work product is the result of a joint effort between members of the IMG-AAA TC and CGA technical committees involved with CGA Standards designed to address the charging of Mobile Acetylene Trailers (MATS).

The IMG-AAA TC is seeking to establish a requirement for deluge sprinkler systems as recommended by the National Transportation Safety Board (NTSB) subsequent to incidents which resulted in substantial damage to acetylene discharge stations using Mobile Acetylene Trailer Systems (MATS). The incidents were the subject of a report from the NTSB which was brought to the attention of the IMG-AAA Technical Committee.

The requirements of Section 11.2.1.3 for a sprinkler system as shown in the 2011 Edition of NFPA 51A may in fact be suitable for filling of individual cylinders for indoor use where closed head systems can be activated. They are not suitable for sprinkler systems installed outdoors where ambient conditions can negatively influence performance, and for other reasons detailed below. A clear requirement should be established to require a deluge sprinkler system when MATS are charged or discharged either indoors or outdoors. The requirement to do so must be in the body of the standard so that users, designers and AHJs are clear with respect to the requirements.

## **REASONS WHY OPEN HEAD DELUGE SYSTEM SHOULD BE REQUIRED**

### **Cooling of adjacent cylinders**

Closed head sprinkler systems do not provided the same level of protection as a deluge system. During a fire inside a building, the ceiling forces the hot combustion products to travel outward ahead of the fire. These hot combustion products activate the closed head sprinklers allowing sprinklers not directly above the fire to activate and help keep the adjacent areas cool helping to prevent the spread of the fire.

MATS (especially discharge stations) are typically located outdoors or under an area of overhead cover that is open on three or more sides constructed as weather protection in accordance with the requirements and limitations of the building code. When located outdoors there is no means provided to allow the collection of the hot combustion products in order to activate a sprinkler system and therefore these sprinkler heads may not open. Depending on ambient conditions such as wind speed, the heat from a fire may only activate sprinkler heads downwind of the fire thus allowing the fire to rapidly spread to cylinders upwind allowing the incident to escalate instead of immediately containing the situation like an open head deluge system could have. In addition wind can blow the spray from the activated sprinklers to downwind sprinklers cooling the downwind sprinklers below their activation temperature. Acetylene cylinders have a thermally activated fusible metal plug

located near the valve or on the top of the cylinder that melts at approximately 212°F. The plug is designed to release the gas as it expands in order to prevent rupture of the container. When this plug melts acetylene vents directly to atmosphere in effect making a large torch (with temperatures greater than 5700°F). On a Mobile Acetylene Trailer (MAT) the cylinders are nested closely together

with the typical cylinder diameters generally 12 inches or less. The result is that the fusible metal plugs are typically only 10 to 12 inches apart. (See Figure 1 below) In the event of a fire if adjacent cylinders are not quickly cooled, the fusible metal plugs will continue to melt allowing the fire to quickly spread from cylinder to cylinder throughout the array. (See Figure 2).

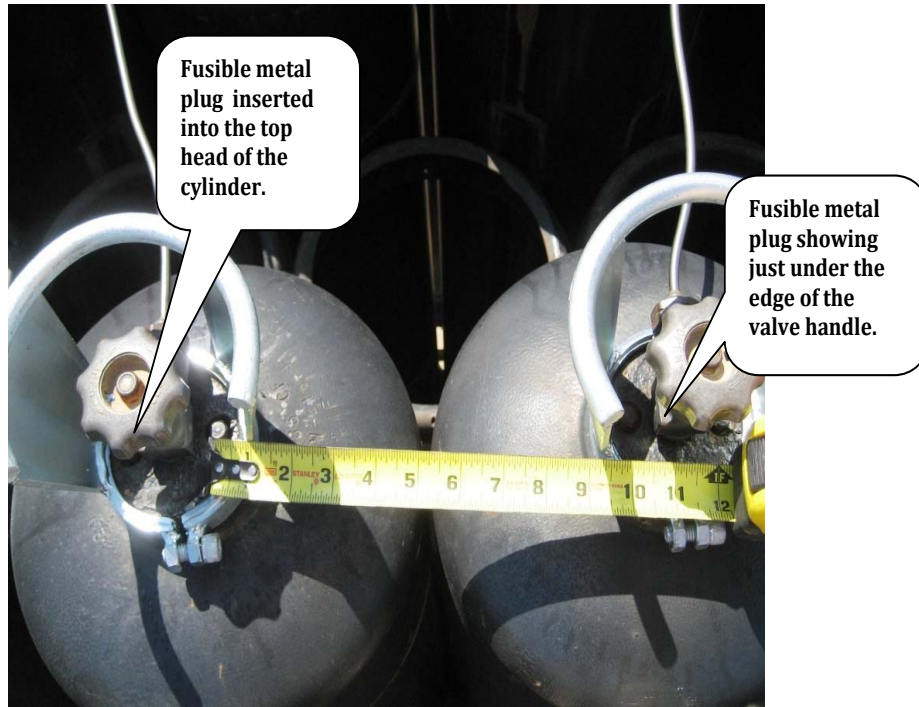


Figure 1. Distance between cylinder fusible metal plugs that are located on the head of the cylinder near the base of the cylinder shutoff valve



Figure 2 – Large quantity of cylinders nested on a trailer

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## **Acetylene Specific Hazards**

Acetylene (stabilized) is a *flammable gas* and also an *unstable reactive gas* that can decompose and generate heat without the presence of oxygen. Cylinders on a trailer are connected through a common manifold that allows the gas to be transported into or out of the containers in the process of being charged or discharged (See Figure 2). In a fire acetylene can decompose inside the piping system which can lead to further decomposition of acetylene inside of cylinders as heat is transmitted through the manifold. The heat from the decomposition of acetylene is sufficient to melt the fusible metal plugs installed to prevent cylinder rupture. If cylinders are not cooled immediately the release of gas from melted fusible metal plugs will likely result in initiating a fire at a different location on the trailer, or even on adjacent trailers. Immediate cooling of all cylinders on the trailer reduces the possibility of a flashover fire and prevents a decomposition reaction and potential mass release of gas thereby limiting the size of the incident accordingly.

In the absence of fire it is also possible, based on the increased pressures (greater than 15 psig), for decomposition to occur inside the piping due to mechanical shock or adiabatic compression with insufficient heat to initially melt a fusible metal plug. Until a fire occurs there will be no external heat available that would activate a closed head sprinkler system. In that particular situation the operator will most likely identify the event when it occurs by either an audible or visual cue before a fire occurs. Having a deluge system available that can be manually activated provides the operator with a system that can be used to cool the cylinders and piping before an external fire, mass release from multiple fusible metal plugs, or potential cylinder rupture occurs.

### **Activation**

Outdoors deluge systems can either be activated manually from a remote point or by automatic means using optical flame detectors such as UV/IR or other approved early warning detection systems. Indoors deluge systems can also be activated manually or activated by automatic means by using optical flame detection or a high sensitivity smoke detection system. Flame detectors have the advantage of being used to detect small flames where open headed deluge systems can quickly be effective. By contrast there is no way to manually or automatically activate a closed head system.

### **Water Density**

Acetylene trailers vary in size. Typical trailers are approximately 8 feet wide ranging in length from 15 to 50 feet although longer and shorter trailers may exist. The maximum trailer dimensions allowed under DOT regulations are 8.5 ft wide by 65 ft long. The 1984 Edition of NFPA 51A contained the first reference to MATS in Section 8-6.1, requiring that the MATS be in compliance with the 1981 Edition of CGA Pamphlet G-1.6. The G-1.6 publication required fire protection to be provided in the form of fire hoses or fixed spray systems.

In 1996 the requirements for MATS in 51A Section 8-6 were deleted as an “editorial change”...” to make the standard more useable, adoptable and enforceable.” A reference to CGA G-1.6 was included as an informational note. Within the regulatory scheme described by NFPA 51A the need for fire protection systems was to be determined by an analysis of local conditions of hazard within the plant, exposure to other properties, water supplies and the probable effectiveness of plant fire brigades to include the time

of response and probable effectiveness of fire departments. Where automatic water spray systems were installed NFPA 15, *Standard for Water Spray Fixed Systems for Fire Protection* were installed water coverage was to be not less than a minimum of 0.25 gpm per sq ft of floor area directly wetted by the stream. An NFPA 13 extra hazard open or closed head sprinkler system was allowed to be used as an acceptable alternate; however, the provisions were general requirements for fire protection including general use and the use of MATS was not mentioned.

There is a concern that limited water supplies may prevent being able to deluge a large area. In these instances it is possible to reduce the total water flow required by constructing fire barrier walls to divide the trailers into groups or compartments. Each area so divided can be equipped with separately controlled deluge systems provided for each area bounded by the fire barriers. Alternatively, an increased spacing between MAT systems can be provided to limit the exposure accordingly.

## **OTHER CONCERNS**

### **Applicability to Cylinder Charging Facilities**

The valves on cylinders in storage are closed as compared to valves on a MAT system which are normally open when the MAT is being charged or discharged. Cylinders on a MAT are manifolded together as compared with typical cylinders in storage. Therefore, stored cylinders are less likely to be involved in an event where heat can spread internally from cylinder to cylinder through a common manifold system. This primary difference requires that a distinction be made between the fire protection systems provided for a MAT system versus the typical arrangement where cylinders are simply stored.

### **Freezing Conditions**

Due to the possibility of freezing (< 40°F) ambient conditions in outdoor locations a wet pipe closed head sprinkler system is not acceptable in many locations. A dry pipe closed head system can be used but it will be much slower to react.

### **Hot Conditions**

When closed head fire sprinkler systems are used NFPA 13 7.7.1.3.1.3 requires the use of intermediate or high temperature-rated sprinklers when the water temperature of the fire protection water being used exceeds 100°F. This is not an uncommon occurrence in areas of the southwestern United States where fire protection water is stored in aboveground tanks and day time temperatures exceed 100°F. NFPA 13: Table 6.2.5.1 lists the following temperature ratings or operating ranges.

- Ordinary temperature-rated sprinklers operate between 135 and 170°F.
- Intermediate temperature-rated sprinklers operate between 175 and 225°F.
- High temperature-rated sprinklers operate between 250 and 300°F.

During the winter season the length of time it takes to achieve a temperature above 175°F at the sprinkler head could allow a fire to become larger than what might otherwise occur in a system protected by an open head deluge system.

**Emergency Nature:** The document contains an error or an omission that was overlooked during a regular revision process. The proposed TIA intends to correct a previously unknown existing hazard. The proposed TIA intends to offer to the public a benefit that would lessen a recognized (known) hazard or ameliorate a continuing dangerous condition or situation.

When the IMG-AAA TC considered this issue in the ROC phase of the revision cycle the unstable nature of acetylene, particularly when Mobile Acetylene Trailer Systems (MATS) were being charged or discharged was not the focus of the group. The unstable nature of acetylene must be addressed by providing a means to cool cylinders rapidly in the event of a fire. The risk for conflagration for cylinders arranged on a MATS, particularly MATS located outdoors is significantly increased through the use of closed head sprinkler systems. The IMG-AAA TC recognized that a fire sprinkler system was necessary to address the risks of a system of this nature but the focus of discussion resulted in requiring an NFPA 13 closed head system. As a result the ROC version contains provisions which could result in the use of a closed head NFPA 13 sprinkler system being installed and the protection provided for MATS in a charging or discharging mode typically found outdoors would be unresponsive within the time frame needed to prevent a major conflagration from occurring. The manufacturing members of the Compressed Gas Association (CGA) have provided additional information to substantiate the use of an open headed deluge system based on response time and coverage required to protect these systems in the early stages of fire thereby avoiding conflagration. The provisions have been expanded to provide a limitation of MATS fire areas and to recognize the use of fire barrier walls as a means to limit exposure.

CGA's standard addressing MATS G-1.6 has been substantially revised and a joint task group was formed between CGA's technical committee and principal members (fire protection engineers) of NFPA's IMG-AAA TC to determine a protection strategy suitable for systems of this nature recognizing the need for fire protection for these systems whether used indoors or outdoors. Past editions of NFPA 51A were reviewed and the specialized needs of MATS systems were recognized. The methodology now proposed revisions integral to the TIA have been accepted by CGA's Standards Council to be published in the CGA G-1.6 standard. These changes represent a reduction of risk to the public and are in keeping with the recommendations of the National Transportation Safety Board (NTSB) and the Department of Transportation.

**The document contains a conflict within the document or with another NFPA document.**

Since completing the work on NFPA 51A the IMG-AAA TC has held its ROP meeting for the revision of NFPA 55 which will be used to integrate NFPA 51A into NFPA 55 and NFPA 51A will be withdrawn. Recognizing the special needs of the fire sprinkler system to be provided the TC has approved a proposal to require deluge sprinkler protection for MATS as the requirements for MATS have been expanded and are to be included in NFPA 55. Publication of a revised NFPA 55 will present a conflict in approach with NFPA 51A as the IMG-AAA TC has recognized the need for deluge sprinkler protection. The TIA will serve as an amendment to NFPA 51A that will avoid confusing designers, users and AHJs as the technical provisions for fire protection evolve within the new venue for requirements which will now be found in NFPA 55.

## NFPA 70®-2011

National Electrical Code®

TIA Log No. 1034

Reference: 230.44(5)

Comment Closing Date: September 9, 2011

Submitter: Christel Hunter, Alcan Cable

[www.nfpa.org/70](http://www.nfpa.org/70)

1. Delete "thermoplastic-insulated" in NEC 230.44(5) as follows:

(5) Single ~~thermoplastic-insulated~~ conductors 1/0 and larger with CT rating

**Submitter's Substantiation:** When 230.44 was revised for the 2011 NEC to specify the allowable wiring methods in cable tray systems supporting service-entrance conductors, only thermoplastic-insulated single conductors were included. The limitation to thermoplastic-insulated conductors has resulted in an adverse impact on the allowable uses of thermoset-insulated CT-rated conductors that was without adequate technical (safety) justification for this action. No technical justification was submitted to exclude thermoset-insulated CT-rated conductors in cable tray, and no technical justification was submitted to specifically limit single CT-rated conductors in cable tray to thermoplastic-insulated types.

As noted by CMP-4 member J. Rogers in ROC 4-36, "There was no technical rationale for limiting the conductors utilized to those of the thermoplastic type. If a manufacturer produces conductors that meet the listing requirements required for CT rating those conductors should also be allowed."

There are two primary standards that CT-rated conductors are listed to in the United States: UL 83 for thermoplastic conductors and UL 44 for thermoset conductors. Both of these standards contain testing requirements that must be satisfied before a conductor can be marked for use in cable tray.

**Emergency Nature:** The proposed TIA intends to correct a circumstance in which the revised document has resulted in an adverse impact on a product or method that was inadvertently overlooked in the total revision process, or was without adequate technical (safety) justification for the action.

**Additional information: TC actions at ROP and ROC meetings**  
ROP:

4-113 Log #1740 NEC-P04 Final Action: Accept  
(230.44)

TCC Action: The Technical Correlating Committee directs that the panel clarify the panel action on this proposal with respect to both the placement of the added text and the accepted text of the second sentence.

This action will be considered by the panel as a public comment.

Submitter: Lowell Reith, Interstates Construction Services Inc.

Recommendation: Add new text to read as follows:

Cable tray systems shall be permitted to support service-entrance conductors.

Cable trays used to support service-entrance conductors shall contain only service-entrance conductors and shall be limited to the following methods:

1. Service-entrance cables
2. Type MC cable
3. Mineral-insulated, metal-sheathed cable
4. Type IGS cable

5. Single Thermoplastic-Insulated Conductors 1/0 and Larger with CT rating

Substantiation: 230.44 lists service entrance cable as being allowed for use on a Cable tray. THHN conductors may be used for service entrance conductors in raceways, and for feeders and branch circuits in cable tray if listed and marked with a CT rating. If SE cable can be used as a single conductor in a cable tray as service entrance conductors, why not other Thermoplastic-Insulated conductors. I personally feel that is allowed, but have run into engineers and others who disagree. By putting a list of the types of cables allowed like what is found in 230.43 for Wiring methods for 600 volts or less, this would be made clear to all. THHN is typically installed in a raceway system for mechanical protection and because it has not undergone the same type of flammability testing as a building type cable such as SE cable. However, when it is marked "CT" as indicated in the ZLGR guide information, then it has undergone the proper flammability test for exposed cables in cable trays which is a more stringent flammability test than is done for SE cable.

Types TW, THW, THW-2, THHN, THHW, THWN, THWN-2, PFA, PFAH and Z in sizes 4 to 1 AWG for grounding conductors only and in sizes 1/0 AWG and larger for circuit and grounding conductors that are marked "Cable Tray Use" or "CT" comply with a vertical-tray cable flame test.

Panel Meeting Action: Accept

Number Eligible to Vote: 10

Ballot Results: Affirmative: 10/ROC:

4-36 Log #73 NEC-P04 Final Action: Accept (230.44)

Submitter: Technical Correlating Committee on National Electrical Code®,

Comment on Proposal No: 4-112

Recommendation: It was the action of the Technical Correlating Committee that this proposal be reconsidered and correlated with the action on Proposal 4-113.

See the Technical Correlating Committee action on Proposal 4-113.

This action will be considered by the panel as a public comment.

Substantiation: This is a direction from the National Electrical Code Technical Correlating Committee in accordance with 3.4.2 and 3.4.3 of the Regulations Governing Committee Projects.

Panel Meeting Action: Accept

The ROP draft correctly locates the text as intended by the panel, and is shown below:

"230.44 Cable Trays. Cable tray systems shall be permitted to support service-entrance conductors. Cable trays used to support service-entrance conductors shall contain only service-entrance conductors and shall be limited to the following methods:

- (1) Service-entrance cables
- (2) Type MC cable
- (3) Mineral-insulated, metal-sheathed cable
- (4) Type IGS cable
- (5) Single Thermoplastic-Insulated Conductors 1/0 and larger with CT rating

[ROP 4-113]

Such cable trays shall be identified with permanently affixed labels with the wording "Service-Entrance Conductors."

The labels shall be located so as to be visible after installation and placed so that the service-entrance conductors may be readily traced through the entire length of the cable tray. [ROP 4-112]

Exception: Conductors, other than service-entrance conductors, shall be permitted to be installed in a cable tray with service-

entrance conductors, provided a solid fixed barrier of a material compatible with the cable tray is installed to separate the service-entrance conductors from other conductors installed in the cable tray." [ROP 4-112]

Number Eligible to Vote: 10

Ballot Results: Affirmative: 10

Comment on Affirmative:

ROGERS, J.: There was no technical rationale for limiting the conductors utilized to those of the thermoplastic type. If a manufacturer produces conductors that meet the listing requirements required for CT rating those conductors should also be allowed.

**NFPA 70®-2011**

*National Electrical Code®*

**TIA Log No. 1037**

**Reference:** 625.13

**Comment Closing Date:** September 9, 2011

**Submitter:** Gery Kissel, General Motors Corp.

[www.nfpa.org/70](http://www.nfpa.org/70)

1. *Revise 625.13 as follows:*

**625.13 Electric Vehicle Supply Equipment Connection.** Electric vehicle supply equipment shall be permitted to be cord and plug connected to the premises wiring system in accordance with one of the following:

- (A) Electric vehicle supply equipment intended for connection to receptacle outlets rated at 125 volts, single phase, 15 and 20 amperes.
- (B) Electric vehicle supply equipment that is rated 250 volts maximum and complies with all of the following:
  - (1) ~~It is installed indoors and or part of a system identified and listed system as suitable for the purpose and meeting the requirements of 625.18, 625.19, and 625.29 shall be permitted to be cord and plug connected.~~
  - (2) It is intended for connection to receptacle outlets rated no more than 50 amperes.
  - (3) It is installed to facilitate any of the following:
    - a. Ready removal for interchange
    - b. Facilitate maintenance and repair
    - c. Repositioning of Portable, movable, or EVSE fastened in place
  - (4) Power supply cord length for electric vehicle supply equipment fastened in place is limited to 6 ft (1.8 m).
  - (5) Receptacles are located to avoid physical damage to the flexible cord.

All other electric vehicle supply equipment shall be permanently connected to the premises wiring system and fastened in place. This The electric vehicle supply equipment shall have no exposed live parts.

**Submitter's Substantiation:** This TIA was created by a task group of CMP 12 that was chaired by Gery Kissel. The other task group members were Tom Brown, Tom Hedges, Jeff Holmes, John Kovacik, Todd Lottman, Jose Salazar, David Sher, and Lori Tennant. The introduction of commercially available electric vehicles

from major automobile manufacturers has accelerated the deployment of electric vehicle infrastructure. With the electrification of vehicles being a national initiative, it is imperative that the *NEC* keep up with the latest technology and clearly address the electrical safety requirements in order to facilitate the safe, efficient, and reliable installation of electric vehicle infrastructure across the country. The *National Electrical Code* serves a key role in the national deployment of electric vehicles. Safety is the paramount goal of the *NEC*, but it also serves a much more significant role than at first glance.

The *NEC* retains its fundamental principle of safeguarding persons and property from hazards arising from the use of electricity through clear, concise, and enforceable language across all jurisdictions. At the center of this mission is ensuring that the rules are clear so communities can easily and consistently enforce the same requirements across jurisdictions. The electrical infrastructure for EVs must be uniform for users and installers across the country.

NEC 625.13 is currently being interpreted differently by the electrical industry and by electrical inspectors across the country. Even a review of the *NEC* archives on this topic presents a quandary of how it should be interpreted. When the original language went into the *NEC* in 1999, the permitted cord and plug connection is documented as being for “portable” electric vehicle supply equipment (EVSE) equipment. Because of a response to a particular comment in the 2011 *NEC* cycle, it appears to some that the *NEC* committee may have taken a different view, but the language remained unchanged in the Code. In order to address the acceptance of cord and plug connected EVSE, the 2011 *NEC* is in need of revision to ensure it is enforced the same from city to city and state to state. Having cord and plug connected EVSE accepted in some states and not in others is an unnecessary speed bump for rolling out EVs and will cause confusion among automobile dealers trying to help customers purchase EVs along with the appropriate charging equipment.

The language in NEC 625.13 can be interpreted incorrectly to prohibit cord and plug connection of EVSE rated at 250V. Jurisdictions that interpret the current NEC 625.13 to prohibit cord and plug connection for EVSE will place an undue hardship on the owners or potential owners of electric vehicles, electrical contractors, and electrical distributors.

**625.13(A)** The section has been restructured to ensure clear and enforceability language for cord and plug connected EVSE. Item (A) addresses 125V charging and item (B) addresses 250V charging. The present language permits a 125V, 20A rated EVSE. The language is being change to align with the receptacle outlet ratings of 15 and 20A in NEC 625.18 and .19.

**625.13(B)** There are no voltage or amperage restrictions on cord and plug connected EVSE rated over 125V, permitting up to 600V and unlimited amperage, which creates a public safety concern for vehicle charging. Plug and cord connected equipment for public interaction is typically limited to 250V with a 50A receptacle for appliances such as ranges. Extending cord and plug connection beyond this voltage and amperage for the general public and in residential applications establishes a safety concern.

**625.13(B)(2)** Since the electric vehicle charging load is considered continuous in NEC 625.14, the maximum rated EVSE that could be installed on a 50A circuit is 40A rated equipment. Therefore, this

proposal restricts plug and cord connection of EVSE to a receptacle outlet rated no more than 50A at 250V.

**625.13(B)(3)** Confusion around the enforcement of the current language could also drive inconsistent permission in the utilization of cord as a substitute for fixed a wiring system. Without clarification, NEC 400.7 can be cited to completely prohibit the use of cord connected EVSE. The introduction of 625.13(B)(3) addresses this acceptance concern.

**625.13(B)(4) & (5)** There currently is no restriction to limit the length of the cord supplying the EVSE. Permitting cord lengths longer than 6 ft opens the opportunity for damage to the cord and provides justification for the inspector to utilize NEC 400.8 as a means to prohibit the use of the cord. The personnel protection system that is required is not a substitute to permit an unlimited cord supply in place of a permanent wiring method. A number of sections in the *NEC* address cord length restrictions and receptacle location.

- NEC 422.16 establishes cord lengths based on the appliance for frequent interchange that vary from 18 in. to 4 ft.
- NEC 422.16 also requires the receptacle to be located to avoid physical damage to the flexible cord.
- NEC 210.50 also provides guidance on the 6 ft restriction because it requires an appliance receptacle to be located within 6 ft of its intended location.
- The 6 ft length restriction also aligns with the permitted length of traveler cable in NEC 620.44(b) to be used beyond a fixed point on the car or hoist way car where a permanent wiring method could then be used.

Therefore, the proposed text restricts the supply cord to 6 ft and provides enforceable language to ensure the receptacle is located to further avoid physical damage to the EVSE supply cord.

**Emergency Nature:** The introduction of commercially available electric vehicles from major automobile manufacturers has accelerated the deployment of electric vehicle infrastructure. With the electrification of vehicles being a national initiative, it is imperative that the *NEC* keep up with the latest technology and clearly address the electrical safety requirements in order to facilitate the safe, efficient, and reliable installation of electric vehicle infrastructure across the country. The *National Electrical Code* serves a key role in the national deployment of electric vehicles. Safety is the paramount goal of the *NEC*, but it also serves a much more significant role than at first glance.

The *NEC* retains its fundamental principle of safeguarding persons and property from hazards arising from the use of electricity through clear, concise, and enforceable language across all jurisdictions. At the center of this mission is ensuring that the rules are clear so communities can easily and consistently enforce the same requirements across jurisdictions. The electrical infrastructure for EVs must be uniform for users and installers across the country.

**NFPA 70®-2011**

*National Electrical Code®*

**TIA Log No. 1038**

**Reference:** 625.14

**Comment Closing Date:** September 9, 2011

**Submitter:** Gery Kissel, General Motors Corp.

[www.nfpa.org/70](http://www.nfpa.org/70)

1. *Revise 625.14 as follows:*

**625.14 Rating.** Electric vehicle supply equipment shall have sufficient rating to supply the load served. ~~For the purposes of this article, electric vehicle charging loads shall be considered to be continuous loads for the purposes of this article. Where an automatic load management system is used, the maximum electric vehicle supply equipment load on a service or feeder shall be the maximum load permitted by the automatic load management system.~~

**Submitter's Substantiation:** This TIA was created by a task group of CMP 12 that was chaired by Gery Kissel. The other task group members were Tom Brown, Tom Hedges, Jeff Holmes, John Kovacic, Todd Lottman, Jose Salazar, David Sher, and Lori Tennant. The NEC must recognize technology that will support the rollout of EVs. Existing infrastructure and regulations can place constraints on where EV will functionally be permitted. The NEC has the opportunity to enhance the roll out of EVs by recognizing and permitting technology that can open the market for the use of EVs without compromising safety.

NEC 625.14 requires electric vehicle supply equipment be considered a continuous load. This means that the EV charging load must be added at 125% of the full load charging capability of the electric vehicle supply equipment. The addition of this load to an existing electrical service will likely result in the service being too small based on NEC calculations, to handle the EV charging. Revisions are needed to specifically recognize energy management as one of the ways to overcome the calculated load issues. The NEC has no provision for shedding loads to offset the electric vehicle supply equipment load, nor is there a provision that would allow the EV charger to reduce the charging load in real time to ensure that the total home or building load was within the rating of the involved equipment. Such permission in the NEC would enable "smart" EVSE or an energy management system to address situations where an infrastructure upgrade might be necessary otherwise the electric vehicle is potentially left sitting on the dealer's lot.

**Emergency Nature:** The introduction of commercially available electric vehicles from major automobile manufacturers has accelerated the deployment of electric vehicle infrastructure. With the electrification of vehicles being a national initiative, it is imperative that the NEC keep up with the latest technology and clearly address the electrical safety requirements in order to facilitate the safe, efficient, and reliable installation of electric vehicle infrastructure across the country. The National Electrical Code serves a key role in the national deployment of electric vehicles. Safety is the paramount goal of the NEC, but it also serves a much more significant role than at first glance.

The NEC retains its fundamental principle of safeguarding persons and property from hazards arising from the use of electricity through clear, concise, and enforceable language across all jurisdictions. At the center of this mission is ensuring that the rules are clear so communities can easily and consistently enforce the same requirements across jurisdictions. The electrical infrastructure for EVs must be uniform for users and installers across the country.

## **NFPA 407-2012**

*Standard for Aircraft Fuel Servicing*

**TIA Log No. 1029**

**Reference:** 4.1.6.3 (New), A.4.1.6.1, and A.4.1.6.3 (New)

**Comment Closing Date:** September 9, 2011

**Submitter:** Jeremy Souza, Rhode Island Airport Corporation  
[www.nfpa.org/407](http://www.nfpa.org/407)

1. *Add a new 4.1.6.3 to read as follows:*

**4.1.6.3\*** ABC multipurpose dry chemical fire extinguishers (ammonium phosphate) shall not be placed on aircraft fueling vehicles, airport fuel servicing ramps, or aprons, or at airport fuel facilities.

2. *Revise A.4.1.6.1 to read as follows:*

~~**A.4.1.6.1** Multipurpose dry chemical (ammonium phosphate) should not be selected due to corrosion concerns relative to the agent. Carbon dioxide extinguishers should not be selected due to their limited range and effectiveness in windy conditions.~~

3. *Add a new A.4.1.6.3 to read as follows:*

**A.4.1.6.3** Multipurpose dry chemical (ammonium phosphate) fire extinguishing agent is known to cause corrosion to aluminum aircraft components. Although the agent is capable of extinguishing fires on or near aircraft, it is likely that the agent will spread to other, uninvolved aircraft, causing damage from corrosion.

**Submitter's Substantiation:** I am a member of the Technical Committee on Aircraft Fuel Servicing, as well as a Captain in the T.F. Green Airport Fire Department, employed by the Rhode Island Airport Corporation. Among my duties are inspections of airport fueling operations to ensure compliance with the requirements of NFPA 407, Standard on Aircraft Fuel Servicing.

In recent months, several misunderstandings and potential misapplications of the intent of NFPA 407 have been brought to light at several airports, regarding the use of certain types of fire extinguishers on aircraft fueling vehicles and on airport ramps. NFPA 407 requires fire extinguishers on aircraft fueling vehicles and on airport fueling ramp areas (4.3.9.1, 4.3.9.2, 5.13.2, 5.13.3, 5.13.4). Annex A, 4.1.6.1 of NFPA 407 recommends that ABC (ammonium phosphate) fire extinguishers be prohibited on airport ramp areas and fueling vehicles. The body of the standard does not make this distinction. The body of the standard has, however, been interpreted by some inspectors to preclude the use of such extinguishers through a requirement of "at least 20-B:C" rated extinguishers. Others have interpreted the "at least 20-B:C" requirement to allow large ABC rated fire extinguishers that meet or exceed the minimum requirement of "20-B:C." The language is vague, at best, and can be construed as conflicting.

ABC (ammonium phosphate) dry chemical fire extinguishers are highly corrosive to the aluminum components of aircraft. The unpredictable spread and travel of dry chemical powder once it is discharged from a fire extinguisher can allow the agent to come to rest on aircraft a distance from an emergency requiring fire extinguisher use, and may not be detected by the aircraft owner or operator, causing corrosion that may not only be expensive to repair, but may affect the safe operation of an aircraft. The aviation industry has a long history of prohibiting ABC dry chemical fire extinguishers from aircraft operating areas.

**Emergency Nature:** The problem of ABC fire extinguishers near aircraft was not addressed during the most recent revision cycle for NFPA 407 during either the ROP or ROC periods. Furthermore, the requirements of “at least 20-B:C” fire extinguishers in the above referenced paragraphs do not adequately coincide with the Annex A recommendation of prohibiting ABC rated fire extinguishers. This TIA would serve as an appropriate remedy to exclude ABC rated fire extinguishers from aircraft operating areas, meeting the intent of NFPA 407, while giving the enforcement authority to the inspectors in the field.

**NFPA 1911-2007 and Proposed 2012 Edition**

*Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus*

**TIA Log No.** 1030

**Reference:** 7.3.3 and 7.3.4

**Comment Closing Date:** September 9, 2011

**Submitter:** Stephen Wilde, Certified Fleet Services, Inc.

[www.nfpa.org/1911](http://www.nfpa.org/1911)

1. Revise 7.3.3 to read as follows:

**7.3.3\*** Tires shall be inspected for damage, dry rot, and belt separation and shall be inflated to the tire manufacturer’s recommended pressure.

2. Revise 7.3.4 to read as follows:

**7.3.4** Tires shall be replaced ~~at least every 7 years or more frequently when:~~

1. A qualified technician determines the need for new tires based on an inspection
2. The tread wear exceeds state or federal standards as determined by measuring with a tread depth gauge. [See 6.3.1(4).]
3. Tires have a tread depth of less than 4/32 in. (3.2 mm) on any steering axle or 2/32 in. (1.6 mm) on any nonsteering axle at any two adjacent major tread grooves anywhere on the tire.

**Submitter’s Substantiation:** There is no tire industry requirement or tire manufacturer that states a commercial tire can only last 7 years. When tires are inspected, as stated in the revised text above, a chronological tire age is not needed. For example, there is a department in our area that does not make many calls, they have an eight year old engine with less than 10,000 miles. The DOT tire dates are from 2002, which under the current standard would require them to be replaced due to age. The tire tread depth measures 9/64”, the tires when new had a tread depth of 11/64”. Why should the tires be replaced if they have passed the PM inspection and are only worn 2/64” Not only is this a financial burden, but it also poses an environmental issue with disposal and depletion of natural resources.

Another consideration has to be how long the tires might have been in storage prior to being sold to the customer. We did a PM inspection on a customer’s truck that had tires replaced in 2010, two tires had DOT dates on them from 2008 and the other two were from 2009. Under the current standard this customer’s tires installed in 2010, would have to be replaced in 2015 and 2016. Since the only way to determine tire age is by the DOT date on the side of the tire, the tires would have to be changed when they have only been on the vehicle for 5 and 6 years instead of 7 years. The minimum tread depth of 4/32” for steer axles and 2/32” for drive axles, as stated

in 7.3.4 (3) and 1911 section 6.3.1(4), is a minimum Federal DOT requirement for commercial tires. Listed in **49CFR393.75-- Sec. 393.75 Tires, Subpart G—Miscellaneous Parts and Accessories, 393.75 Tires (b) and (c).**

The attached tire life statement by Rubber Manufacturers Association (RMA) explains the reasons that a tire’s chronological age cannot be determined. According to RMA and tire manufacturer’s, the same holds true for commercial tires, even though the attached RMA tire life statement is specific to passenger and light truck tires.

**Emergency Nature:** The required replacement of tires after 7 years is placing an undue financial burden on departments and agencies trying to comply with the 1911 requirements. The waste of natural resources and the burden of proper disposal or reprocessing of the tire have an effect on the environment. The document is in the process of being reprinted and this change must be included immediately to stop the replacement of good tires that are not defective, but simply beyond a specific age.

## Errata issued on NFPA 13R, 130 and 1971.

The following errata have been issued. Copies of these errata are available on the NFPA web site at <http://www.nfpa.org/codelist>; from the NFPA Fulfillment Center, 11 Tracy Drive, Avon, MA 02322; or by calling 800-344-3555. Electronic products and pamphlet reprints may have this errata incorporated.

### NFPA 13R-2010

*Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height*

**Reference:** 7.2.4, 7.2.4.1, 7.2.4.2, A.7.2.4, A.7.2.4.1, and A.7.2.4.2

**Errata No.:** 13R-10-1

[www.nfpa.org/13R](http://www.nfpa.org/13R)

### NFPA 130-2010

*Standard for Fixed Guideway Transit and Passenger Rail Systems*

**Reference:** 5.4.8

**Errata No.:** 130-10-1

[www.nfpa.org/130](http://www.nfpa.org/130)

### NFPA 1971-2007

*Standard on Protective Ensembles for Structural Fire Fighting and Proximity Fire Fighting*

**Reference:** 8.59.7.1

**Errata No.:** 1971-07-4

[www.nfpa.org/1971](http://www.nfpa.org/1971)

## Call for presentations

NFPA is accepting proposals for educational presentations at its 2012 Conference & Expo in Las Vegas. [Proposals due September 12](#)

## Commissioning with NFPA 3

This Fall, NFPA will be releasing its first commissioning documents NFPA 3, *Recommended Practice for Commissioning and Integrated Testing of Fire Protection and Life Safety Systems*. Over the next few editions of NFPA News, Matt Klaus, senior fire protection engineer at NFPA and staff liaison for the document, will answer questions about its development, content and application.

### What does the term Commissioning (Cx) mean?

Commissioning, as we define it in NFPA 3, is a systematic process that provides documented confirmation that all building systems function as they were intended. It's important to note that commissioning is a process—it's not simply a physical act in the field or a final acceptance test as some industries and jurisdictions define it.

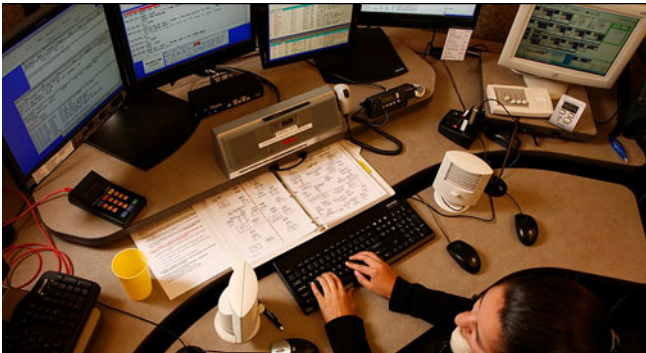
### What kinds of systems are covered by NFPA 3?

NFPA 3 focuses on active and passive fire protection and life safety systems. With active systems, it's everything from big-ticket sprinkler systems and fire alarm systems to systems that might be less frequently applied, like smoke control or water mist systems. Some are very common, some exist in one out of every thousand buildings that get built; NFPA 3 applies to all of them. The passive side includes rated wall construction and fire resistance rated doors.

### Is it limited to certain types of buildings?

NFPA 3 can be applied to hospitals, office buildings, road tunnels, airports—almost any structure that include fire protection and life safety components. It's a systematic process for almost any project that is intended to ensure that the structure and its systems function as intended by the system designers.

[Go to the NFPA website for more information about NFPA 3](#)



The dispatch center for the Tualatin Valley Fire & Rescue in Oregon. A recent study found that, of the more than 10,000 commercial automatic alarms received by the department over a five-year period, 99 percent were what the report termed 'false alarms' or 'no-hazard incidents.' (Photo: Robbie McClaren)

## False. Nuisance. Unwanted.

*The problem goes by many names, but it's a singular concern for the alarm industry, standards developers, and the fire service. The latest issue of NFPA Journal® looks at the problem of unwanted alarms and how NFPA codes can be part of the solution.*

Tracking the number of emergency calls it receives is a top priority

for Tualatin Valley Fire & Rescue, which serves 450,000 people in nine Oregon communities. But it wasn't until the release of its 2009 study on emergency calls that the department realized the extent of the problem it has with what it terms "low-risk, high-frequency" calls: of the more than 10,000 commercial automatic alarms the department responded to during a five-year period, 99 percent were what the report described as "false alarms" or "no-hazard incidents," which Tualatin defines as alarms triggered by burnt food, welding, dust exposure, and problems with heating, ventilation, and air-conditioning systems. [Read the entire article on unwanted alarms.](#)



NFPA Journal talked with NFPA fire service specialists Laurence Stewart and Ken Holland about the new standard and how it complements NFPA's push into the EMS world.

## Comments for NFPA 1917 due August 30, 2011

In 2008, NFPA's Standards Council approved [NFPA 1917, Automotive Ambulances](#), for inclusion in the 2012 revision cycle. The new standard establishes the minimum requirements, performance parameters, and essential criteria for new emergency medical services (EMS) vehicles and could replace federal specification requirements currently guiding ambulance construction. The document's Report on Proposals (ROP) was released in June, 2011 and the public has until August 30 to submit comments on the ROP.

The new standard is part of a recent series of EMS-related efforts undertaken by NFPA. While dispelling myths that NFPA is solely a fire protection and prevention organization with little or no involvement in EMS, staff members have educated the EMS community on a number of existing codes and standards relevant to their line of work and have developed key contacts in the process.



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## Committee calendar

For additional meeting information please contact the appropriate staff liaison listed on NFPA's Document Information Page (click the below document number and Technical Committee Tab). If you are interested in attending a NFPA Technical Committee meeting as a guest please read NFPA's *Regulations Governing Committee Projects* (Section 3.3.3.3) for further information.

### August

- 8–11 NFPA Standards Council, NFPA Headquarters, Quincy, MA
- 9–11 Emergency Management and Business Continuity (1600 ROP), Quincy, MA
- 11–12 Portable Fire Extinguishers, Irving (10 ROP), TX
- 15–16 Explosion Protection Systems (67, 68 ROP), Quincy, MA
- 23–24 Electrical Equipment in Chemical Atmospheres (496 ROP), Baltimore, MD
- 23–25 Electrical Equipment Maintenance, (70B ROP), Nashville TN

### September

- 7–8 Lightning Protection (780 pre-ROP), Quincy, MA
- 12–14 Fire Fighter Professional Qualifications (1001 ROC, 1002 ROP), Nashville, TN
- 19–21 Sprinkler System Installation (13 ROC), Newport Beach, CA
- 20–22 Fire Investigation (921 pre-First Draft /pre-ROP), Denver, CO
- 22–23 Emergency Medical Services (450 ROC), Minneapolis, MN
- 22–23 Sprinkler System Discharge Criteria (13 ROC), Newport Beach, CA
- 26–27 Residential Sprinkler Systems (13D, 13R ROC), Newport Beach, CA
- 27–29 Handling and Conveying of Dusts, Vapors and Gases (654 ROC), Manchester, NH
- 28 Hanging and Bracing of Water Based Fire Protection (13 ROC), Newport Beach, CA
- 28 Fire Doors and Windows (80, 105 ROC), Nashville, TN
- 29 Private Water Supply Piping Systems (24, 291 ROC), Newport Beach, CA

### October

- 3–4 Fire Prevention Organization and Deployment (New Document), Jackson, WY
- 3–5 Emergency Power Supplies (110 and 111 ROC), Oakbrook Terrace, IL
- 4–5 Pyrotechnics (1122, 1124, 1127 ROC), Minneapolis, MN
- 4–5 Agricultural Dusts (61 ROC), Denver, CO
- 4–6 Hazardous Materials Response Personnel (472, 473 ROC), Fort Lauderdale, FL
- 10–11 Public Emergency Reporting Systems (72 ROC), Richmond, VA
- 10–12 Fire Service Occupational Safety and Health (1500, 1582 ROC; 1521, 1561 pre-ROP), Baltimore, MD
- 10–12 Fundamentals of Fire Alarm and Signaling Systems (72 ROC), Richmond, VA
- 10–12 Emergency Communication Systems (72 ROC), Richmond, VA

- 11–12 Combustible Metals and Metal Dusts (484 pre-ROP), NFPA Headquarters, Quincy, MA
- 11–13 TCC Fire and Emergency Services Protective Clothing and Equipment (1851, 1852, 1855, 1981, 1982, 1989 ROP; 1801 ROC), Baltimore, MD
- 11–13 Testing and Maintenance of Fire Alarm and Signaling Systems (72 ROC), Richmond, VA
- 12–13 Ambulances (1917 ROC), Baltimore, MD
- 12–13 Supervising Station Fire alarm and Signaling System (72 ROC), Richmond, VA
- 12–14 Single and Multiple Station Alarms and Household Fire Alarm Systems (72 ROC), Richmond, VA
- 13–14 Notification Appliances for Fire Alarm and Signaling Systems (72 ROC), Richmond, VA
- 13–14 Initiating Devices for Fire Alarm and Signaling Systems (72 ROC), Richmond, VA
- 17–18 NFPA Standards Council, Savannah, GA
- 18–20 Fire Pumps (20 ROC), San Antonio, TX
- 21–22 Fire and Emergency Service Organization and Deployment-Volunteer (1720 pre-ROP), Nashville, TN
- 25–26 Forest and Rural Fire Protection (1144 ROC), Denver, CO
- 25–27 Hazardous Chemicals (400 ROC), Phoenix, AZ

### December

- 8–9 Fire and Emergency Service Organization and Deployment-Career (1710 pre-ROP), Lake Buena Vista, FL

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## Call for members

The **Committee on Aerosol Extinguishing Technology** is seeking members in all interest categories except Special Experts. This Committee is responsible for NFPA 2010, *Standard for Fixed Aerosol Fire Extinguishing Systems*.

The **Committee on Aerosol Products** is seeking members in all interest categories except Manufacturers. The Committee is responsible for NFPA 30B, *Code for the Manufacture and Storage of Aerosol Products*.

The **Committee on Aircraft and Rescue** is seeking members in all interest categories except consumers and manufacturers. This Committee is responsible for NFPA 403, *Standard for Aircraft Rescue and Fire-Fighting Services at Airports*, NFPA 405 *Standard for the Recurring Proficiency of Airport Fire Fighters*, NFPA 408 *Standard for Aircraft Hand Portable Fire Extinguishers*, NFPA 412 *Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment*, NFPA 414 *Standard for Aircraft Rescue and Fire-Fighting Vehicles*, NFPA 422 *Guide for Aircraft Accident/Incident Response Assessment*, and NFPA 424 *Guide for Airport/Community Emergency Planning*.

The **Committee on Aircraft Maintenance Operations** is seeking members in all interest categories. This Committee is responsible for NFPA 410, *Standard on Aircraft Maintenance*.

The **Committee on Animal Housing Facilities** is seeking members in all interest categories except Users. This Committee is responsible for NFPA 150, *Standard on Fire and Life Safety in Animal Housing Facilities*.

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The **Committee on Boiler Combustion System Hazards—Fluidized Bed Boilers** is seeking members in all interest categories except Manufacturers. This Committee is responsible for Chapter 7 in NFPA 85, *Boiler and Combustion Systems Hazards Code*.

The **Committee on Boiler Combustion System Hazards—Fundamentals** is seeking members in all interest categories except Manufacturers and Special Experts. This Committee is responsible for Chapters 1,2,3, and 4 in NFPA 85, *Boiler and Combustion Systems Hazards Code*.

The **Committee on Boiler Combustion System Hazards—Heat Recovery Steam Generators** is seeking members in all interest categories except Manufacturers and Special Experts. This Committee is responsible for Chapter 8 in NFPA 85, *Boiler and Combustion Systems Hazards Code*.

The **Committee on Boiler Combustion System Hazards—Pulverized Fuel Systems** is seeking members in all interest categories except Special Experts. This Committee is responsible for Chapter 9 in NFPA 85, *Boiler and Combustion Systems Hazards Code*.

The **Committee on Boiler Combustion System Hazards—Single Burner Boilers** is seeking members in all interest categories except Manufacturers. This Committee is responsible for Chapter 5 in NFPA 85, *Boiler and Combustion Systems Hazards Code*.

The **Committee on Boiler Combustion System Hazards—Stoker Operations** is seeking members in all interest categories except Special Experts and Users. This Committee is responsible for stoker material, Chapter 10 in NFPA 85, *Boiler and Combustion Systems Hazards Code*.

The **Committee on Building Code—Board and Care Facilities** is seeking members in all interest categories except Special Experts. This Committee is responsible for Chapter 26 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Building and Construction** is seeking members in all interest categories. This Committee is responsible for Chapter 7, Sections 8.3, 8.4 and Annex D in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Building Service and Fire Protection Equipment** is seeking members in all interest categories. This Committee is responsible for Chapter 55 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Building Systems** is seeking members in all interest categories. This Committee is responsible for Chapter 12, Chapters 49-54, and Annex B in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Detention and Correctional Occupancies** is seeking members in all interest categories except Special Experts. This Committee is responsible for Chapter 21 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Educational and Day-Care** is seeking members in all interest categories except Special

Experts. This Committee is responsible for Chapters 17 and 18 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Fire Protection Features** is seeking members in all interest categories except Manufacturers. This Committee is responsible for Chapter 8 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Fundamentals** is seeking members in all interest categories. This Committee is responsible for Chapters 1-6 and 13-15 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Furnishings and Contents** is seeking members in all interest categories except Special Experts. This Committee is responsible for Chapter 10 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Health Care Occupancies** is seeking members in all interest categories except Enforcing Authorities and Users. This Committee is responsible for Chapters 19-20 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Industrial, Storage, and Misc Occupancies** is seeking members in all interest categories except Users. This Committee is responsible for Chapters 29-31 and 33-34 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Mercantile and Business Occupancies** is seeking members in all interest categories. This Committee is responsible for Chapters 27 and 28 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Residential Occupancies** is seeking members in all interest categories. This Committee is responsible for Chapters 22-25 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Building Code—Structures, Construction and Materials** is seeking members in all interest categories except Manufacturers and Insurance. This Committee is responsible for Chapter 32 and Chapters 25-48 in NFPA 5000®, *Building Construction and Safety Code*®.

The **Committee on Classification and Properties of Hazardous Chemical Data** is seeking members in all interest categories except Special Experts. This Committee is responsible for NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*.

The **Committee on Combustible Metals and Metal Dusts** is seeking members in all interest categories except Users. The Committee is responsible for NFPA 484, *Standard for Combustible Metals*.

The **Committee on Confined Space Safe Work Practices** is seeking members in all interest categories except Users. Manufacturers are especially in need.

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The **Committee on Construction and Demolition** is seeking members in all interest categories except Enforcing Authorities. The Committee is responsible for NFPA 241, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*.

The **Committee on Data Exchange for the Fire Service** is seeking members in all interest categories except Users.

The **Correlating Committee on Combustible Dusts** is seeking members in all interest categories.

The **Committee on Fundamentals of Combustible Dusts** is seeking members in all interest categories.

The **Committee on Electrical Equipment in Chemical Atmospheres** is seeking members in all interest categories except Special Experts and Users. This Committee is responsible for NFPA 496, *Standard for Purged and Pressurized Enclosures for Electrical Equipment*; NFPA 497, *Recommended Practice for the Classification of Flammable Liquids, Gases, or Vapors and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas*; and NFPA 499, *Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Locations for Electrical Installations in Chemical Process Areas*.

The **Committee on Electronic Computer Systems** is seeking members in all interest categories except Special Experts and Manufacturers. The Committee is responsible for NFPA 75, *Standard for the Protection of Information Technology Equipment*.

The **Committee on Emergency Medical Services** is seeking individuals in the following interest categories: Labor, Insurance, and Manufacturers. This Committee is responsible for NFPA 450, *Guide for Emergency Medical Services and Systems*.

The **Committee on Emergency Services Organization Risk Management** is seeking individuals in all categories except Enforcing Authorities and Special Experts. This Committee is responsible for NFPA 1201, *Standard for Providing Emergency Services to the Public* and NFPA 1250, *Recommended Practice in Emergency Service Organization Risk Management*.

The **Committee on Explosives** is seeking members in all interest categories except Manufacturers and Special Experts. This Committee is responsible for NFPA 495, *Explosive Materials Code* and NFPA 498, *Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives*.

The **Committee on Exposure Fire Protection** is seeking members in all interest categories except Manufacturers and Special Experts. This Committee is responsible for NFPA 80A, *Recommended Practice for Protection of Buildings from Exterior Fire Exposures*.

The **Committee on Fire and Emergency Service Organization and Deployment—Volunteer** is seeking members in all interest categories except Enforcing Authorities. This Committee is responsible for NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments*.

The **Committee on Fire and Emergency Services Protective Clothing and Equipment—Electronic Safety Equipment** is seeking members in all interest categories except Manufacturers. This Committee is responsible for NFPA 1800, *Standard on Electronic Safety Equipment for Emergency Services* (Proposed); NFPA 1801, *Standard on Thermal Imagers for the Fire Service*; and NFPA 1982, *Standard on Personal Alert Safety Systems (PASS)*.

The **Committee on Fire and Emergency Services Protective Clothing and Equipment—Emergency Medical Services Protective Clothing and Equipment** is seeking members in all interest categories except Manufacturers. This Committee is responsible for NFPA 1999, *Standard on Protective Clothing for Emergency Medical Operations*.

The **Committee on Fire and Emergency Services Protective Clothing and Equipment—Hazardous Materials Protective Clothing and Equipment** is seeking members in the following interest categories: Consumers, Enforcing Authorities, Labor, Special Experts and Users. This Committee is responsible for NFPA 1991, *Standard on Vapor-Protective Ensembles for Hazardous Materials Emergencies*; NFPA 1992, *Standard on Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies*; and NFPA 1994, *Standard on Protective Ensembles for First Responders to CBRN Terrorism Incidents*.

The **Committee on Fire and Emergency Services Protective Clothing and Equipment—Special Operations Protective Clothing and Equipment** is seeking members in all interest categories except Manufacturer and Users. This Committee is particularly seeking members with expertise in contaminated water operations protective clothing and equipment. This Committee is responsible for NFPA 1951, *Standard on Protective Ensemble for Technical Rescue Incidents*; NFPA 1952, *Standard on Surface Water Operations Protective Clothing and Equipment*; NFPA 1975, *Station/Work Uniforms for Fire and Emergency Services*; and NFPA 1983, *Standard on Life Safety Rope and Equipment for Emergency Services*.

The **Committee on Wildland Fire Fighting Protective Clothing and Equipment** is seeking members in all interest categories. This Committee is responsible for NFPA 1977, *Standard on Protective Clothing and Equipment for Wildland Fire Fighting*.

The **Committee on Fire Department Rescue Tools** is seeking members in all interest categories except Manufacturers and Users. This Committee is responsible for NFPA 1936, *Standard on Powered Rescue Tools*.

The **Committee on Fire Department Ground Ladders** is seeking members in all interest categories. This Committee is responsible for Chapters in NFPA 1931, *Standard for Manufacturer's Design of Fire Department Ground Ladders* and NFPA 1932, *Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders*.

The **Committee on Fire Department Rescue Tools** is seeking members in all interest categories except Manufacturers and Users. This Committee is responsible for NFPA 1936, *Standard on Powered Rescue Tools*.

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The **Committee on Fire Doors and Windows** is seeking members in all interest categories except Manufacturers. This Committee is responsible for Chapters in NFPA 105, *Standard for Smoke Door Assemblies and Other Opening Protectives* and NFPA 80, *Fire Doors and Other Opening Protectives*.

The **Committee on Fire Hose** is seeking members from all interest categories except Manufacturers and Users. This Committee is responsible for NFPA 1961, *Standard on Fire Hose*; NFPA 1962, *Standard for the Inspection, Care, and Use of Fire Hose, Couplings, and Nozzles and the Service Testing of Fire Hose*; NFPA 1963, *Standard for Fire Hose Connections*; NFPA 1964, *Standard for Spray Nozzles*; and NFPA 1965, *Standard for fire Hose Appliances*.

The **Committee on Fire Prevention Organization and Deployment** is seeking members from all interest categories. This Committee shall have primary responsibility for documents on the organization, operation, deployment and evaluation of code enforcement, public fire and life safety education and fire investigation operations.

The **Committee on Fire Reporting** is seeking members in all interest categories. This Committee is responsible for NFPA 901, *Standard Classifications for Incident Reporting and Fire Protection Data*.

The **Committee on Fire Risk Assessment Methods** is seeking members in all interest categories except Special Experts. The Committee is responsible for NFPA 550, *Guide to the Fire Safety Concepts Tree* and NFPA 551, *Guide for the Evaluation of Fire Risk Assessments*.

The **Committee on Fire Safety and Emergency Symbols** is seeking members in all interest categories except Special Experts. This Committee is responsible for NFPA 170, *Standard for Fire Safety and Emergency Symbols*.

The **Committee on Fire Tests** is seeking members in all interest categories except Manufacturers and Special Experts. This Committee is responsible for NFPA 251, *Standard Methods of Tests of Fire Resistance of Building Construction and Materials*; NFPA 252, *Standard Methods of Fire Tests of Door Assemblies*; NFPA 253, *Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source*; NFPA 257, *Standard on Fire Test for Window and Glass Block Assemblies*; NFPA 259, *Standard Test Method for Potential Heat of Building Materials*; NFPA 260, *Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture*; NFPA 261, *Standard Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes*; NFPA 262, *Standard Method of Test for Flame Travel and Smoke of Wires and Cables for Use in Air-Handling Spaces*; NFPA 265, *Standard Methods of Fire Tests for Evaluating Room Fire Growth Contribution of Textile Coverings on Full Height Panels and Walls*; NFPA 268, *Standard Test Method for Determining Ignitibility of Exterior Wall Assemblies Using a Radiant Heat Energy Source*; NFPA 269, *Standard Test Method for Developing Toxic Potency Data for Use in Fire Hazard Modeling*; NFPA 270, *Standard Test Method for Measurement of Smoke Obscuration Using a Conical Radiant Source in a Single Closed Chamber*; NFPA 271, *Standard Method of Test for*

*Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter*; NFPA 273, *Standard Method of Test for Determining the Degrees of Combustibility of Building Materials* (Proposed); NFPA 274, *Standard Test Method to Evaluate Fire Performance Characteristics of Pipe Insulation*, NFPA 275, *Standard Method of Fire Tests for the Evaluation of Thermal Barriers Used Over Foam Plastic Insulation*; NFPA 276, *Standard Method of Fire Tests for Determining the Heat Release Rate of Roofing Assemblies with Combustible Above-Deck Roofing Components* (Proposed); NFPA 284, *Standard Test Method for Mattresses for Correctional Occupancies* (Proposed); NFPA 285, *Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components*; NFPA 286, *Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth*; NFPA 287, *Standard Test Methods for Measurement of Flammability of Materials in Cleanrooms Using a Fire Propagation Apparatus* (FPA); NFPA 288, *Standard Methods of Fire Tests of Floor Fire Door Assemblies Installed Horizontally in Fire Resistance-Rated Floor Systems*; NFPA 289, *Standard Method of Fire Test for Individual Fuel Packages*; NFPA 290, *Standard for Fire Testing of Passive Protection Materials for Use on LP-Gas Containers*; NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films*; and NFPA 705, *Recommended Practice for a Field Flame Test for Textiles and Films*.

The **Correlating Committee on Flammable and Combustible Liquids** is seeking members in all categories except Special Expert, and particularly interested in manufacturers of containers and tanks. This Correlating Committee is responsible for NFPA 30, *Flammable and Combustible Liquids Code*.

The **Committee on Flammable and Combustible Liquids-Fundamentals** is seeking members in the interest categories of Enforcers and Users. This Committee is responsible for Chapters in NFPA 30, *Flammable and Combustible Liquids Code*.

The **Committee on Flammable and Combustible Liquids – Tank Storage and Piping Systems** is seeking members in the interest categories of Manufacturer – storage tank vaults. This Committee is responsible for Chapters in NFPA 30, *Flammable and Combustible Liquids Code*.

The **Committee on Flash Fire Protective Garments** is seeking members in all interest categories except Manufacturers. This Committee is responsible for NFPA 2112, *Standard on Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire*, and NFPA 2113, *Standard on Selection, Care, Use, and Maintenance of Flame-Resistant Garments for Protection of Industrial Personnel Against Flash Fire*.

The **Committee on Fluid Heaters** is seeking members in all interest categories. This Committee is responsible for NFPA 87, *Recommended Practice for Fluid Heaters*.

The **Committee on Forest and Rural Fire Protection** is seeking members in all interest categories except Special Experts. This Committee is responsible for NFPA 1141, *Standard for Fire Protection Infrastructure for Land Development in Suburban and*

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*Rural Areas*; NFPA 1142, *Standard on Water supplies for Suburban and Rural Fire Fighting*; NFPA 1143, *Standard for Wildland Fire Management*; NFPA 1144, *Standards for Reducing Structure Ignition Hazards from Wildland Fire*; NFPA 1145, *Guide for the Use of Class A Foams in Manual Structural Fire Fighting*; and NFPA 1150, *Standard on Foam Chemicals for Fires in Class A Fuels*.

The **Committee on Garages and Parking Structures** is seeking members in all interest categories except Manufacturers and Users. This Committee is responsible for NFPA 88A, *Standard for Parking Structures*.

The **Committee on Gas Hazards** is seeking members in all interest categories. This Committee is responsible for NFPA 306, *Standard for the Control of Gas Hazards on Vessels*.

The **Committee on Hazard and Risk of Contents and Furnishings** is seeking members in all interest categories except Research/ Testing Laboratories and Special Experts. This Committee is responsible for NFPA 555, *Guide on Methods for Evaluating Potential for Room Flashover*, NFPA 556, *Guide on Methods for Evaluating Fire Hazard to Occupants of Passenger Road Vehicles*, and NFPA 557, *Standard for Determination of Fire Load for Use in Structural Fire Protection Design*.

The **Committee on Health Care Facilities—Fundamentals** is seeking members for all interest categories except Users and Special Experts. This Committee is responsible for Chapters 1, 2, 3 and 15 in NFPA 99, *Standard for Health Care Facilities*

The **Committee on Health Care Facilities—Emergency Management and Security** is seeking members for all interest categories except Users. This Committee is responsible for Chapter 12 in NFPA 99, *Standard for Health Care Facilities*.

The **Committee on Health Care Facilities—Hyperbaric and Hypobaric Facilities** is seeking members for all interest categories except Users. This Committee is responsible for Chapter 20 in NFPA 99, *Standard for Health Care Facilities* and NFPA 99B, *Standard for Hypobaric Facilities*.

The **Committee on Health Care Facilities—Mechanical Systems** is seeking members for all interest categories except Special Experts and Manufacturers. This Committee is responsible for Chapter 6 in NFPA 99, *Standard for Health Care Facilities*.

The **Committee on Health Care Facilities—Medical Equipment** is seeking members for all interest categories except Special Experts. This Committee is responsible for Chapters 8, 9 and 10 in NFPA 99, *Standard for Health Care Facilities*.

The **Committee on Helicopter Facilities** is seeking members in all interest categories except Special Experts. This Committee is responsible for NFPA 418, *Standard for Heliports*.

The **Committee on Hot Works Operations** is seeking members in all interest categories except Insurers and Special Experts. This Committee is responsible for NFPA 51B, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*.

The **Committee on Incinerators and Waste Handling Systems** is seeking members in all interest categories except Manufacturers and Special Experts. This Committee is responsible for NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment*.

The **Committee on Industrial and Medical Gases** is seeking members in all interest categories. This Committee is responsible for NFPA 51, *Standard for the Design and Installation of Oxygen–Fuel Gas Systems for Welding, Cutting, and Allied Processes*; NFPA 51A, *Standard for Acetylene Cylinder Charging Plants*; NFPA 55, *Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks*; and NFPA 560, *Standard for the Storage, Handling, and Use of Ethylene Oxide for Sterilization and Fumigation*.

The **Committee on Industrial Trucks** is seeking members in all interest categories except Manufacturers. This Committee is responsible for NFPA 505, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operation*.

The **Technical Committee on Internal Combustion Engines** is seeking members in the interest categories of Enforcer, Insurer, and User. This Committee is responsible for NFPA 37, *Standard for the Installation and Use of Stationary Combustion Engines and Gas-Turbines*.

The **Committee on Laser Fire Protection** is seeking members in all interest categories except Special Experts. This Committee is responsible for NFPA 115, *Standard for Laser Fire Protection*.

The **Committee on Liquid Fuel Burning Equipment** is seeking members in the interest categories of Insurer and User. This Committee is responsible for NFPA 31, *Standard for the Installation of Oil-Burning Equipment*.

The **Committee on Loss Prevention Procedures and Practices** is seeking members in all interest categories. This Committee is responsible for NFPA 600, *Standard on Industrial Fire Brigades*; and NFPA 601, *Standard for Security Services in Fire Loss Prevention*.

The **Committee on LP-Gases at Utility Gas Plants** is seeking members in all interest categories except Users. This Committee is responsible for NFPA 59, *Utility LP-Gas Plant Code*.

The **Committee on Manufacture of Organic Coatings** is seeking members in all interest categories except Manufacturer and Special Expert. This Committee is responsible for NFPA 35, *Standard for the Manufacture of Organic Coatings*.

The **Committee on Manufactured Housing** is seeking members in all interest categories except Enforcing Authorities. This Committee is responsible for NFPA 501, *Standard on Manufactured Housing*; NFPA 501A, *Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities*; and NFPA 225, *Model Manufactured Home Installation Standard*.

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The **Committee on Marinas and Boatyards** is seeking members in all interest categories. This Committee is responsible for NFPA 303, *Fire Protection Standard for Marinas and Boatyards*.

The **Committee on Marine Fire-Fighting Vessels** is seeking members in all interest categories except Manufacturers and Special Experts. This Committee is responsible for NFPA 1925, *Standard on Marine Fire Fighting Vessels*.

The **Committee on Marine Terminals** is seeking members in all interest categories except Special Experts and Insurance. This Committee is responsible for NFPA 307, *Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves*.

The **Committee on Merchant Vessels** is seeking members from the commercial fishing industry and towing vessel industry. This Committee is responsible for NFPA 301, *Code for Safety to Life from Fire on Merchant Vessels*.

The **Committee on Mining Facilities** is seeking members in the following interest categories: Special Expert and Manufacturers, specifically the Manufacturers of mining equipment. This Committee is responsible for NFPA 120, *Standard for Fire Prevention and Control in Coal Mines*; and NFPA 122, *Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing Facilities*.

The **Committee on Motion Picture and Television Industry** is seeking member in all interest categories except Special Experts. This Committee is responsible for NFPA 140, *Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations*.

The **Committee on Motor Craft** is seeking members in all interest categories except for Special Experts. This Committee is responsible for NFPA 302, *Fire Protection Standard for Pleasure and Commercial Motor Craft*.

The **Committee on Oxygen Enriched Atmospheres** is seeking members in all interest categories except for Special Experts and Users. This Committee is responsible for NFPA 53, *Recommended Practice on Materials, Equipment and Systems Used in Oxygen-Enriched Atmospheres*.

The **Committee on Organization and Deployment of Fire Prevention Activities** is seeking members in all interest categories except Enforcing Authorities. This Committee is responsible for a new document on the organization, operation, deployment and evaluation of code enforcement, public fire and life safety education and fire investigation operations.

The **Committee on Portable Fire Extinguishers** is seeking members the interest category of Enforcers. This Committee is responsible for NFPA 10, *Standard for Portable Fire Extinguishers*.

The **Committee on Professional Qualifications—Accreditation and Certification to Fire Service Professional Qualifications** is seeking members in all interest categories. This Committee is responsible for NFPA 1000, *Standard for Fire Service Professional Qualifications Accreditation and Certification Systems*.

The **Committee on Professional Qualifications—Emergency Vehicle Mechanic Technicians Professional Qualifications** is seeking members in all interest categories. This Committee is responsible for NFPA 1071, *Standard for Emergency Vehicle Technician Professional Qualifications*.

The **Committee on Professional Qualifications—Fire Fighter Professional Qualifications** is seeking members in all interest categories. This Committee is responsible for NFPA 1001, *Standard for Fire Fighter Professional Qualifications*; NFPA 1002, *Standard for Fire Apparatus Driver/Operator Professional Qualifications*; NFPA 1003, *Standard for Airport Fire Fighter Professional Qualifications*; and NFPA 1005, *Standard for Professional Qualifications for Marine Fire Fighting for Land-Based Fire Fighters*.

The **Committee on Professional Qualifications—Fire Inspector Professional Qualifications** is seeking members in all interest categories. This Committee is responsible for NFPA 1031, *Standard for Professional Qualifications for Fire Inspector and Plan Examiner*.

The **Committee on Professional Qualifications—Fire Investigator Professional Qualifications** is seeking members in all interest categories except Users. This Committee is responsible for NFPA 1033, *Standard for Professional Qualifications for Fire Investigator*.

The **Committee on Professional Qualifications—Fire Marshal Professional Qualifications** is seeking members in all interest categories except Users, Consumers and Special Experts. This Committee is responsible for NFPA 1037, *Standard for Professional Qualifications for Fire Marshal*.

The **Committee on Professional Qualifications—Fire Officer Professional Qualifications** is seeking members in all interest categories except Users. This Committee is responsible for NFPA 1021, *Standard for Fire Officer Professional Qualifications*.

The **Committee on Professional Qualifications—Fire Service Instructor Professional Qualifications** is seeking members in all interest categories except Users and Special Experts. This Committee is responsible for NFPA 1041, *Standard for Fire Service Instructor Professional Qualifications*.

The **Committee on Professional Qualifications—Industrial Fire Brigades Professional Qualifications** is seeking members in all interest categories except Users and Special Experts. This Committee is responsible for NFPA 1081, *Standard for Industrial Fire Brigade Member Professional Qualifications*.

The **Committee on Professional Qualifications—Public Fire Educator Professional Qualifications** is seeking members in all interest categories except Users and Special Experts. This Committee is responsible for NFPA 1035, *Standard for Professional Qualifications for Public Fire and Life Safety Educator*.

The **Committee on Professional Qualifications—Public Safety Telecommunicator Professional Qualifications** is seeking members in all interest categories except Users. This Committee is responsible for NFPA 1061, *Standard for Professional Qualifications for Public Safety Telecommunicator*.

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The **Committee on Professional Qualifications—Rescue Technician Professional Qualifications** is seeking members in all categories except Labor, Users and Special Experts. This Committee is responsible for NFPA 1006, *Standard for Technical Rescue Professional Qualifications*.

The **Committee on Professional Qualifications—Wildfire Suppression Professional Qualifications** is seeking members in all categories except Special Experts. This Committee is responsible for NFPA 1051, *Standard for Wildland Fire Fighter Professional Qualifications*.

The **Committee on Public Emergency Service Communication** is seeking members all interest categories except Users and Special Experts. This Committee is responsible for NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*.

The **Committee on Recreational Vehicles** is seeking members in all interest categories except Manufacturers. This Committee is responsible for Chapters in NFPA 1192, *Standard on Recreational Vehicles* and NFPA 1194, *Standard for Recreational Vehicle Parks and Campgrounds*.

The **Committee on Risk Management** is seeking members in all interest categories. This Committee is responsible for NFPA 1201, *Standard for Providing Emergency Services to the Public* and NFPA 1250, *Recommended Practice in Emergency Service Organization Risk Management*.

The **Committee on Road Tunnel and Highway Fire Protection** is seeking members in all interest categories except Special Experts. This Committee is responsible for NFPA 502, *Standard for Road Tunnels, Bridges, and Other Limited Access Highways*.

The **Committee on Safety to Life—Alternative Approaches to Life Safety** is seeking members in all interest categories except Special Experts. This Committee is responsible for Chapters in NFPA 101A, *Guide on Alternative Approaches to Life Safety*.

The **Committee on Safety to Life—Board and Care Facilities** is seeking members in all interest categories except Special Experts. This Committee is responsible for Chapters 32 and 33 in NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety to Life—Building Service and Fire Protection Equipment** is seeking members in all interest categories. This Committee is responsible for Chapter 9 in NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety to Life—Detection and Correctional Occupancies** is seeking members in all interest categories except Special Experts. This Committee is responsible for Chapters 22 and 23 in NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety to Life—Educational and Day Care Occupancies** is seeking members in all interest categories except Special Experts. This Committee is responsible for Chapters 14-17 in NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety to Life—Fire Protection Features** is seeking members in all interest categories except Manufacturers. This Committee is responsible for Chapter 8 in NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety to Life—Fundamentals** is seeking members in all interest categories. This Committee is responsible for Chapters 1-6, Section 11.8 and 43 in NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety to Life—Furnishings and Contents** is seeking members in all interest categories except Special Experts. This Committee is responsible for Chapter 10 in the NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety to Life—Health Care Occupancies** is seeking members in all interest categories except Enforcing Authorities and Users. This Committee is responsible for Chapters 18-21 in NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety to Life—Industrial Storage and Miscellaneous Occupancies** is seeking members in all interest categories except Users. This Committee is responsible for Chapters 11, 40 and 42 in NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety to Life—Mercantile and Business Occupancies** is seeking members in all interest categories. This Committee is responsible for Chapters 36-39 in NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety to Life—Residential Occupancies** is seeking members in all interest categories. This Committee is responsible for Chapters 24, 26 and 28-31 in NFPA 101<sup>®</sup>, *Life Safety Code*<sup>®</sup>.

The **Committee on Safety at Motorsports Venues** is seeking members in all interest categories. This Committee is responsible for NFPA 610, *Guide for Emergency and Safety Operations at Motorsports Venues*.

The **Committee on Shipbuilding, Repair, and Lay-Up** is seeking members in all interest categories except Insurance. This Committee is responsible for NFPA 312, *Standard for Fire Protection of Vessels During Construction, Conversion, Repair, and Lay-Up*.

The **Committee on Signaling Systems—Notification Appliances for Fire Alarm Systems** is seeking members in all categories except Manufacturers and Special Experts. This Committee is responsible for Chapter 18 and Annex F in NFPA 72<sup>®</sup>, *National Fire Alarm Code*<sup>®</sup>.

The **Committee on Signaling Systems—Public Fire Reporting Systems** is seeking members in all categories except Manufacturers, Special Experts, Installers/Maintainers and Users. This Committee is responsible for Chapter 27 in NFPA 72<sup>®</sup>, *National Fire Alarm Code*<sup>®</sup>.

The **Committee on Smoke Management Systems** is seeking members in all interest categories except Manufacturers and Spe-

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cial Experts. This Committee is responsible for Chapters in NFPA 204, *Standard for Smoke and Heat Venting*, NFPA 92A, *Standard for Smoke-Control Systems Utilizing Barriers and Pressure Differences*, and NFPA 92B, *Standard for Smoke Management Systems in Malls, Atria, and Large Spaces*.

The **Committee on Solvent Extraction Plants** is seeking members in all interest categories except Special Expert and User. This Committee is responsible for NFPA 36, *Standard for Solvent Extraction Plants*.

The **Committee on Standpipes** is seeking members in all interest categories except Installer/Maintainers. This Committee is responsible for NFPA 14, *Standard for the Installation of Standpipe and Hose Systems*.

The **Committee on Static Electricity** is seeking members in the interest categories of Enforcer, Insurer, and Research/ Testing. This Committee is responsible for NFPA 77, *Recommended Practice on Static Electricity*.

The **Committee on Subterranean Spaces** is seeking members in all categories except Special Experts and Users. This Committee is responsible for NFPA 520, *Standard on Subterranean Spaces*.

The **Committee on Tank Leakage and Repair Safeguards** is seeking members in the interest categories of Insurer, Installer/Maintainer, and Manufacturer. This Committee is responsible for NFPA 326, *Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair*, and NFPA 329, *Recommended Practice for Handling Releases of Flammable and Combustible Liquids and Gases*.

The **Committee on Technical Rescue** is seeking members in all interest categories except Special Experts. This Committee is responsible for NFPA 1670, *Standard on Operations and Training for Technical Search and Rescue Incidents*.

The **Committee on Telecommunications** is seeking members in the Users category, specifically from the cable industry. The Committee is responsible for NFPA 76, *Standard for the Fire Protection of Telecommunications Facilities*.

The **Committee on Textile and Garment Care Processes** is seeking members in all interest categories except Manufacturers and Users. This Committee is responsible for NFPA 32, *Standard for Drycleaning Plants*.

The **Committee on Traffic Control Incident Management Professional Qualifications** is seeking members in all interest categories. This committee shall have jurisdiction over documents that address professional qualifications for emergency responders in relation to their operations on roadways.

The **Committee on Transportation of Flammable Liquids** is seeking members in all interest categories. This Committee is responsible for NFPA 385, *Standard for Tank Vehicles for Flammable and Combustible Liquids*.

The **Committee on Vehicular Alternative Fuel Systems** is seeking members in the interest category of Enforcing Authorities and Insurance. This Committee is responsible for NFPA 52, *Vehicular Fuel Systems Code*.

The **Committee on Wastewater Treatment Plants** is seeking members in all interest categories except Special Experts. This Committee is responsible for NFPA 820, *Standard for Fire Protection in Wastewater Treatment and Collection Facilities*.

The **Committee on Water Additives for Fire Control and Vapor Mitigation** is seeking members in the all interest categories except Manufacturers. This Committee is responsible for NFPA 18, *Standard on Wetting Agents*; and NFPA 18A, *Standard on Water Additives for Fire Control and Vapor Mitigation*.

The **Committee on Water-Cooling Towers** is seeking members in all interest categories except Manufacturers and Special Experts. This Committee is responsible for NFPA 214, *Standard on Water-Cooling Towers*.

The **Committee on Water Spray Fixed Systems** is seeking members in all interest categories. This Committee is responsible for NFPA 15, *Standard for Water Spray Fixed Systems for Fire Protection*.

The **Committee on Water Tanks** is seeking members in all interest categories except Manufacturers and Special Experts. This Committee is responsible for NFPA 22, *Standard for Water Tanks for Private Fire Protection*.

The **Committee on Wood and Cellulosic Materials Processing** is seeking members in the interest categories of Enforcing Authorities and Users. This Committee is responsible for NFPA 664, *Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities*.

Anyone interested in serving on one of these committees or on any NFPA technical committee can download a technical committee application from NFPA's website at <http://www.nfpa.org/codesTC>; by email at [committeeapplication@nfpa.org](mailto:committeeapplication@nfpa.org); or by a written request to: Codes and Standards Administration, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471. The application deadline for the October 2011 Standards Council meeting is August 12, 2011.

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## Committees soliciting proposals

The committees for the following documents are planning to begin preparation of their reports. In accordance with the Regulations Governing Committee Projects, committees are now accepting proposals for recommendations on content for the documents listed below. Proposals received by 5:00 p.m. ET on the closing date indicated will be acted on by the committee, and that action will be published in the committee's report. Proposals must be submitted to Codes and Standards Administration on proposal forms which are available in the back of all NFPA documents or from NFPA headquarters. (NOTE: For information on specific committee meeting dates, contact Codes and Standards Administration, NFPA.) Copies of **new document** drafts are available by email at [stds\\_admin@nfpa.org](mailto:stds_admin@nfpa.org) or from Codes and Standards Administration, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471, or they may be downloaded from NFPA's website at <http://www.nfpa.org/codelist>. If you need a current edition of a document, please contact NFPA, Fulfillment Center, 11 Tracy Drive, Avon, MA 02322, or call 800-344-3555.

† Change in proposal closing date or cycle  
P\* Indicates proposed document

Document No./Edition	Title	Proposal Closing Date	Meeting Reporting
<a href="#">NFPA 51B-2009</a>	Standard for Fire Prevention During Welding, Cutting, and Other Hot Work	11/25/2011	A2013
<a href="#">NFPA 58-2011</a>	Liquefied Petroleum Gas Code	11/25/2011	A2013
<a href="#">NFPA 69-2008†</a>	Standard on Explosion Prevention Systems	5/25/2012	F2013
<a href="#">NFPA 70-2011</a>	National Electrical Code®	11/4/2011	A2013
<a href="#">NFPA 96-2011</a>	Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations	11/25/2011	A2013
<a href="#">NFPA 99B-2010†</a>	Standard for Hypobaric Facilities	11/23/2012	A2014
<a href="#">NFPA 130-2010†</a>	Standard for Fixed Guideway Transit and Passenger Rail Systems	11/25/2011	A2013
<a href="#">NFPA 306-2009</a>	Standard for the Control of Gas Hazards on Vessels	11/25/2011	A2013
<a href="#">NFPA 403-2009</a>	Standard for Aircraft Rescue and Fire-Fighting Services at Airports	11/25/2011	A2013
<a href="#">NFPA 412-2009</a>	Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Equipment	11/25/2011	A2013
<a href="#">NFPA 502-2011</a>	Standard for Road Tunnels, Bridges, and Other Limited Access Highways	11/25/2011	A2013
<a href="#">NFPA 520-2010</a>	Standard on Subterranean Spaces	5/24/2013	F2014
<a href="#">NFPA 610-2009</a>	Guide for Emergency and Safety Operations at Motorsports Venues	11/25/2011	A2013
<a href="#">NFPA 780-2011</a>	Standard for the Installation of Lightning Protection Systems	11/25/2011	A2013
<a href="#">NFPA 853-2010†</a>	Standard for the Installation of Stationary Fuel Cell Power Systems	5/24/2013	F2014
<a href="#">NFPA 914-2010†</a>	Code for Fire Protection of Historic Structures	5/24/2013	F2014
<a href="#">NFPA 1002-2009</a>	Standard for Fire Apparatus Driver/Operator Professional Qualifications	8/26/2011	A2013
<a href="#">NFPA 1005-2007†</a>	Standard for Professional Qualifications for Marine Fire Fighting for Land-Based Fire Fighters	5/25/2012	F2013
<a href="#">NFPA 1021-2009</a>	Standard for Fire Officer Professional Qualifications	11/11/2011	A2013
<a href="#">NFPA 1026-2009</a>	Standard for Incident Management Personnel Professional Qualifications	11/11/2011	A2013
<a href="#">NFPA 1031-2009</a>	Standard for Professional Qualifications for Fire Inspector and Plan Examiner	11/11/2011	A2013
<a href="#">NFPA 1033-2009</a>	Standard for Professional Qualifications for Fire Investigator	11/11/2011	A2013
<a href="#">NFPA 1143-2009</a>	Standard for Wildland Fire Management	11/25/2011	A2013
<a href="#">NFPA 1901-2009</a>	Standard for Automotive Fire Apparatus	11/25/2011	A2013