# Standards Council Meeting

**Supplemental Agenda**

**October 17-18, 2011**

**Hyatt Regency Savannah**

2 W. Bay Street

Savannah, Georgia

912-238-1234

912-944-3678 (Fax)

## 11-10-1

Act on the issuance of proposed Tentative Interim Amendment (TIA) to Section 11.4.1.2.4, A.11.4.1.2.1, and A.11.4.3 of the 2010 edition and the proposed 2013 edition of NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*, (TIA No. 1035). Comment closing date was September 2, 2011.

**STAFF NOTE:** Please note that TIA No. 1035 on NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection*, is being proposed for the 2010 and the 2013 editions. In the *Regulations Governing Committee Projects (Regs)* at Section 5.9, TIAs shall apply to the document existing at the time of issuance, except in the case of a document undergoing revisions where a TIA can apply to the existing and proposed editions. NFPA 20 is expected to be an A2012 consent document. The NITMAM Closing Date for A2012 consent documents is April 6, 2012. If this TIA on the 2010 edition is issued by the Standards Council, this TIA will be issued placed on a future Council agenda for consideration of issuance concurrently with the 2013 edition of NFPA 20.

| 11-10-1-a | Text of proposed TIA No. 1035. See Attachment 11-10-1-a |
| 11-10-1-b | Ballot results of TIA No. 1035. **Passed** TC ballot on both technical merit and emergency nature. See Attachment 11-10-1-b |
| 11-10-1-c | No public comments received. No Attachment |

## 11-10-2

**ADMINISTRATIVELY WITHDRAWN FROM THIS AGENDA**

Act on the issuance of proposed Tentative Interim Amendment (TIA) to Section 3.3 (New), 10.6, and 11.2.1.3 of the 2012 edition of NFPA 51A, *Standard for Acetylene Cylinder Charging Plants*, (TIA No. 1036). Comment closing date was September 9, 2011.

| 11-10-2-a | Text of proposed TIA No. 1036. See Attachment 11-10-2-a |
| 11-10-2-b | Ballot results of TIA No. 1036. **Passed** TC ballot on both technical merit and emergency nature. See Attachment 11-10-2-b |
| 11-10-2-c | No public comments received. No Attachment |

## 11-10-3

Act on the issuance of proposed Tentative Interim Amendment (TIA) to Section 230.44(5) of the 2011 edition of NFPA 70®, *National Electrical Code®*, (TIA No. 1034) Comment closing date was September 9, 2011.

| 11-10-3-a | Text of proposed TIA No. 1034. See Attachment 11-10-3-a |
| 11-10-3-b | Ballot results of TIA No. 1034. **Passed** TCC on both correlation and emergency nature and **Passed** Panel ballot on both technical merit and emergency nature. See Attachment 11-10-3-b |
| 11-10-3-c | One public comment was received. See Attachment 11-10-3-c |

## 11-10-4

Act on the issuance of proposed Tentative Interim Amendment (TIA) to Section 625.13 of the 2011 edition of NFPA 70®, *National Electrical Code®*, (TIA No. 1037) Comment closing
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-10-4-a</td>
<td>Text of proposed TIA No. 1037. See Attachment 11-10-4-a</td>
</tr>
<tr>
<td>11-10-4-b</td>
<td>Ballot results of TIA No. 1037. <strong>Passed</strong> TCC on both correlation and emergency nature and <strong>Passed</strong> Panel ballot on both technical merit and emergency nature. See Attachment 11-10-4-b  &lt;sup&gt;See SA Attachment 11-10-4-b&lt;/sup&gt;</td>
</tr>
<tr>
<td>11-10-4-c</td>
<td>Nineteen public comments received. See Attachment 11-10-4-c  &lt;sup&gt;See SA Attachment 11-10-4-c&lt;/sup&gt;</td>
</tr>
<tr>
<td>11-10-5</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to Section 625.14 of the 2011 edition of NFPA 70®, <em>National Electrical Code</em>®, (TIA No. 1038) Comment closing date was September 9, 2011.  &lt;sup&gt;See Attachment 11-10-4-a&lt;/sup&gt;  &lt;sup&gt;See SA Attachment 11-10-4-a&lt;/sup&gt;</td>
</tr>
<tr>
<td>11-10-5-a</td>
<td>Text of proposed TIA No. 1038. See Attachment 11-10-4-a</td>
</tr>
<tr>
<td>11-10-5-b</td>
<td>Ballot results of TIA No. 1038. <strong>Passed</strong> TCC on both correlation and emergency nature and <strong>Passed</strong> Panel ballot on both technical merit and emergency nature. See Attachment 11-10-5-b  &lt;sup&gt;See SA Attachment 11-10-5-b&lt;/sup&gt;</td>
</tr>
<tr>
<td>11-10-5-c</td>
<td>Fourteen public comments received. See Attachment 11-10-5-c  &lt;sup&gt;See SA Attachment 11-10-5-c&lt;/sup&gt;</td>
</tr>
<tr>
<td>11-10-6</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to Section 4.1.6.3 (New), A.4.1.6.1, and A.4.1.6.3 (New) of the 2012 edition of NFPA 407, <em>Standard for Aircraft Fuel Servicing</em>, (TIA No. 1029) Comment closing date was September 9, 2011.  &lt;sup&gt;See Attachment 11-10-4-a&lt;/sup&gt;  &lt;sup&gt;See SA Attachment 11-10-4-a&lt;/sup&gt;</td>
</tr>
<tr>
<td>11-10-6-a</td>
<td>Text of proposed TIA No. 1029. See Attachment 11-10-6-a</td>
</tr>
<tr>
<td>11-10-6-b</td>
<td>Ballot results of TIA No. 1029. <strong>Passed</strong> TC ballot on both technical merit and emergency nature. See Attachment 11-10-6-b</td>
</tr>
<tr>
<td>11-10-6-c</td>
<td>One public comment received. See Attachment 11-10-6-c</td>
</tr>
<tr>
<td>11-10-7</td>
<td>Act on the issuance of proposed Tentative Interim Amendment (TIA) to Section 7.3.3 and 7.3.4 of the 2007 and the proposed 2012 editions of NFPA 1911, <em>Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus</em> (TIA No. 1030). Comment closing date was September 9, 2011.  &lt;sup&gt;See SA Attachment 11-10-4-a&lt;/sup&gt;  &lt;sup&gt;See SA Attachment 11-10-4-a&lt;/sup&gt;  &lt;sup&gt;See Regs at 5.9&lt;/sup&gt;</td>
</tr>
<tr>
<td>11-10-7-a</td>
<td>Text of proposed TIA No. 1030. See Attachment 11-10-7-a</td>
</tr>
<tr>
<td>11-10-7-b</td>
<td>Ballot results of TIA No. 1030. <strong>Failed</strong> TC ballot on both technical merit and emergency nature. See Attachment 11-10-7-b</td>
</tr>
<tr>
<td>11-10-7-c</td>
<td>One public comment received. See Attachment 11-10-7-c</td>
</tr>
</tbody>
</table>
| 11-10-8 | Consider the request of the Technical Rescue Technical Committee (TC) to change the title of the Committee to better reflect the committee scope and document for which they are responsible.  <br>**Current Committee Title:** Technical Rescue  <br>**Proposed Committee Title:** Technical Search and Rescue  <br>**Current Committee Scope:** This Committee shall have primary responsibility for documents on technical search and rescue techniques, operations, and procedures to develop efficient, proper, and safe utilization of personnel and...
Consider the request of the Chair of the Hazardous Materials Response Personnel Technical Committee (TC) to revise the scope of the Committee as follows:

**Current Committee Scope:** This Committee shall have primary responsibility for documents on the requirements for the professional competence, training, procedures, and equipment for emergency responders to hazardous materials incidents.

**Proposed Committee Scope:** This Committee shall have primary responsibility for documents on the requirements for the professional qualifications, professional competence, training, procedures, and equipment for emergency responders to hazardous materials/weapons of mass destruction incidents.

See Attachment 11-10-9

Consider the request of the Chair of the Fire Service Occupational Safety and Health Technical Committee (TC) to revise the scope of the Committee as follows:

**Current Committee Scope:** This Committee shall have primary responsibility for documents on occupational safety and health in the working environment of the fire service. The Committee shall also have responsibility for documents related to medical requirements for fire fighters.

**Proposed Committee Scope:** This Committee shall have primary responsibility for documents on occupational safety and health in the working environment of the fire service. The Committee shall also have responsibility for documents related to medical requirements for fire fighters, and the professional qualifications for Fire Department Safety Officer.

See Attachment 11-10-10

Consider the request from the Chair of the Emergency Medical Services Technical Committee (TC) to revise the scope of the Committee as follows:

**Current Committee Scope:** This Committee shall have primary responsibility for documents on the training and education requirements for personnel, personal protective equipment, health and safety programs, and quality assurance programs which incorporate physicians and the community planning process. It shall also be responsible for documents relating to emergency medical services, except those covered by other NFPA committees that may have primary responsibility.

**Proposed Committee Scope:** This Committee shall have primary responsibility for documents on the training and education requirements for personnel, personal protective equipment, health and safety programs, and quality assurance programs which incorporate physicians and the community planning process. It shall also be responsible for documents relating to emergency medical services, except those documents covered by other existing NFPA committees that may have primary responsibility.

See Attachment 11-10-11
<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11-10-12</td>
<td>Consider the request of the Traffic Control Incident Management Professional Qualifications Technical Committee (TC) to enter a new document, NFPA 1091, <em>Standard on Professional Qualifications for Traffic Control Incident Management</em> into the Fall 2014 revision cycle. The Council voted to proceed with the establishment of this proposed new document in August, 2010. See Attachment 11-10-12</td>
</tr>
<tr>
<td>11-10-13</td>
<td>Consider the request of Dean Larson of Larson Performance Consulting that NFPA consider the establishment of a new project on guide for using large buildings for mass shelters outside the sheltering provided by a non government organization such as the Red Cross. See Attachment 11-10-13</td>
</tr>
<tr>
<td>11-10-14</td>
<td>Consider the request of William Fitch, Chair of the Fire Tests Technical Committee (TC) that NFPA consider the establishment of a new document as a screening fire test standard for textiles based on the Small Scale test method. See Attachment 11-10-14.</td>
</tr>
<tr>
<td>11-10-15</td>
<td>ADMINISTRATIVELY WITHDRAWN FROM THIS AGENDA Informational discussion on Retail Sales of Fireworks.</td>
</tr>
<tr>
<td>11-10-16</td>
<td>ADMINISTRATIVELY WITHDRAWN FROM THIS AGENDA Information discussion on Anti-freeze.</td>
</tr>
<tr>
<td>11-10-17</td>
<td>Consider requests from NFPA Committees to change revision cycles for their documents:</td>
</tr>
<tr>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>77</td>
</tr>
<tr>
<td></td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>204</td>
</tr>
<tr>
<td></td>
<td>252</td>
</tr>
<tr>
<td></td>
<td>253</td>
</tr>
<tr>
<td></td>
<td>275</td>
</tr>
<tr>
<td></td>
<td>286</td>
</tr>
<tr>
<td></td>
<td>289</td>
</tr>
<tr>
<td></td>
<td>701</td>
</tr>
<tr>
<td></td>
<td>See Attachment 11-10-17</td>
</tr>
<tr>
<td>11-10-18</td>
<td>Hear the report from the High Rise Building Safety Advisory Committee. See Attachment 11-10-18</td>
</tr>
<tr>
<td>11-10-19</td>
<td>Hear the Report from the Policy and Procedures Task Group (S. Clary, Chair). No Attachment</td>
</tr>
<tr>
<td>11-10-20</td>
<td>Hear the Report of the Membership Task Group (K. Bell, Chair). No Attachment</td>
</tr>
<tr>
<td>11-10-20-a</td>
<td>Act on pending applications for Committee Membership.</td>
</tr>
<tr>
<td>11-10-20-b</td>
<td>Start-up Roster of the Combustible Dusts Technical Correlating Committee.</td>
</tr>
<tr>
<td>11-10-20-c</td>
<td>Start-up Roster of the Commissioning and Integrated Testing Technical Committee.</td>
</tr>
<tr>
<td>11-10-20-d</td>
<td>Review vote limited status of the Professional Qualifications Technical Correlating Committee members.</td>
</tr>
<tr>
<td>11-10-20-e</td>
<td>Annual Reappointment of Committee Members.</td>
</tr>
<tr>
<td>11-10-20-f</td>
<td>Member classification review.</td>
</tr>
<tr>
<td>11-10-21</td>
<td>Hear a report on the Minutes of the August 2011 meeting. No Attachment</td>
</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>11-10-22</td>
<td>Act on Schedules for Processing Committee Reports for F2014 and A2015 revision cycles. See SA Attachment 11-10-22</td>
</tr>
<tr>
<td>11-10-23</td>
<td>The Council approved the dates and places for upcoming meetings, as follows:</td>
</tr>
<tr>
<td></td>
<td>March 5-6, 2012</td>
</tr>
<tr>
<td></td>
<td>(TG Meeting 8:00 AM on March 5)</td>
</tr>
<tr>
<td></td>
<td>San Juan, PR</td>
</tr>
<tr>
<td></td>
<td>August 6-9, 2012</td>
</tr>
<tr>
<td></td>
<td>(TG Meeting 12:00 PM on August 6)</td>
</tr>
<tr>
<td></td>
<td>Quincy, MA</td>
</tr>
<tr>
<td></td>
<td>October 29-30, 2012</td>
</tr>
<tr>
<td></td>
<td>(TG Meeting 8:00 AM on October 29)</td>
</tr>
<tr>
<td></td>
<td>Santa Fe, NM</td>
</tr>
</tbody>
</table>
Item 11-10-1
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.
TIA FINAL TC BALLOT RESULTS

According to 5.4 in the NFPA (RGCP), the final results show this TIA HAS achieved the necessary votes on both Question 1 (Technical Merit) and Question 2 (Emergency Nature).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 22.

\[30 \text{ (eligible to vote)} – 1 \text{ (not returned)} – 0 \text{ (abstentions)} = 29 \times 0.75 = 21.75\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[30 \text{ eligible} ÷ 2 = 15 + 1 = 16 \text{ (this is the simple majority)}\]

30 Eligible to Vote
1 Not Returned (Dorini)

TC FINAL Ballot results for Technical Merit are as follows:
29 Agree
0 Disagree
0 Abstentions

FINAL ACTION: PASSED

TC FINAL Ballot results for Emergency Nature are as follows:
28 Agree (Snyder w/comment)
1 Disagree (Whitney)
0 Abstentions

FINAL ACTION: PASSED
Goyette, Joanne

From: Whitney, John [JWhitney@clarkefire.com]
Sent: Wednesday, July 27, 2011 5:22 PM
To: Goyette, Joanne
Cc: Duffy, Chad; Walker, Nancy; Foley, Patrick; Lipinski, Irene
Subject: RE: REMINDER--NFPA 20 Proposed TIA #1035 - Due Friday, July 29, 2011

Joanne,

Please see my ballot below.

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise Sections 11.4.1.2.4, A.11.4.1.2.1, and A.11.4.3.

X AGREE
DISAGREE*
ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:
*An explanation must accompany a disagreement or abstaining position.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

AGREE
X DISAGREE*
ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:
*An explanation must accompany a disagreement or abstaining position.

__There is approximately one year until the next revision on 20 will be issued. And much of that time will be lost to the process should a TIA be issued. Additionally many districts do not adopt new revisions of 20 as soon they are issued; therefore the 2010 revision is not even being used in many places. __

__This particular subject matter is one that regardless of what 20 says, will have to approved to the local fire marshal's satisfaction with or without this language revision. __

__Considering the adoption cycle of standards, the limited time until the revision of 20 and the regardless involvement of the local AHJ, I do not see a value in issuing a TIA.

Regards,
John

John Whitney
Senior VP
Clarke Fire Protection Products, Inc
513.520.5607 Cell

From: Goyette, Joanne [mailto:jgoyette@NFPA.org]
Sent: Wednesday, July 27, 2011 12:13 PM
To: Goyette, Joanne
Cc: Duffy, Chad; Walker, Nancy; Foley, Patrick; Lipinski, Irene
Subject: REMINDER--NFPA 20 Proposed TIA #1035 - Due Friday, July 29, 2011

Dear Committee Members:

This is a second reminder to let you know that the Due Date for your NFPA 20 TIA #1035 Ballot is Friday, July 29, 2011. Please return your ballot by fax to the following number: 617-984-7110 or by email to: jgoyette@nfpa.org. If you have any questions, please feel free to contact me.

October 13, 2011 Standards Council Agenda October 17-18, 2011 Page 10 of 331
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1035
To Revise Sections 11.4.1.2.4, A.11.4.1.2.1, and A.11.4.3 of the 2010 and Proposed 2013
Editions of NFPA 20,
Standard for the Installation of Stationary Pumps for Fire Protection

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise Sections 11.4.1.2.4, A.11.4.1.2.1, and A.11.4.3.

AGREE _______ DISAGREE* _______ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

Question 2: I agree that the subject is of an EMERGENCY NATURE.

AGREE _______ DISAGREE* _______ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

______________________________________________________________________________

______________________________________________________________________________

______________________________________________________________________________

Signature

Date 12/15/11

Name (Please Print) Darrel Suyten

Please return the ballot on or before Friday, July 29, 2011.

PLEASE RETURN TO:
Joanne Goyette, Administrator, Technical Projects
NFPA
1 Batterymarch Park
Quincy, MA 02169

FAX: (617) 984-7110

E-mail: jgoyette@nfpa.org

October 13, 2011 Standards Council Agenda October 17-18, 2011 Page 11 of 331
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-resistant 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.**
10.6.2.1 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 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.

10.6.2.1.1 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.

10.6.2.2 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.

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

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

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

ACETYLENE – FLAMMABLE GAS – NO SMOKING – NO OPEN FLAMES

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

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

10.6.2.6.2 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 provide 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.
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.
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.
TIA FINAL TC BALLOT RESULTS

According to 5.4 in the NFPA (RGCP), the final results show this TIA **HAS** achieved the necessary votes on both Question 1 (**Technical Merit**) and Question 2 (**Emergency Nature**).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is **18**.

\[28 \text{ (eligible to vote)} - 5 \text{ (not returned)} - 0 \text{ (abstentions)} = 23 \times 0.75 = 17.25\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[28 \text{ eligible} \div 2 = 14 + 1 = 15 \text{ (this is the simple majority)}\]

<table>
<thead>
<tr>
<th>Eligible to Vote</th>
<th>Not Returned (Barnes, Fast, Harris, Mills, Younis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>28</td>
<td>5</td>
</tr>
</tbody>
</table>

**TC FINAL** Ballot results for **Technical Merit** are as follows:

- 23 Agree
- 0 Disagree
- 0 Abstentions

**FINAL ACTION: PASSED**

**TC FINAL** Ballot results for **Emergency Nature** are as follows:

- 23 Agree
- 0 Disagree
- 0 Abstentions

**FINAL ACTION: PASSED**
Item 11-10-3
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 I 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.
TIA FINAL TCC BALLOT RESULTS

According to 5.4 in the NFPA (RGCP), the final results show this TIA HAS achieved the necessary votes on both Question 1 (Correlation Issues) and Question 2 (Emergency Nature).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 9.

\[12 \text{ (eligible to vote)} - 0 \text{ (not returned)} - 0 \text{ (abstention)} = 12 \times 0.75 = 9\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[12 \text{ eligible} \div 2 = 6 + 1 = 7 \text{ (this is the simple majority)}\]

12  Eligible to Vote
0   Not Returned

TCC FINAL Ballot results for Correlation Issues are as follows:
12  Agree
0   Disagree
0   Abstentions

FINAL ACTION: PASSED

TCC FINAL Ballot results for Emergency Nature are as follows:
12  Agree
0   Disagree
0   Abstentions

FINAL ACTION: PASSED

Final NEC-P4 Ballots are on the next page
According to 5.4 in the NFPA (RGCP), the final results show this TIA HAS achieved the necessary votes on both Question 1 (Technical Merit) and Question 2 (Emergency Nature).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 9.

\[11 \text{ (eligible to vote) } - 0 \text{ (not returned) } - 0 \text{ (abstention) } = 11 \times 0.75 = 8.25\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[11 \text{ eligible } ÷ 2 = 5.5 = 6 \text{ (this is the simple majority)}\]

TC FINAL Ballot results for Technical Merit are as follows:

11 Agree
0 Disagree
0 Abstentions

FINAL ACTION: PASSED

TC FINAL Ballot results for Emergency Nature are as follows:

11 Agree
0 Disagree
0 Abstentions

FINAL ACTION: PASSED
From: Ravi Ganatra [mailto:rganatra@cmewire.com]
Sent: Thursday, August 18, 2011 11:10 AM
To: TIA
Subject: Comment on TIA (TIA Log No. 1034)

Attn: Ms. Amy Beasley Cronin - Secretary, Standards Council
1 Batterymarch Park, Quincy, MA 02169-7471

Dear Ms. Cronin,

Comment on Tia Log No. 1034

As a member of NFPA, I would like to express my support for the TIA Log No. 1034. Conductors permitted for use in Cable Trays are identified as such (ex: "For CT Use") for different types of insulations that are recognized in the NEC and are required in accordance with the applicable product standards. Limiting the use to "thermoplastic insulation" for conductors that are suitable for use in cable trays (with "CT Use" markings has no technical merit over other recognized materials that are also recognized in the NEC and permitted in accordance with the applicable product standards for same application.

Sincerely,

Ravi Ganatra

Ravi Ganatra
Engineering Manager

CME Wire & Cable, Inc.
495 Horizon Drive NE, Suite 100
Suwanee, GA 30024

Ph.: (770)623-0001 X 227
Cell: (404)-503-2306
Fax: (678)546-5729
rganatra@cmewire.com
www.cmewire.com

CONFIDENTIALITY NOTICE: Unless indicated otherwise or obvious from the nature of the transmittal, the information contained in this e-mail is confidential information intended for the use of the individual or entity named above. If the reader of this message is not the intended recipient, or the employee or agent responsible to deliver it to the intended recipient, you are hereby notified that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please immediately notify the sender and destroy such e-mail. Thank you.
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. 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.
TIA FINAL TCC BALLOT RESULTS

According to 5.4 in the NFPA (RGCP), the final results show this TIA HAS achieved the necessary votes on both Question 1 (Correlation Issues) and Question 2 (Emergency Nature).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 9.

\[ 12 \text{ eligible to vote} - 0 \text{ not returned} - 0 \text{ abstention} = 12 \times 0.75 = 9 \]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[ 12 \text{ eligible} \div 2 = 6 + 1 = 7 \text{ (this is the simple majority)} \]

12 Eligible to Vote
0 Not Returned

TCC FINAL Ballot results for Correlation Issues are as follows:
12 Agree
0 Disagree
0 Abstentions

FINAL ACTION: PASSED

TCC FINAL Ballot results for Emergency Nature are as follows:
11 Agree
1 Disagree (Hittinger)
0 Abstentions

FINAL ACTION: PASSED

Final NEC-P12 Ballots are on the next page
According to 5.4 in the NFPA (RGCP), the final results show this TIA **HAS** achieved the necessary votes on both Question 1 (*Technical Merit*) and Question 2 (*Emergency Nature*).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 9.

\[14 \text{ (eligible to vote)} - 3 \text{ (not returned)} - 0 \text{ (abstention)} = 11 \times 0.75 = 8.25\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[14 \text{ eligible} ÷ 2 = 7 + 1 = 8 \text{ (this is the simple majority)}\]

**TC FINAL** Ballot results for *Technical Merit* are as follows:
- 10 Agree (Clark w/comment)
- 1 Disagree (Holmes)
- 0 Abstentions

**FINAL ACTION: PASSED**

**TC FINAL** Ballot results for *Emergency Nature* are as follows:
- 11 Agree
- 0 Disagree
- 0 Abstentions

**FINAL ACTION: PASSED**
NEC TECHNICAL CORRELATING COMMITTEE
LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1037
To Revise 625.13 of the 2011 Edition of the NEC

Question 1: I agree that there are no correlation issues in accordance with 3.4.2 and 3.4.3 (copy enclosed) of the NFPA Regs.

X AGREE  DISAGREE*  ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position. If disagreeing, cite relevant section(s)/paragraph(s) of the correlation issue and describe.


Question 2: I agree that the subject of this TIA is of an EMERGENCY NATURE.

X AGREE  DISAGREE*  ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a negative/disagreement or abstaining position.

The 2011 NEC presently allows the use of EYSE above 125 volts as long as the requirements of 625.18 and 625.19 are met. This was addressed in the various panel statements in both the ROP and the ROC documents. This is more an issue of education and in our opinion is not of an emergency nature. Clarity in the present code language can be addressed in the upcoming code cycle.

Signature

Name (Please Print)  David Hittinger

Date  8/26/2011

Please return the ballot as soon as possible, however, no later than Thursday, September 1, 2011.

PLEASE RETURN TO:
Jean O’Connor, Technical Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169  FAX: (617) 984-7070  E-mail: joconnor@nfpa.org

TIA TCC Ballot Form – September 30, 2009
NEC CODE-MAKING PANEL 12
LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT NO. 1037
To Revise 625.13 of the 2011 Edition of NFPA 70,
National Electrical Code

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 625.13

__________________ AGREE ___________ DISAGREE* ___________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

NEW LANGUAGE WOULD ALLOW A 40 AMP PORTABLE 240-V USE. (Safety Concerns). All other Appliances of that Ampage ARE CONSIDERED FASTED IN PLACE AND ARE NOT INTENDED TO BE MOVED. DOES NOT MEET 316 (MANUAL REQUIREMENTS FOR 1ST Level 2nd Level Subdivisions No Titles).

Question 2: I agree that the subject is of an EMERGENCY NATURE.

X AGREE ___________ DISAGREE* ___________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.


Signature
Jeffrey L. Holmes

Name (Please Print)
Jeffrey L. Holmes

Date
8/11/11

Please return the ballot on or before Friday, August 12, 2011

PLEASE RETURN TO:
Jean O’Connor, Technical Projects Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169  FAX: (617) 984-7070  E-mail: joconnor@nfpa.org

TIA TC Ballot Form – September 30, 2009

October 13, 2011  Standards Council Agenda October 17-18, 2011  Page 35 of 331
NEC CODE-MAKING PANEL 12
LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT NO. 1037
To Revise 625.13 of the 2011 Edition of NFPA 70,
National Electrical Code

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 625.13

   X  AGREE  DISAGREE*  ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

___ EVSE technology is moving ahead very quickly and the Code must reflect new
technology as much as possible. This TIA will allow for this new field to expand
by resolving ambiguous Code language

Question 2: I agree that the subject is of an EMERGENCY NATURE.

   X  AGREE  DISAGREE*  ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

\[Signature\]

Phil Clark
Name (Please Print)

August 19, 2011
Date

Please return the ballot on or before Friday, August 12, 2011

PLEASE RETURN TO:
Jean O'Connor, Technical Projects Administrator
NFPA
1 Batterymarch Park

TIA TC Ballot Form – September 30, 2009
TIA FINAL TCC BALLOT RESULTS

According to 5.4 in the NFPA (RGCP), the final results show this TIA HAS achieved the necessary votes on both Question 1 (Correlation Issues) and Question 2 (Emergency Nature).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 9.

\[(12 \text{ eligible to vote} - 0 \text{ not returned} - 0 \text{ abstention}) = 12 \times 0.75 = 9\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[12 \text{ eligible} \div 2 = 6 + 1 = 7 \text{ (this is the simple majority)}\]

<table>
<thead>
<tr>
<th>Eligible to Vote</th>
<th>Not Returned</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>0</td>
</tr>
</tbody>
</table>

TCC FINAL Ballot results for Correlation Issues are as follows:

- 12 Agree
- 0 Disagree
- 0 Abstentions

**FINAL ACTION: PASSED**

TCC FINAL Ballot results for Emergency Nature are as follows:

- 11 Agree
- 1 Disagree (Hittinger)
- 0 Abstentions

**FINAL ACTION: PASSED**

*Final NEC-P12 Ballots are on the next page*
According to 5.4 in the NFPA (RGCP), the final results show this TIA HAS achieved the necessary votes on both Question 1 (Technical Merit) and Question 2 (Emergency Nature).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 9.

\[14 \text{ (eligible to vote)} - 3 \text{ (not returned)} - 0 \text{ (abstention)} = 11 \times 0.75 = 8.25\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[14 \text{ eligible} ÷ 2 = 7 + 1 = 8 \text{ (this is the simple majority)}\]

---

14 Eligible to Vote
3 Not Returned (Anderson, Marcovici, Ward)

TC FINAL Ballot results for Technical Merit are as follows:
10 Agree (Clark w/comment)
1 Disagree (Holmes)
0 Abstentions

FINAL ACTION: PASSED

TC FINAL Ballot results for Emergency Nature are as follows:
11 Agree
0 Disagree
0 Abstentions

FINAL ACTION: PASSED
From: Richard.Steinberg@MINIUSA.COM  
Sent: Friday, September 09, 2011 10:32 AM  
To: Walker, Nancy  
Subject: FW: Proposed NEC code/NFPA amendments - EVSEs

NFPA:

My name is Rich Steinberg and I run the Electric Vehicle program for BMW North America. I am writing to you today in regard to the proposed amendments to NEC 625.

As you may know, we have extensive recent experience with EVSE installations with the MINI E program back in 2009. While many improvements have occurred of late with the launch of other BEVs from Chevrolet and Nissan (and others), there is still much room for improvement in the whole consumer experience surrounding the installation of EVSE equipment.

The proposed changes to NEC 625 will significantly change the landscape for installations. Based on our MINI E experiences, the unpredictable delays associated with the permitting/inspection process and the lack of understanding of the EVSE technology by municipal authorities led to substantial consumer frustrations that potentially jeopardized vehicle sales and ultimately EV acceptance.

A “plug in” solution that would be similar to installing an outlet in a consumer’s garage to support a dryer or range would take the mystery out of the permitting/inspection process.

To be perfectly honest, when we were selecting a vendor to provide EVSE hardware/installation services for our next EV, the BMW ActiveE coming later this year, we were hoping to convert to a plug-in device. We referred to this internally as the “holy grail” solution, if that gives you any indication as to how we view this technology.

However, given the current status of the NEC regulations, we weren’t comfortable moving forward with a vendor offering this plug-in technology because there was too much uncertainty surrounding the code.

As we move forward with our EV plans (our next generation EVs will arrive in 2013 – the BMW i3 and i8 that will be part of our new i sub-brand), we will most definitely consider offering plug-in EVSEs if the proposed amendment is approved. This would streamline the installation process in a big way and remove one of the primary barriers to purchase of EVs.

I would also like to point out one additional advantage of the plug-in EVSE technology. Using a standard “dryer-like” outlet, customers that are moving their household to a new community would be able to bring their EVSE with them. During our MINI E field trial, we had quite a few customers move house, and we had to rewire their new homes, which isn’t an inexpensive proposition. If we had a plug in solution, the customer could simply have a “dryer-like” outlet installed and bring their charging equipment with them.

The same circumstances would be of interest for used car buyers of EVs. When a vehicle is still new, we can help steer the customer through the EVSE installation process as an OEM. This will not be so easy to manage for used vehicles, so a plug in solution would streamline the process and increase the values in the used EV market.

Thank you for your consideration. Please let me know if you would like any additional feedback regarding this amendment.

RS

Richard Steinberg  
Manager, Electric Vehicle Operations and Strategy  
Richard.Steinberg@bmwna.com  
201-307-3859  

BMW of North America, LLC  

Curious about the Future of Mobility? -- Join the Conversation now!  

ACTIVATE THE FUTURE  
BMWActivateTheFuture.com
Essentially, there is not an Emergency Nature and the technical merits are not substantiated.  

Please pass along to the TC for consideration:

Thanks
Steve Campolo

Public Comment on NEC TIA 1037

TIA 1037 does not rise to the level of an emergency in nature. The substantiation cites AHJ confusion regarding the NEC’s allowance of cord connected EVSE’s at voltages higher than 120V.

Since there are cord connected UL Listed EVSE’s at greater than 120V and found suitable for installation, the Code is clear in this area, although improvement on this single issue can be made.

Simple editorial corrections do not warrant the emergency nature and purpose that TIA’s are intended for. The present Chair of the Code Panel has suggested a Formal Interpretation asking the simple question of (paraphrasing) “cord connected 250V; Yes or No” and has indicated that he would answer YES.

Additionally, during the work of a task group to address this matter, it was suggested to modify the explanatory material in the NEC handbook with an errata; this was rejected by the task group.

The request for the TIA should not have been allowed as there is no documentation that proves an emergency exists, nor any explanation as to meeting 5.2 of the TIA regulations.

The content of the TIA attempts to write Code language mid-cycle bypassing the normal Code process. Had the TIA simply addressed the sole issue of cord connected EVSE’s at voltages greater than 120v (which the substantiation spoke of), there may have been an argument. By completely re-writing 625.13 and adding additional requirements not found in article 625, this is a mid-cycle proposal without the benefit of the normal due process.

Simply, the stated issue of confusion over cord connected EVSE’s at voltages greater than 120V could have been addressed by much less severe remedies such as a Handbook errata or a Formal Interpretation.

A TIA that goes well beyond the issues cited in the substantiation is improper at this time, and the full content is best left for an in-cycle normal proposal.

Finally, if an AHJ was pre-disposed not to allow cord connected EVSE's at greater than 120V, this TIA would provide greater ammunition by the additions of 625.13(B)3,4 & 5 since they provide no guidance to judge acceptability. The additions of 625.13(B) 3, 4 & 5 are new material and should not bypass the full public Code cycle in the normal fashion.
Ms. Walker,

San Diego Gas & Electric has played a major supportive role with respect to the recent rollout of plug-in electric vehicles (PEVs) in the San Diego region and we are very interested in doing everything we can to make this effort a long-term success. We are proud that approximately 10% (over 550) of all Nissan Leaf plug-in electric vehicles sold to date in the U.S. are located in our service territory.

I am writing this morning to let you know that we were recently made aware of two Temporary Interim Amendments (TIAs) that clarify NEC Article 625 with respect to Electric Vehicle Supply Equipment (EVSEs). The revisions to Article 625.13 will allow plug and cord connected EVSEs up to 125v and 250v, and the revisions to Article 625.14 will allow a load management device to switch between a bank of EVSEs at a customer site rather than requiring a feeder line that is capable of charging all connected vehicles at once.

We are extremely supportive of these two TIAs, as they will bring positive benefits to our customers who are looking at the options for installing EVSEs at their premises. EVSE installation costs can be a significant barrier to PEV customers, and these TIAs will help cut both cost and time out of the installation and inspection processes. Anything we can do to help reduce those costs would be most welcome by our customers and potential PEV buyers nationwide.

In addition to supporting these two TIAs, we also support classifying them as “Exceptions” to the normal NFPA code process as we believe both of these items are critical to the successful adoption of plug-in electric vehicles. These two amendments will help to reduce cost and complexity with respect to customer EVSE installations, and we think it is important to implement these two amendments as quickly as possible. Without the “Exception” process, our understanding is that it could take as long as 2014 to implement the amendments, and in our opinion, we will lose critical momentum to attract mainstream consumers to PEVs.

Thank you for your support in this matter,

Joel Pointon
Clean Transportation
Electric Transportation Program Manager
SDG&E

October 13, 2011
October 13, 2011
Standards Council Agenda October 17-18, 2011
Page 44 of 331
TIA 1037

NEC Code Making Panel 12

Letter Ballot response. For Technical Merits of the proposed TIA to revise 625.13
We disagree for the reasons below:

The 6 foot restriction is not practical for all charging applications of commercial trucks. Many of our receptacles will be placed high on the body to protect the receptacle. The cords need to have a 12 foot range to accommodate this requirement. The language should read, no longer than 12 ft. If we agree to a 6 foot standard, the manufactures will only produce them in that length. It will be very costly for longer cords to be produced. There are many anti-chaff products to prevent cord damage; we have been using high voltage cords in aerospace applications for many years for aircraft ground power units. These cords are drug around very abrasive ramps. We need to set standards for the cable coating to be robust enough to endure normal usage.

Contact information:
Michael G Britt Sr.
55 Glenlake Parkway
Atlanta GA 30328
Office 404 828-461
Cell 949 697-1078
Fax 404 828-8150
mbritt@ups.com
I do not agree that a TIA is an appropriate vehicle for implementing a mid-cycle code change without an emergency. In the event the code panel disagrees and deems TIA 1037 an emergency, then my requested changes are as follows:

1. 625.13 (B) (5) "Receptacles are located to avoid physical damage to the flexible cord." The statement should align with the existing Article 400.8 (7) Uses not permitted (7) "where subject to physical damage."
   Justification: consistency within the Codebook NFPA70

2. 625.13 (B) (3) c. The term portable should not introduced without further review. It's recommended that 625.13 (B) (3) c. be removed from the TIA.
   Justification: UL has defined and incorporated the terms portable, stationary, moveable and permanent. The verbiage should align with the UL definitions or it will be confusing due to various EVSE definitions.

3. 625.13 (B) 4 Power supply cord length for electric vehicle supply equipment fastened in place is limited to 6ft. (1.8m) should be removed.
   Justification: Article 625.22 already states the following: "Where cord and plug connected electric vehicle supply equipment is used, the interrupting device of a personal protection system shall be provided and shall be an integral part of the attachment plug or shall be located in the power supply cable not more than 300m (12in.) from the attachment plug." If the EVSE is hardwired there is no length limit so the proposed statement doesn’t make sense and conflicts with Article 625.22.

Sincerely,

Kenneth J. Brown
Director Engineering (C&I) San Diego
From: Bell, Chad [Chad.Bell@bestbuy.com]
Sent: Friday, September 02, 2011 10:36 AM
To: Walker, Nancy
Subject: RE: Comments on Article 625 of the National Electrical Code (NEC)

Nancy,
Best Buy supports the amendment’s objectives of accelerating the installation of infrastructure and reducing regulatory permitting burdens associated with expanding infrastructure.

Please contact me with questions/comments.
Chad

Chad Bell
Platform Lead/Sr.Director - Personal Mobility
New Business Solutions Group
Best Buy Company
(612) 291-5025 (Work)
(612) 670-8950 (Cell)
c.hawk73 (Skype)
Twitter
GoElectricDrive
Nancy/NFPA -

I am the Director of Electric Vehicle Infrastructure Commercialization for General Motors. After 9 months of overseeing the installation of 240V EVSEs to support new customers of our Chevrolet Volt electric vehicle program we are convinced that we need to make 2 urgent clarifications to the NEC 625 electrical code to streamline the EVSE installation and inspection processes and lower consumer costs. These are time-sensitive amendments and we fully support their implementation and we encourage you to approve them now.

The average home installation cost today is approximately $1,500 - this is not including the cost of the EVSE hardware. So it is no surprise that one of the most common complaints lodged by new electric vehicle customers to date on various blog sites is the fact that the installation of a 240V charger is excessively costly and complex. This is an obvious barrier to large mainstream market adoption of plug-in electric vehicles. In fact, the process of installing a 240V EVSE at a home should not be much different than installing an electric clothes dryer. These two amendments will accomplish the goal of simplifying the EVSE installation and inspection processes by allowing a plug and cord-connected solution for EVSEs and by recognizing the role of a load management device to determine a logical feeder line capacity requirement where banks of EVSEs are being installed.

We launched the Chevy Volt in December of 2010 and we are progressively increasing our production rates to bring the Volt to increasingly larger markets. Any real or even perceived barriers about the difficulty and/or cost of installing EVSEs or inspecting these EVSEs following installation could significantly impact the success of the Chevy Volt and other electric vehicles in the market. And waiting until 2014 for these particular changes to follow the formal NFPA code modification process would represent a significant risk to the successful early rollout of plug-in electric vehicles to consumers.

Immediate approval of these two amendments will give both electrical contractors and inspectors the clarity they are looking for to allow these logical improvements to the existing code and ensure that installations of EVSEs to support plug-in vehicle charging are as safe, efficient and cost-effective as possible.

We appreciate very much your efforts to support this important cause.

Regards -

Britta Gross

Britta K. Gross
GM, R&D and Strategic Planning
Director, Global Energy Systems & Infrastructure Commercialization
tel: 586-596-0382
britta.gross@gm.com

Nothing in this message is intended to constitute an electronic signature unless a specific statement to the contrary is included in this message.

Confidentiality Note: This message is intended only for the person or entity to which it is addressed. It may contain confidential and/or privileged material. Any review, transmission, dissemination or other use, or taking of any action in reliance upon this message by persons or entities other than the intended recipient is prohibited and may be unlawful. If you received this message in error, please contact the sender and delete it from your computer.
I have read the Submitter's substantiation and saw no reason that this equipment needs cord connection any differently than other fastened -in-place equipment. I would like you to reject this TIA for this reason only, the other changes seem to have some merit.

Just because a huge industry wants an easier way to do something doesn't mean that we should conform to their wishes.

Jim Smithberg
Electrician
BDEC
Columbus, ND
September 6, 2011

Secretary, Standards Council
1 Batterymarch Park
Quincy, MA 02169-7471

RE: Commit on NFPA 70-2011 TIA Log No. 1037

I would like to express my thoughts regarding TIA 1037 for Section 625.13 for the connection of electrical vehicle supply equipment.

The electrical inspection community has express full support of the implementation of electric vehicles. Some have felt that this change would assist in making the correct interpretation of the code.

I understand the confusion that exists around the current language and the new language makes it clear that cord and plug connected EVSE is permitted. I am expressing my support the inclusion of the language proposed in the TIA. I attended the SAE-NFPA EV Safety Summit and this issue was discussed. The language in the TIA does a good job of tying back to NEC 400.7 to clearly provide permission to use cord in these installations. The 50A limitation placed on the cord and plug is also appropriate and consistent with amperage levels currently encountered in the home by the general public and users. It is important that this be changed prior to the next edition so that the implementation of electric vehicles is not negatively impacted and that the code is being enforced uniformly across the country.

Very truly yours

[Signature]

David Williams
Electrical Inspector
Delta Township, Lansing, Michigan
From: Colleen Quinn [mailto:colleenquinn@gmail.com]
Sent: Wednesday, September 07, 2011 10:01 AM
To: Walker, Nancy
Subject: Fwd: EDTA | Time Sensitive - Support NFPA Amendment by September 9th

Coulomb Technologies is a member of EDTA and an Electric Vehicle Services Equipment Manufacturer and Service Provider. Headquartered in Silicon Valley California we are the industry leader in EV Charging Services with the first networked system and over 7,000 customers globally.

We enthusiastically support these changes. We have participated with NEMA and our Chief Technology Officer, Richard Lowenthal chairs the standards committee.

Please do not hesitate to contact us if you have any questions.

Sincerely,
Colleen Quinn
Vice President Government Relations and Public Policy
Coulomb Technologies, Inc

---------- Forwarded message ----------
From: Brian Wynne <bwnynne@electricdrive.org>
Date: Wed, Aug 31, 2011 at 5:39 PM
Subject: EDTA | Time Sensitive - Support NFPA Amendment by September 9th
To:

Dear EDTA Member,

EDTA has been asked by one of its members to support the effort to amend Article 625 of the National Electrical Code (NEC), dealing with infrastructure for electric vehicles. A task force of the National Fire Protection Association (NFPA) has looked at this issue in-depth and reached conclusions summarized in the attached documents.

The success of this amendment will greatly depend on broad cross-industry support. **If your company would like weigh in support of the amendment, send your comments on these 2 proposed TIA's (Temporary Interim Amendments) by Sept 9th in a simple email to Nancy Walker at nwalker@nfpa.orgto.**

Although EDTA has no technical standing on this task force, EDTA plans to generally support the amendment’s objectives of accelerating the installation of infrastructure and reducing regulatory permitting burdens associated with expanding infrastructure. If you have a substantive objection to EDTA’s endorsement of the amendment effort, please respond to me ASAP.

Sincerely, Brian

Brian Wynne | President
Subject: FW: EDTA Comment on Amendment

From: Brian Wynne [mailto:bwynne@electricdrive.org]
Sent: Thursday, September 08, 2011 6:00 PM
To: Maynard, Mary
Subject: EDTA Comment on Amendment

The Electric Drive Transportation Association (EDTA) is the preeminent US industry association dedicated to the promotion of electric drive as the best means to achieve the highly efficient and clean use of secure energy in the transportation sector.

I am writing to convey our agreement with TIA 1037 to 625.13. Our members believe that it should be adopted as soon as possible in support of the overall objective of electrifying transportation. Specifically, we believe that immediate approval of this amendment will give electrical contractors, code officials, and inspectors greater clarity and ensure that installations of EVSEs to support plug-in vehicle charging are safe, efficient and cost-effective.

Thank you for your consideration of EDTA’s support in this matter.

Sincerely,

Brian Wynne | President
EDTA - Electric Drive Transportation Association

1101 Vermont Ave NW, Suite 401, Washington, DC 20005
+1 (202) 408-0774 x 307 (office) | +1 (202) 408-7610 (fax)
bwynne@electricdrive.org |
ElectricDrive.org | GoElectricDrive.com
Subject: FW: Public Comment on TIA 1037 to Section 625.13 of the NEC

From: Rosenstock, Steven
Sent: Thursday, September 08, 2011 2:58 PM
To: nwalker@nfpa.org
Subject: Public Comment on TIA 1037 to Section 625.13 of the NEC

I am the Manager of Energy Solutions for the Edison Electric Institute (EEI). EEI and its member companies are very involved with projects associated with the rollout of plug-in electric vehicles for light, medium, and heavy-duty markets. For the record, EEI is in complete agreement with TIA 1037 to 625.13 and agrees with the emergency nature and the technical merits of the TIA.

We are in agreement with other parties that immediate approval of this amendment will give electrical contractors, code officials, and inspectors the clarity they are looking for. TIA 1037 to 625.13 makes improvements to the existing code, and it will ensure that installations of EVSEs to support plug-in vehicle charging are as safe, efficient and cost-effective as possible.

Thank you for your review of our public comment. Please let me know if you need any further information.

Steve Rosenstock
Manager, Energy Solutions
Edison Electric Institute
srosenstock@eei.org
202-508-5465
Proposed Tentative Interim Amendments

No. 1037 and 1038

Date: 09/07/2011
To: Jean A. O'Connor
Cc: Dennis Clements, Rod Belisle
From: Dale L. Garcia
RE: General Overview

After reviewing the proposed Tentative Interim Amendments No. 1037 and 1038 with the Chief Electrical Inspector for the State of Oregon, our local union advisory person and utility representatives the following conclusions were made:

1. The proposed adjustments appear to be appropriate to provide a more consistent interpretation of the rules that specifically apply to the Electric Vehicle (EV) charging equipment presently being produced and installed in support of the Electric Vehicle technology requirements.

2. The proposed adjustments appear to supply needed clarification of code related rules as they apply to EV infrastructure installation requirements per the NEC in Article 625 and other sections.

3. The proposed adjustments appear to improve the consistency and uniform application of the rules in Article 625 and associated articles.

4. Although these adjustments may not meet the typical definition of an "emergency" it is apparent that the changes should be implemented promptly to adjust code language to a level consistent with the industries present "best practices" and to facilitate improved language adjustments during the next code revision cycle.

Based on the information above, as a public comment, PGE is supportive of the proposed amendments and advancement in the NEC language as it applies to the Electric Vehicle rules specifically covered in articles 625 and others related sections of the NEC code.

Dale L. Garcia
Project Manager EV Program
Portland General Electric - Portland Oregon

09/07/2011  Confidential
Subject: NEC Article 625 - Proposed Temporary Interim Amendments (TIAs)

Coulomb Technologies has played a major role with respect to the rollout of plug-in electric vehicles (PEVs) across the United States and we are very interested in doing everything we can to make this industry a long-term and safe success. We are proud that 5,000 Coulomb ChargePoint charge stations have been installed with expectations for thousands more in the next year.

We are familiar with the two Temporary Interim Amendments (TIAs) that clarify NEC Article 625 with respect to Electric Vehicle Supply Equipment (EVSEs). The revisions to Article 625.13 will allow plug and cord connected EVSEs up to 125V and 250V, and the revisions to Article 625.14 will allow a load management device to switch between a bank of EVSEs at a customer site rather than requiring a feeder line that is capable of charging all connected vehicles at once. We believe these two measures will both significantly increase the safety of EVSE installations.

We are extremely supportive of these two TIAs, as they will bring positive benefits to our customers who are looking at the options for installing EVSEs at their premises. EVSE installation costs can be a significant barrier to PEV customers, and these TIAs will help cut both cost and time out of the installation and inspection processes. Anything we can do to help reduce those costs would be most welcome by our customers and potential PEV buyers nationwide.

In addition to supporting these two TIAs, we also support classifying them as "Exceptions" to the normal NFPA code process. These two amendments will help to reduce cost and complexity and improve safety with respect to customer EVSE installations, so it is important to implement these two amendments as quickly as possible.

Most importantly there are significant safety issues associated with installers not having the guidance these TIA's provide. We know of cases where EVSE was install plug-connected without the safety guidance that TIA 1037 adds, which we believe is unsafe. In fact, at the urging of an automaker we contacted one of our customers about their unsafe plug attachment. In the absence of the TIA, people are adding plugs anyway but in an unsafe way. We also have observed cases where EVSE has been installed without the load management features of the TIA 1038, and without doing the proper load calculations. These kinds of installations are happening daily and these TIA's will make both situations significantly safer.

Thank you for your support in this matter.

Sincerely,

[Signature]

Richard Lowenthal
Founder and Chief Technical Officer
Coulomb Technologies
(408) 841-4501
Richard.lowenthal@coulombtech.com
Sep. 8, 2011

National Fire Protection Association

Subject: Amendment support to NEC Article 625

Duke Energy is in support of the following 2 Temporary Interim Amendments (TIAs) to NEC Article 625 that deals with electrical codes relative to EVSE installations for EV charging:

- Allow plug and cord connected EVSEs. This will simplify and reduce the cost of the current 240V EVSE installation process.
- Allow a load management device to switch between a bank of EVSEs at a site so that you do not have to design a feeder line that must charge all vehicles at once

These two items are critical to the early success of plug-in electric vehicles because it will help to reduce the cost and complexity of the EVSE installation process (home, multi-family dwellings, workplace, and public installations). The amount of money required to install an EVSE is currently a significant barrier to PEV customers. The average cost to install a 240V EVSE in a residential location for a PEV customer is approximately $1000, plus the cost of the EVSE itself. This current price point makes it challenging for general consumers to accept and adopt electric vehicles.

The items proposed in these two TIAs will help reduce the cost and time in the installation and inspection processes. We understand the next code cycle to review amendments is not until 2014, but due to the critical nature of these items we request these two temporary interim amendments be rushed through the NFPA code process.

Sincerely,

Michael Rowand,  
Duke Energy  
Managing Director, Advanced Customer Technology

Jessica Bishop  
Duke Energy  
Plug-In Electric Vehicle Program Director
To Whom it May Concern;

Puget Sound Energy (PSE) wishes to express its support for the approval of TIAs No. 1037 and 1038. PSE supports the electrification of the transportation industry for several reasons. If well managed, this transition offers the potential to flatten load curves, increase asset utilization, provide a downward pressure on rates, and increase customer satisfaction. On a national scale, we recognize the collateral benefits of reducing air pollution and increasing energy independence. That said, only when PEV's achieve significant adoption will these benefits be realized.

The window to convince consumers to adopt PEV's may be a short one. Thus we believe that all actions that can be safely and prudently taken to reduce barriers to PEV adoption should be pursued quickly. We consider the issues contained in these TIAs as critical to the success of PEVs by making the process simpler and less expensive, thereby increasing the chances that these vehicles make it to the mainstream.

Thank you for your time and attention to this matter.

Sincerely,

Patrick

Patrick Leslie
Project Manager | Emerging Technologies | Puget Sound Energy
o: (425) 457-5739  m: (207) 400-2452
Dear Nancy,

Please accept this letter, on behalf of SPX Service Solutions, in support of NFPA TIA 1037 and TIA 1038 (NEC Articles 625.13 & 625.14 respectively).

Allowing plug and cord connected 240V EVSE installations, as well as allowing Energy Management Systems to help to reduce the size of feeder circuits to EVSE’s is necessary to evolve and support the adoption of Battery Electric Vehicles (BEV’s), Plug-in Hybrid Electric Vehicles (PHEV’s) and Plug-in Extended Range Electric Vehicles (EREV’s).

Many critical stakeholders have been involved in the work to prepare the referenced TIA’s, and the very collaborative effort is evidence of the type of synergies needed to move the EV industry forward safely and successfully by all involved.

Please consider our SPX support during the consideration period for the NEC Code making Panel 12 Standards Council issuance at the October meetings

With Best Regards

Mike Muller
Product Manager – Charging Technologies
SPX Service Solutions

28635 Mound Road
Warren, MI 48092

TEL +1 586-586-5879

MOB +1 586 292 2681
mike.muller@spx.com
www.spx.com
To Whom It May Concern:

Tesla Motors appreciates the inclusion of section 625.13(B) language concerning EV Supply Equipment Connections in the NFPA Amendment. We believe this will provide a more efficient mobile charging solution (EVSE rated 250 volts maximum, cord & plug connected).

We understand that several changes have been made to 625.13(B)(1) including the deletion of the requirement that the equipment be "installed indoors". Since there are a significant number of 250V rated outdoor outlets, we support modifying the language to allow EVSE to connect to outdoor 250V rated outlets, provided the EVSE is outdoor rated. In fact, allowing installation of EVSEs outdoors will assist greatly in the market introduction and adoption of electric vehicles.

Despite this goal, the current version of language does not satisfy this request. Specifically, and as shown below, reference to the requirements of 625.18, 625.19 and 625.29 may be inferred to require indoor installation, especially in the case of 625.29. This could be confusing to EVSE installers.

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 as 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.

<table>
<thead>
<tr>
<th></th>
<th>625.18</th>
<th>625.19</th>
<th>625.29</th>
<th>625.30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installed indoors</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Installed outdoors</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>
As a result of the foregoing potential confusion, we suggest the following modification of language to 625.13(B)(1) to clarify the true intent of the requirement:

(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 part of a listed system meeting the following requirements:
       (A) It is intended for connection to receptacle outlets rated no more than 50 amperes
       (B) It is installed to facilitate any of the following:
           i. Ready removal for interchange
           ii. Facilitate maintenance and repair
           iii. Repositioning of Portable, movable, or EVSE fastened in place
       (C) Power supply cord length for electric vehicle supply equipment fastened in place is limited to 6 ft (1.8m)
       (D) Receptacles are located to avoid physical damage to the flexible cord

Thank you for considering this modification. Please feel free to contact us at 650-867-6863 if you have any questions.

Sincerely,

Craig Carlson
From: Richard.Steinberg@MINIUSA.COM
Sent: Friday, September 09, 2011 10:32 AM
To: Walker, Nancy
Subject: FW: Proposed NEC code/NFPA amendments - EVSEs

'NFPA:

My name is Rich Steinberg and I run the Electric Vehicle program for BMW North America. I am writing to you today in regard to the proposed amendments to NEC 625.

As you may know, we have extensive recent experience with EVSE installations with the MINI E program back in 2009. While many improvements have occurred of late with the launch of other BEVs from Chevrolet and Nissan (and others), there is still much room for improvement in the whole consumer experience surrounding the installation of EVSE equipment.

The proposed changes to NEC 625 will significantly change the landscape for installations. Based on our MINI E experiences, the unpredictable delays associated with the permitting/inspection process and the lack of understanding of the EVSE technology by municipal authorities led to substantial consumer frustrations that potentially jeopardized vehicle sales and ultimately EV acceptance.

A “plug in” solution that would be similar to installing an outlet in a consumer’s garage to support a dryer or range would take the mystery out of the permitting/inspection process.

To be perfectly honest, when we were selecting a vendor to provide EVSE hardware/installation services for our next EV, the BMW ActiveE coming later this year, we were hoping to convert to a plug-in device. We referred to this internally as the “holy grail” solution, if that gives you any indication as to how we view this technology.

However, given the current status of the NEC regulations, we weren’t comfortable moving forward with a vendor offering this plug-in technology because there was too much uncertainty surrounding the code.

As we move forward with our EV plans (our next generation EVs will arrive in 2013 – the BMW i3 and i8 that will be part of our new i sub-brand), we will most definitely consider offering plug-in EVSEs if the proposed amendment is approved. This would streamline the installation process in a big way and remove one of the primary barriers to purchase of EVs.

I would also like to point out one additional advantage of the plug-in EVSE technology. Using a standard “dryer-like” outlet, customers that are moving their household to a new community would be able to bring their EVSE with them. During our MINI E field trial, we had quite a few customers move house, and we had to rewire their new homes, which isn’t an inexpensive proposition. If we had a plug in solution, the customer could simply have a “dryer-like” outlet installed and bring their charging equipment with them.

The same circumstances would be of interest for used car buyers of EVs. When a vehicle is still new, we can help steer the customer through the EVSE installation process as an OEM. This will not be so easy to manage for used vehicles, so a plug in solution would streamline the process and increase the values in the used EV market.

Thank you for your consideration. Please let me know if you would like any additional feedback regarding this amendment.

RS

October 13, 2011
Curious about the Future of Mobility? -- Join the Conversation now!

ACTIVATE THE FUTURE

BMWActivateTheFuture.com
Item 11-10-5
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 Kovacik, 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.
TIA FINAL TCC BALLOT RESULTS

According to 5.4 in the NFPA (RGCP), the final results show this TIA HAS achieved the necessary votes on both Question 1 (Correlation Issues) and Question 2 (Emergency Nature).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 9.

\[12 \text{ (eligible to vote) } - 0 \text{ (not returned) } - 0 \text{ (abstention) } = 12 \times 0.75 = 9\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[12 \text{ eligible } ÷ 2 = 6 + 1 = 7 \text{ (this is the simple majority)}\]

<table>
<thead>
<tr>
<th>12</th>
<th>Eligible to Vote</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Not Returned</td>
</tr>
</tbody>
</table>

TCC FINAL Ballot results for Correlation Issues are as follows:

- 11 Agree
- 1 Disagree (LaBrake)
- 0 Abstentions

**FINAL ACTION: PASSED**

TCC FINAL Ballot results for Emergency Nature are as follows:

- 10 Agree (Johnston w/comment)
- 2 Disagree (Hittinger, LaBrake)
- 0 Abstentions

**FINAL ACTION: PASSED**

*Final NEC-P12 Ballots are on the next page*
According to 5.4 in the NFPA (RGCP), the final results show this TIA **HAS** achieved the necessary votes on both Question 1 (**Technical Merit**) and Question 2 (**Emergency Nature**).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is **9**.

\[14 \text{ (eligible to vote)} - 3 \text{ (not returned)} - 0 \text{ (abstentions)} = 11 \times 0.75 = 8.25\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[14 \text{ eligible} ÷ 2 = 7 + 1 = 8 \text{ (this is the simple majority)}\]

**14 Eligible to Vote**

3 Not Returned (Anderson, Marcovici, Ward)

**TC FINAL** Ballot results for **Technical Merit** are as follows:

- 9 Agree (Clark, Holmes w/comment)
- 2 Disagree (Croushore, Cunningham)
- 0 Abstentions

**FINAL ACTION: PASSED**

**TC FINAL** Ballot results for **Emergency Nature** are as follows:

- 9 Agree
- 2 Disagree (Croushore, Cunningham)
- 0 Abstentions

**FINAL ACTION: PASSED**
NEC TECHNICAL CORRELATING COMMITTEE
LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1038
To Revise 625.14 of the 2011 Edition of the NEC

Question 1: I agree that there are no correlation issues in accordance with 3.4.2 and 3.4.3 (copy enclosed) of the NFPA Regs.

X AGREE  _____ DISAGREE  _____ ABSTAIN

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position. If disagreeing, cite relevant section(s)/paragraph(s) of the correlation issue and describe.


Question 2: I agree that the subject of this TIA is of an EMERGENCY NATURE

_____ AGREE  X DISAGREE  _____ ABSTAIN

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a negative/disagreement or abstaining position. The 2011 NEC presently allows the use of EVSE above 125 volts as long as the requirements of 625.16 and 625.19 are met. This has been addressed in various panel statements in both the RCP and ROC documents. This is more of an education issue and in our opinion not of emergency nature. Clarity in the present Code can be addressed in the upcoming Code cycle.

Signature

David Hittinger

Date 8/26/2011

Please return the ballot as soon as possible, however, no later than Thursday, September 1, 2011.

PLEASE RETURN TO:
Jean O'Connor, Technical Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169  FAX: (617) 984-7070  E-mail: jocconnor@nfpa.org

TIA TCC Ballot Form – September 30, 2009
NEC TECHNICAL CORRELATING COMMITTEE
LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1038
To Revise 625.14 of the 2011 Edition of the NEC

Standards Council Agenda October 17-18, 2011

October 13, 2011

Question 1: I agree that there are no correlation issues in accordance with 3.4.2 and 3.4.3 (copy enclosed) of the NFPA Regs.

_____ AGREE  _____X_____ DISAGREE*  _____ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position. If disagreeing, cite relevant section(s)/paragraph(s) of the correlation issue and describe.

I agree with the explanation of negative ballot by the Chair of CMP-12, Mr. Timothy Crouchore. A correlation issue would result with 220.60, which needs to be addressed by the Technical Committee.

Question 2: I agree that the subject of this TIA is of an EMERGENCY NATURE

_____ AGREE  _____X_____ DISAGREE*  _____ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a negative/disagreement or abstaining position. Due to the special equipment nature of Article 625 relative to the general requirements in Article 220, no correlation issues were brought forth during the 2011 NBC cycle to address the perceived concern. Therefore, no safety issue has been addressed to warrant the emergency nature under Section 5.2 of the NFPA Regulations Governing Committee Projects.

________________________________________
Signature
Neil F. LaBrake, Jr. – TCC Principal, BHI rep.
Name (Please Print)

28 August 2011
Date

Please return the ballot as soon as possible, however, no later than Thursday, September 1, 2011.

PLEASE RETURN TO:
Jean O'Connor, Technical Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169  FAX: (617) 984-7070  E-mail: jocconnor@nfpa.org
TIA TCC Ballot Form – September 30, 2009
NEC TECHNICAL CORRELATING COMMITTEE  
LETTER BALLOT  
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1038  
To Revise 625.14 of the 2011 Edition of the NEC  

Question 1: I agree that there are no correlation issues in accordance with 3.4.2 and 3.4.3 (copy enclosed) of the NFPA Regs.  

× AGREE          _______ DISAGREE*           _______ ABSTAIN*  

EXPLANATION OF VOTE - Please type or print your comments:  

*An explanation must accompany a disagreement or abstaining position. If disagreeing, cite relevant section(s)/paragraph(s) of the correlation issue and describe.  

Question 2: I agree that the subject of this TIA is of an EMERGENCY NATURE  

× AGREE          _______ DISAGREE*           _______ ABSTAIN*  

EXPLANATION OF VOTE - Please type or print your comments:  

*An explanation must accompany a negative/disagreement or abstaining position.  


Signature  
Name (Please Print)  
08-24-2011  
Date  

Please return the ballot as soon as possible, however, no later than Thursday, September 1, 2011.  

PLEASE RETURN TO:  
Jean O'Connor, Technical Project Administrator  
NFPA  
1 Batterymarch Park  
Quincy, MA 02169  
FAX: (617) 984-7070  
E-mail: joconnor@nfpa.org  

TIA TCC Ballot Form – September 30, 2009
NEO-CODE-MAKING PANEL IE
LETTER BALLOT
PROPOSED INTERIM AMENDMENT NO. 1048
To revise 628.14 of the 2013 Edition of NEC-70
National Electrical Code

Question: 
Is the TECHNICAL MERIT of the Proposed TIA to revise 628.14
AGREE _______ DISAGREE* _______ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:
*An explanation must accompany any disagreement or abstaining position.

I wish to thank the CH4-12 Task Group on Electric Vehicles for working on this particular issue and actively supporting this TIA. I wish to commend the task group for recognizing the highly potential limitations in the code that would support the plug-in and smart electric vehicles. While I support the initiatives of the task group, I must disagree with this particular TIA for the following reasons:

I disagree with the concept that a new automatic load management system would be needed to make loads non-significant and that the maximum loads for feeders or service loads calculations would be the maximum load permitted by the automatic load management system. However, this provision is already permitted by 220.60 Non-incident Loads in the current National Electrical Code. I envision in this TIA requires the use of an automatic load management system to allow for multiple electric vehicle charging loads to be calculated in existing existing feeder and service conductance without new equipment. Section 220.60 only requires the level of the non-incident load to located by calculation without requiring any specific "automatic load management system". The submitters' substantiation statements do not specifically recognize automatic energy management as one of the ways to overcome the calculated load issues. However, the text of this section is written that an automatic load management system is the only way that can be used to overcome the calculated load issues.

In addition, the re-submission provided [such as example calculations] to support the following sentence in the TIA: "The addition of this load to existing electrical service will likely result in the service being too small based upon NEC calculations to handle EV charging."

AGREE _______ DISAGREE* _______ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:
*An explanation must accompany any disagreement or abstaining position.

I disagree with the emergency nature of this TIA. I do not see where an automatic load management system could not be used in accordance with 220.60 of the current edition of the National Electrical Code to produce the same desired result as requested in this TIA. I am not aware of any specific product currently identified as an automatic load management system that is designed for this purpose. I am also not aware of any specific instances where the lack of the proposed language in this section has caused any

TIA TC Panel Final - September 30, 2011
Issues or problems with any installations or would make the use of the proposed automated load management system.

[Signature]

Timothy M. Crossbar
Name (Please Print)

[Date]

Please return the ballot by before Friday, August 12, 2011.

PLEASE RETURN TO:
Jean O'Connor, Technical Projects Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169
FAX: (617) 281-2010

E-mail: JeanC@nfpa.org
O'Connor, Jean

From: Cunningham, Karl M. [Karl.Cunningham@alcoa.com]  
Sent: Monday, September 12, 2011 9:36 AM  
To: O'Connor, Jean  
Subject: RE: Public Comments for TIA's 1037 and 1038

Jean,

I would like to make my vote in opposition of TIA's 1037 and 1038. My comments are essentially the same as Mr. Croushore's explanation. The integrity of the code and the respect it has worldwide would be undermined should we not follow due process. These issues are not of an emergency nature regardless of how well intentioned or popular they may be.

Karl Cunningham  
Power & Automation Area Manager  
Ras Al Khair Aluminium Project  
+966 5 1516 0362 Bravo Mobile  
+966 5 1413 9827 7167 AT&T Mobile  
+966 5 0048 8518 KSA Mobile

From: O'Connor, Jean [mailto:joconnor@NFPA.org]  
Sent: Monday, September 12, 2011 4:20 PM  
To: O'Connor, Jean  
Cc: Burke, Bill; Warren, Mary; Alan Manche; Brian Rock; David Sher; Earley, Mark; Frank Tse; Gerry J. Kissel; gil morz; Gregory Nieminski; Jason France; Jeff Holmes; Jeffrey Mening; John Kovack; Jose Salazar; Lori Tennant; Steve Campolo; Todd Lottmann; Tom Brown; Tom Hedges; Bob McCullough; Daniel J. Kissane; Danny P. Liggett; David Hittinger; Earnest J. Gallo; Harold Ware; James Brunssen; James T. Dollard, Jr.; Larry Ayer; Earley, Mark; Mark Ode; Merton W. Bunker; Michael E. McNeil; Michael Johnston; Neil LaBrake; Palmer Hickman; Richard Bienmann; Richard P. Owen; Stanley J. Folz; Thomas L. Adams; William Drake; William T. Fiske  
Subject: Public Comments for TIA's 1037 and 1038

To the Members of NEC Code-Making Panel 12 and the NEC Technical Correlating Committee:

Enclosed please find the Public Comments for TIA's 1037 and 1038 that were received by the closing date of September 9, 2011.

If you wish to change your vote as a result of reviewing the public comments, please advise me by Friday, September 16, 2011. Otherwise, no action is necessary.

Please be advised that if you are vote limited on Article 625 you are ineligible to vote.

Jean A. O'Connor  
Technical Projects Administrator  
National Fire Protection Association  
1 Batterymarch Park  
Quincy, MA 02169  
Phone: 617-984-7421  
Fax: 617-984-7070  
Email: joconnor@nfpa.org

October 13, 2011  Standards Council Agenda October 17-18, 2011  Page 73 of 331
NEC CODE-MAKING PANEL 12
LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT NO. 1038
To Revise 625.14 of the 2011 Edition of NFPA 70,
National Electrical Code

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 625.14

__X__ AGREE  ___________ DISAGREE*  ___________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:
*An explanation must accompany a disagreement or abstaining position.

__The proposed TIA will help facilitate the spread of EVSE technology by allowing some flexibility for existing systems while providing for a practical level of safety. I believe that future Code language should include the word “existing” before “service or feeder” to clarify that new system should be designed for the anticipated load.

__

Question 2: I agree that the subject is of an EMERGENCY NATURE.

__X__ AGREE  ___________ DISAGREE*  ___________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:
*An explanation must accompany a disagreement or abstaining position.

__

Signature

Philip Clark
Name (Please Print).

August 19, 2011
Date

Please return the ballot on or before Friday, August 12, 2011

PLEASE RETURN TO:
TIA TC Ballot Form – September 30, 2009
Standards Council Agenda October 17-18, 2011

October 13, 2011

NEC CODE-MAKING PANEL 12
LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT NO. 1038
To Revise 625.14 of the 2011 Edition of NFPA 70,
National Electrical Code

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 625.14

X AGREE  _______ DISAGREE*  _______ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

According to 625.5 THE ENERGY MANAGEMENT SYSTEM USED MUST BE LISTED OR LABELED FOR USE WITH EV SYSTEMS. SIMPLY NOT USING YOUR DRYER IS NOT A LISTED ENERGY MANAGEMENT SYSTEM.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

X AGREE  _______ DISAGREE*  _______ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

__________________________

Jeffrey L. Holmes
Signature

Jeffrey L. Holmes
Name (Please Print)

8/11/11
Date

Please return the ballot on or before Friday, August 12, 2011

PLEASE RETURN TO:
Jean O’Connor, Technical Projects Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169  FAX: (617) 984-7070  E-mail: joconnor@nfpa.org

TIA TC Ballot Form – September 30, 2009
According to 5.4 in the NFPA (RGCP), the final results show this TIA **HAS** achieved the necessary votes on both Question 1 (**Correlation Issues**) and Question 2 (**Emergency Nature**).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is **9**.

\[
[12 \text{ (eligible to vote)} - 0 \text{ (not returned)} - 0 \text{ (abstention)} = 12 \times 0.75 = 9]
\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[
[12 \text{ eligible} \div 2 = 6 + 1 = 7 \text{ (this is the simple majority)}]
\]

TCC FINAL Ballot results for **Correlation Issues** are as follows:

- 11 Agree
- 1 Disagree (LaBrake)
- 0 Abstentions

**FINAL ACTION: PASSED**

TCC FINAL Ballot results for **Emergency Nature** are as follows:

- 10 Agree (Johnston w/comment)
- 2 Disagree (Hittinger, LaBrake)
- 0 Abstentions

**FINAL ACTION: PASSED**

*Final NEC-P12 Ballots are on the next page*
According to 5.4 in the NFPA (RGCP), the final results show this TIA **HAS** achieved the necessary votes on both Question 1 (*Technical Merit*) and Question 2 (*Emergency Nature*).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 9.

\[
[14 \text{ (eligible to vote)} - 3 \text{ (not returned)} - 0 \text{ (abstentions)}] = 11 \times 0.75 = 8.25
\]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

\[
[14 \text{ eligible} \div 2 = 7 + 1 = 8 \text{ (this is the simple majority)}]
\]

**TC FINAL** Ballot results for *Technical Merit* are as follows:

- 9 Agree (Clark, Holmes w/comment)
- 2 Disagree (Croushore, Cunningham)
- 0 Abstentions

**FINAL ACTION: PASSED**

**TC FINAL** Ballot results for *Emergency Nature* are as follows:

- 9 Agree
- 2 Disagree (Croushore, Cunningham)
- 0 Abstentions

**FINAL ACTION: PASSED**
NFPA:

My name is Rich Steinberg and I run the Electric Vehicle program for BMW North America. I am writing to you today in regard to the proposed amendments to NEC 625.

As you may know, we have extensive recent experience with EVSE installations with the MINI E program back in 2009. While many improvements have occurred of late with the launch of other BEVs from Chevrolet and Nissan (and others), there is still much room for improvement in the whole consumer experience surrounding the installation of EVSE equipment.

The proposed changes to NEC 625 will significantly change the landscape for installations. Based on our MINI E experiences, the unpredictable delays associated with the permitting/inspection process and the lack of understanding of the EVSE technology by municipal authorities led to substantial consumer frustrations that potentially jeopardized vehicle sales and ultimately EV acceptance.

A “plug in” solution that would be similar to installing an outlet in a consumer’s garage to support a dryer or range would take the mystery out of the permitting/inspection process.

To be perfectly honest, when we were selecting a vendor to provide EVSE hardware/installation services for our next EV, the BMW ActiveE coming later this year, we were hoping to convert to a plug-in device. We referred to this internally as the “holy grail” solution, if that gives you any indication as to how we view this technology.

However, given the current status of the NEC regulations, we weren’t comfortable moving forward with a vendor offering this plug-in technology because there was too much uncertainty surrounding the code.

As we move forward with our EV plans (our next generation EVs will arrive in 2013 – the BMW i3 and i8 that will be part of our new i sub-brand), we will most definitely consider offering plug-in EVSEs if the proposed amendment is approved. This would streamline the installation process in a big way and remove one of the primary barriers to purchase of EVs.

I would also like to point out one additional advantage of the plug-in EVSE technology. Using a standard “dryer-like” outlet, customers that are moving their household to a new community would be able to bring their EVSE with them. During our MINI E field trial, we had quite a few customers move house, and we had to rewire their new homes, which isn’t an inexpensive proposition. If we had a plug in solution, the customer could simply have a “dryer-like” outlet installed and bring their charging equipment with them.

The same circumstances would be of interest for used car buyers of EVs. When a vehicle is still new, we can help steer the customer through the EVSE installation process as an OEM. This will not be so easy to manage for used vehicles, so a plug in solution would streamline the process and increase the values in the used EV market.

Thank you for your consideration. Please let me know if you would like any additional feedback regarding this amendment.

RS
Curious about the Future of Mobility? – Join the Conversation now!

ACTIVATE
THE FUTURE

BMWActivateTheFuture.com
Hello, to whom it may concern: Load management systems seem a good way to go, for car chargers: It is my understanding that a 240 volt charger will take 4-6 hours to charge a vehicle: Autonomous load management would allow 2 vehicles to charge overnight in a residential garage without any more interaction from the vehicle owners: would allow for more electrical vehicles to be connected to the nation's grid = electric vehicles without taking highway monies for electric grid expansion. Sincerely, Patrick Nacey. Supervising electrician, Chicago #3266
San Diego Gas & Electric has played a major supportive role with respect to the recent rollout of plug-in electric vehicles (PEVs) in the San Diego region and we are very interested in doing everything we can to make this effort a long-term success. We are proud that approximately 10% (over 550) of all Nissan Leaf plug-in electric vehicles sold to date in the U.S. are located in our service territory.

I am writing this morning to let you know that we were recently made aware of two Temporary Interim Amendments (TIAs) that clarify NEC Article 625 with respect to Electric Vehicle Supply Equipment (EVSEs). The revisions to Article 625.13 will allow plug and cord connected EVSEs up to 125v and 250v, and the revisions to Article 625.14 will allow a load management device to switch between a bank of EVSEs at a customer site rather than requiring a feeder line that is capable of charging all connected vehicles at once.

We are extremely supportive of these two TIAs, as they will bring positive benefits to our customers who are looking at the options for installing EVSEs at their premises. EVSE installation costs can be a significant barrier to PEV customers, and these TIAs will help cut both cost and time out of the installation and inspection processes. Anything we can do to help reduce those costs would be most welcome by our customers and potential PEV buyers nationwide.

In addition to supporting these two TIAs, we also support classifying them as “Exceptions” to the normal NFPA code process as we believe both of these items are critical to the successful adoption of plug-in electric vehicles. These two amendments will help to reduce cost and complexity with respect to customer EVSE installations, and we think it is important to implement these two amendments as quickly as possible. Without the “Exception” process, our understanding is that it could take as long as 2014 to implement the amendments, and in our opinion, we will lose critical momentum to attract mainstream consumers to PEVs.

Thank you for your support in this matter,

Joel Pointon

Clean Transportation
Electric Transportation Program Manager
SDG&E
8306 Century Park Ct CP42K
San Diego, CA 92123
858-654-8767 (O) 858-761-2309 (C) 858-636-5559 (Fax)
Website: sdge.com/cleantransportation
City of Beachwood

Mayor
Merle S. Gorden

NFPA
Secretary, to Standards Council
1 Batterymarch Park
Quincy, MA 02169-7471.

Reference TIA 1038  NFPA 70 2011

Please accept my following comments in favor TIA 1038

I entirely support the inclusion of the language in TIA 1038, without this language it may force AHJs, including myself to require a service upgrade before I could permit EVSE to be installed to an existing service. The noncoincident load relief in 220.60 closely resembles this permission to reduce the load calculation, however EVSE is not a noncoincident load and therefore the EVSE or another load must be forced in to an off position by the load management equipment in order to get the load reduction. As a participant in the NFPA process, I support the urgent need to revise the NEC in order to ensure the NEC is not an impediment to utilizing technology that will permit the automobile customer to choose an E

Tom Moore

City of Beachwood
Electrical/Building Inspector
Tom.Moore@BeachwoodOhio.com
216.292.1914
Electric Vehicle.
From: Bell, Chad [Chad.Bell@bestbuy.com]
Sent: Friday, September 02, 2011 10:38 AM
To: Walker, Nancy
Subject: RE: Comments on Article 625 of the National Electrical Code (NEC)

Nancy,
Best Buy supports the amendment’s objectives of accelerating the installation of infrastructure and reducing regulatory permitting burdens associated with expanding infrastructure.

Please contact me with questions/comments.
Chad

Chad Bell
Platform Lead/Sr. Director - Personal Mobility
New Business Solutions Group
Best Buy Company
(612) 291-5025 (Work)
(612) 670-8950 (Cell)
c.hawk73 (Skype)
Twitter
GoElectricDrive
Nancy/NFPA -

I am the Director of Electric Vehicle Infrastructure Commercialization for General Motors. After 9 months of overseeing the installation of 240V EVSEs to support new customers of our Chevrolet Volt electric vehicle program we are convinced that we need to make 2 urgent clarifications to the NEC 625 electrical code to streamline the EVSE installation and inspection processes and lower consumer costs. These are time-sensitive amendments and we fully support their implementation and we encourage you to approve them now.

The average home installation cost today is approximately $1,500 - this is not including the cost of the EVSE hardware. So it is no surprise that one of the most common complaints lodged by new electric vehicle customers to date on various blog sites is the fact that the installation of a 240V charger is excessively costly and complex. This is an obvious barrier to large mainstream market adoption of plug-in electric vehicles. In fact, the process of installing a 240V EVSE at a home should not be much different than installing an electric clothes dryer. These two amendments will accomplish the goal of simplifying the EVSE installation and inspection processes by allowing a plug and cord-connected solution for EVSEs and by recognizing the role of a load management device to determine a logical feeder line capacity requirement where banks of EVSEs are being installed.

We launched the Chevy Volt in December of 2010 and we are progressively increasing our production rates to bring the Volt to increasingly larger markets. Any real or even perceived barriers about the difficulty and/or cost of installing EVSEs or inspecting these EVSEs following installation could significantly impact the success of the Chevy Volt and other electric vehicles in the market. And waiting until 2014 for these particular changes to follow the formal NFPA code modification process would represent a significant risk to the successful early rollout of plug-in electric vehicles to consumers.

Immediate approval of these two amendments will give both electrical contractors and inspectors the clarity they are looking for to allow these logical improvements to the existing code and ensure that installations of EVSEs to support plug-in vehicle charging are as safe, efficient and cost-effective as possible.

We appreciate very much your efforts to support this important cause.

Regards -

Britta Gross

Britta K. Gross
GM, R&D and Strategic Planning
Director, Global Energy Systems & Infrastructure Commercialization
tel: 586-696-0382
britta.gross@gm.com

Nothing in this message is intended to constitute an electronic signature unless a specific statement to the contrary is included in this message.

Confidentiality Note: This message is intended only for the person or entity to which it is addressed. It may contain confidential and/or privileged material. Any review, transmission, dissemination or other use, or taking of any action in reliance upon this message by persons or entities other than the intended recipient is prohibited and may be unlawful. If you received this message in error, please contact the sender and delete it from your computer.
September 6, 2011

Secretary, Standards Council
1 Batterymarch Park
Quincy, MA 02169-7471

RE: Commit on NFPA 70-2011  TIA Log No. 1038

I would like to express my support regarding TIA 1038 for Section 625.14 for the rating of electrical vehicle supply equipment.

The CMP-12 committee has reviewed the information and drafted the proposed TIA. The changes made would assist the AHJ in determining if a service needed to be upgraded or not. I support the implementation of this TIA.

The electrical inspection industry supports removing any barriers that would affect the implementation of electrical vehicles.

As a participant in the NFPA process, I support the urgent need to revise the NEC in order to ensure the NEC is not a barrier to utilizing technology that will permit the automobile customer to choose an Electric Vehicle

Very truly yours

David Williams
Electrical Inspector
Delta Township, Lansing, Michigan
Subject: FW: EDTA | Time Sensitive - Support NFPA Amendment by September 9th
Attachments: image001.png; image002.png; TIA 1037 625_13.pdf; TIA 1038 625_14.pdf

From: Colleen Quinn [mailto:colleenquin@gmail.com]
Sent: Wednesday, September 07, 2011 10:01 AM
To: Walker, Nancy
Subject: Fwd: EDTA | Time Sensitive - Support NFPA Amendment by September 9th

Coulomb Technologies is a member of EDTA and an Electric Vehicle Services Equipment Manufacturer and Service Provider. Headquartered in Silicon Valley California we are the industry leader in EV Charging Services with the first networked system and over 7,0000 customers globally.

We enthusiastically support these changes. We have participated with NEMA and our Chief Technology Officer, Richard Lowenthal chairs the standards committee.

Please do not hesitate to contact us if you have any questions.

Sincerely,
Colleen Quinn
Vice President Government Relations and Public Policy
Coulomb Technologies, Inc

---------- Forwarded message ----------
From: Brian Wynne <bwyne@electricdrive.org>
Date: Wed, Aug 31, 2011 at 5:39 PM
Subject: EDTA | Time Sensitive - Support NFPA Amendment by September 9th
To:

Dear EDTA Member,

EDTA has been asked by one of its members to support the effort to amend Article 625 of the National Electrical Code (NEC), dealing with infrastructure for electric vehicles. A task force of the National Fire Protection Association (NFPA) has looked at this issue in-depth and reached conclusions summarized in the attached documents.

The success of this amendment will greatly depend on broad cross-industry support. If your company would like weigh in in support of the amendment, send your comments on these 2 proposed TIA's (Temporary Interim Amendments) by Sept 9th in a simple email to Nancy Walker at nwalker@nfpa.orgto.

Although EDTA has no technical standing on this task force, EDTA plans to generally support the amendment’s objectives of accelerating the installation of infrastructure and reducing regulatory permitting burdens associated with expanding infrastructure. If you have a substantive objection to EDTA’s endorsement of the amendment effort, please respond to me ASAP.

Sincerely, Brian

Brian Wynne | President
September 8, 2011

Re: TIA 1038

Although I believe there is validity in recognizing load management systems when calculating loads, and that they should be considered for addition to future codes, I do not agree with the TIA for the following reasons:

1. This proposal does not belong in article 625.14. Load calculation should be consistent for all continuous loads, and the exception should not only apply to EVSE. The exception should be located in articles 610.19 and 610-20, or under a new article that specifically addresses load management systems.

2. TIA 1038 does not qualify as an emergency in nature. Because there is no evidence that an emergency exists, the proposal should be made through the normal code process.

Sincerely,

Andrew M. Kriegman
Proposed Tentative Interim Amendments

No. 1037 and 1038

Date: 09/07/2011
To: Jean A. O’Connor
Cc: Dennis Clements, Rod Belisle
From: Dale L. Garcia
RE: General Overview

After reviewing the proposed Tentative Interim Amendments No. 1037 and 1038 with the Chief Electrical Inspector for the State of Oregon, our local union advisory person and utility representatives the following conclusions were made:

1. The proposed adjustments appear to be appropriate to provide a more consistent interpretation of the rules that specifically apply to the Electric Vehicle (EV) charging equipment presently being produced and installed in support of the Electric Vehicle technology requirements.

2. The proposed adjustments appear to supply needed clarification of code related rules as they apply to EV infrastructure installation requirements per the NEC in Article 625 and other sections.

3. The proposed adjustments appear to improve the consistency and uniform application of the rules in Article 625 and associated articles.

4. Although these adjustments may not meet the typical definition of an “emergency” it is apparent that the changes should be implemented promptly to adjust code language to a level consistent with the industries present “best practices” and to facilitate improved language adjustments during the next code revision cycle.

Based on the information above, as a public comment, PGE is supportive of the proposed amendments and advancement in the NEC language as it applies to the Electric Vehicle rules specifically covered in articles 625 and others related sections of the NEC code.

Dale L. Garcia
Project Manager EV Program
Portland General Electric - Portland Oregon
Coulomb Technologies has played a major role with respect to the rollout of plug-in electric vehicles (PEVs) across the United States and we are very interested in doing everything we can to make this industry a long-term and safe success. We are proud that 5,000 Coulomb ChargePoint charge stations have been installed with expectations for thousands more in the next year.

We are familiar with the two Temporary Interim Amendments (TIAs) that clarify NEC Article 625 with respect to Electric Vehicle Supply Equipment (EVSEs). The revisions to Article 625.13 will allow plug and cord connected EVSEs up to 125V and 250V, and the revisions to Article 625.14 will allow a load management device to switch between a bank of EVSEs at a customer site rather than requiring a feeder line that is capable of charging all connected vehicles at once. We believe these two measures will both significantly increase the safety of EVSE installations.

We are extremely supportive of these two TIAs, as they will bring positive benefits to our customers who are looking at the options for installing EVSEs at their premises. EVSE installation costs can be a significant barrier to PEV customers, and these TIAs will help cut both cost and time out of the installation and inspection processes. Anything we can do to help reduce those costs would be most welcome by our customers and potential PEV buyers nationwide.

In addition to supporting these two TIAs, we also support classifying them as “Exceptions” to the normal NFPA code process. These two amendments will help to reduce cost and complexity and improve safety with respect to customer EVSE installations, so it is important to implement these two amendments as quickly as possible.

Most importantly there are significant safety issues associated with installers not having the guidance these TIA's provide. We know of cases where EVSE was install plug-connected without the safety guidance that TIA 1037 adds, which we believe is unsafe. In fact, at the urging of an automaker we contacted one of our customers about their unsafe plug attachment. In the absence of the TIA, people are adding plugs anyway but in an unsafe way. We also have observed cases where EVSE has been installed without the load management features of the TIA 1038, and without doing the proper load calculations. These kinds of installations are happening daily and these TIA's will make both situations significantly safer.

Thank you for your support in this matter.

Sincerely,

Richard Lowenthal
Founder and Chief Technical Officer
Coulomb Technologies
(408) 841-4501
Richard.lowenthal@coulombtech.com
National Fire Protection Association

Subject: Amendment support to NEC Article 625

Duke Energy is in support of the following 2 Temporary Interim Amendments (TIAs) to NEC Article 625 that deals with electrical codes relative to EVSE installations for EV charging:

- Allow plug and cord connected EVSEs. This will simplify and reduce the cost of the current 240V EVSE installation process.
- Allow a load management device to switch between a bank of EVSEs at a site so that you do not have to design a feeder line that must charge all vehicles at once.

These two items are critical to the early success of plug-in electric vehicles because it will help to reduce the cost and complexity of the EVSE installation process (home, multi-family dwellings, workplace, and public installations). The amount of money required to install an EVSE is currently a significant barrier to PEV customers. The average cost to install a 240V EVSE in a residential location for a PEV customer is approximately $1000, plus the cost of the EVSE itself. This current price point makes it challenging for general consumers to accept and adopt electric vehicles.

The items proposed in these two TIAs will help reduce the cost and time in the installation and inspection processes. We understand the next code cycle to review amendments is not until 2014, but due to the critical nature of these items we request these two temporary interim amendments be rushed through the NFPA code process.

Sincerely,

Michael Rowand
Duke Energy
Managing Director, Advanced Customer Technology

Jessica Bishop
Duke Energy
Plug-In Electric Vehicle Program Director
To Whom it May Concern;

Puget Sound Energy (PSE) wishes to express its support for the approval of TIAs No. 1037 and 1038. PSE supports the electrification of the transportation industry for several reasons. If well managed, this transition offers the potential to flatten load curves, increase asset utilization, provide a downward pressure on rates, and increase customer satisfaction. On a national scale, we recognize the collateral benefits of reducing air pollution and increasing energy independence. That said, only when PEV's achieve significant adoption will these benefits be realized.

The window to convince consumers to adopt PEV’s may be a short one. Thus we believe that all actions that can be safely and prudently taken to reduce barriers to PEV adoption should be pursued quickly. We consider the issues contained in these TIAs as critical to the success of PEVs by making the process simpler and less expensive, thereby increasing the chances that these vehicles make it to the mainstream.

Thank you for your time and attention to this matter.

Sincerely,

Patrick

Patrick Leslie
Project Manager  |  Emerging Technologies  |  Puget Sound Energy
o: (425) 457-5739  m: (207) 400-2452
Dear Nancy,

Please accept this letter, on behalf of SPX Service Solutions, in support of NFPA TIA 1037 and TIA 1038 (NEC Articles 625.13 & 625.14 respectively).

Allowing plug and cord connected 240V EVSE installations, as well as allowing Energy Management Systems to help to reduce the size of feeder circuits to EVSE's is necessary to evolve and support the adoption of Battery Electric Vehicles (BEV's), Plug-in Hybrid Electric Vehicles (PHEV's) and Plug-in Extended Range Electric Vehicles (EREV's).

Many critical stakeholders have been involved in the work to prepare the referenced TIA's, and the very collaborative effort is evidence of the type of synergies needed to move the EV industry forward safely and successfully by all involved.

Please consider our SPX support during the consideration period for the NEC Code making Panel 12 Standards Council issuance at the October meetings

With Best Regards

Mike Muller
Product Manager – Charging Technologies
SPX Service Solutions

28635 Mound Road
Warren, MI 48092

TEL +1 586-586-5879
MOB +1 586 292 2681
mike.muller@spx.com
www.spx.com
NFPA:

My name is Rich Steinberg and I run the Electric Vehicle program for BMW North America. I am writing to you today in regard to the proposed amendments to NEC 625.

As you may know, we have extensive recent experience with EVSE installations with the MINI E program back in 2009. While many improvements have occurred of late with the launch of other BEVs from Chevrolet and Nissan (and others), there is still much room for improvement in the whole consumer experience surrounding the installation of EVSE equipment.

The proposed changes to NEC 625 will significantly change the landscape for installations. Based on our MINI E experiences, the unpredictable delays associated with the permitting/inspection process and the lack of understanding of the EVSE technology by municipal authorities led to substantial consumer frustrations that potentially jeopardized vehicle sales and ultimately EV acceptance.

A “plug in” solution that would be similar to installing an outlet in a consumer’s garage to support a dryer or range would take the mystery out of the permitting/inspection process.

To be perfectly honest, when we were selecting a vendor to provide EVSE hardware/installation services for our next EV, the BMW ActiveE coming later this year, we were hoping to convert to a plug-in device. We referred to this internally as the “holy grail” solution, if that gives you any indication as to how we view this technology.

However, given the current status of the NEC regulations, we weren’t comfortable moving forward with a vendor offering this plug-in technology because there was too much uncertainty surrounding the code.

As we move forward with our EV plans (our next generation EVs will arrive in 2013 – the BMW i3 and i8 that will be part of our new i sub-brand), we will most definitely consider offering plug-in EVSEs if the proposed amendment is approved. This would streamline the installation process in a big way and remove one of the primary barriers to purchase of EVs.

I would also like to point out one additional advantage of the plug-in EVSE technology. Using a standard “dryer-like” outlet, customers that are moving their household to a new community would be able to bring their EVSE with them. During our MINI E field trial, we had quite a few customers move house, and we had to rewire their new homes, which isn’t an inexpensive proposition. If we had a plug in solution, the customer could simply have a “dryer-like” outlet installed and bring their charging equipment with them.

The same circumstances would be of interest for used car buyers of EVs. When a vehicle is still new, we can help steer the customer through the EVSE installation process as an OEM. This will not be so easy to manage for used vehicles, so a plug in solution would streamline the process and increase the values in the used EV market.

Thank you for your consideration. Please let me know if you would like any additional feedback regarding this amendment.

RS
Curious about the Future of Mobility? – Join the Conversation now!

ACTIVATE THE FUTURE

BMWActivateTheFuture.com
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.
TIA FINAL TC BALLOT RESULTS

According to 5.4 in the NFPA (RGCP), the final results show this TIA HAS achieved the necessary votes on both Question 1 (Technical Merit) and Question 2 (Emergency Nature).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 13.

21 eligible to vote – 3 not returned – 1 abstention = 17 \times 0.75 = 12.75

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

21 eligible \div 2 = 10.5 = 11 (this is the simple majority)

21 Eligible to Vote
3 Not Returned (Bosserman, Creley, Thurston)

TC FINAL Ballot results for Technical Merit are as follows:
17 Agree (Nuzzolese, Stipkovits w/comment)
0 Disagree
1 Abstention (Gammon)

FINAL ACTION: PASSED

TC FINAL Ballot results for Emergency Nature are as follows:
16 Agree
1 Disagree (Davis)
1 Abstention (Gammon)

FINAL ACTION: PASSED
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1029
To Add New 4.1.6.3, Revise A.4.1.6.1, and Add New A.4.1.6.3 to the 2012 Edition of NFPA 407,
Standard for Aircraft Fuel Servicing

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to add a New 4.1.6.3, revise
A.4.1.6.1, and add a New A.4.1.6.3.

☑ AGREE    ☐ DISAGREE*    ☐ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

☑ AGREE    ☐ DISAGREE*    ☐ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

DOES NOT MEET REQUIREMENTS OF SECTION 5.1 For "EMERGENCY NATURE"

Signature

CHARLES A. DAVIS
Name (Please Print)

Aug 16, 2011
Date

Please return the ballot on or before Thursday, August 18, 2011.

PLEASE RETURN TO:
Joanne Goyette, Administrator, Technical Projects
NFPA
1 Batterymarch Park
Quincy, MA 02169

FAX: (617) 984-7110

E-mail: jgoyette@nfpa.org
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1029

To Add New 4.1.6.3, Revise A.4.1.6.1, and Add New A.4.1.6.3 to the 2012 Edition of NFPA 407, Standard for Aircraft Fuel Servicing

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to add a New 4.1.6.3, revise A.4.1.6.1, and add a New A.4.1.6.3.

__ AGREE  __________ DISAGREE*  __ X __ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

My expertise does not include firefighting

_________________________________________________________

_________________________________________________________

Question 2: I agree that the subject is of an EMERGENCY NATURE.

__ AGREE  __________ DISAGREE*  __ X __ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

Same explanation as in 1

_________________________________________________________

_________________________________________________________

Howard Gammon
Signature

HOWARD GAMMON
Name (Please Print)

8-17-11
Date

Please return the ballot on or before Thursday, August 18, 2011.

PLEASE RETURN TO:
Joanne Goyette, Administrator, Technical Projects
NFPA
1 Batterymarch Park
Quincy, MA 02169  FAX: (617) 984-7110  E-mail: jgoyette@nfpa.org

October 13, 2011  Standards Council Agenda October 17-18, 2011  Page 100 of 331
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1029
To Add New 4.1.6.3, Revise A.4.1.6.1, and Add New A.4.1.6.3 to the 2012 Edition of NFPA 407,
Standard for Aircraft Fuel Servicing

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to add a New 4.1.6.3, revise
A.4.1.6.1, and add a New A.4.1.6.3.

X* AGREE  ___________ DISAGREE*  ___________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

SEE ATTACHED SUGGESTIONS

---

Question 2: I agree that the subject is of an EMERGENCY NATURE.

X* AGREE  ___________ DISAGREE*  ___________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

---

Aldo Nuzzolese
Signature

Name (Please Print)

8/15/11
Date

Please return the ballot on or before Thursday, August 18, 2011.

PLEASE RETURN TO:
Joanne Goyette, Administrator, Technical Projects
NFPA
1 Batterymarch Park
Quincy, MA 02169

FAX: (617) 984-7110  E-mail: jgoyette@nfpa.org
I agree with the TECHNICAL MERITS of the Proposed TIA and suggest the following changes:

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

   4.1.6.3* ABC fire extinguishers that dispense monoammonium phosphate (ammonium phosphate) extinguishing agent shall not be used or placed on aircraft fueling vehicles, airport fuel servicing ramps, or aprons, or at airport fuel facilities.

   This paragraph should also be stated in 5.13 or 5.13 should refer for fire extinguishers to comply with 4.1.6.

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

   A.4.1.6.3 Fire extinguishers that dispense monoammonium phosphate (ammonium phosphate) extinguishing agent is known to cause corrosion to aluminum aircraft components and electronics. 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.

   **Substantiation:**

   If the intent is to prohibit the use of monoammonium phosphate (ammonium phosphate) extinguishing agent, the change should be revised to read as stated above so that it will prohibit the use of fire extinguishers that discharge ammonium phosphate, but will allow other ABC agents. This will permit the use of ABC rated fire extinguishers that meet the minimum BC rating specified, as there are approved ABC fire extinguishers such as “Clean Agent” (Halon, Halotron) fire extinguishers that do not cause corrosion or the use of any new ABC agent developed that is also efficient and safe to use.
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1029
To Add New 4.1.6.3, Revise A.4.1.6.1, and Add New A.4.1.6.3 to the 2012 Edition of NFPA 407,
Standard for Aircraft Fuel Servicing

October 13, 2011
Standards Council Agenda October 17-18, 2011
Page 103 of 331

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to add a New 4.1.6.3, revise
A.4.1.6.1, and add a New A.4.1.6.3.

[ ] AGREE [ ] DISAGREE* [ ] ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

[ ] An explanation must accompany a disagreement or abstaining position.

[ ] I would recommend something regarding fire ext. be added as well

[ ]

Question 2: I agree that the subject is of an EMERGENCY NATURE.

[ ] AGREE [ ] DISAGREE* [ ] ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

[ ] An explanation must accompany a disagreement or abstaining position.

[ ]

[ ]

[ ]

Signature

[ ]

Name (Please Print)

[ ]

Date

[ ]

Please return the ballot on or before Thursday, August 18, 2011.

PLEASE RETURN TO:
Joanne Goyette, Administrator, Technical Projects
NFPA
1 Batterymarch Park
Quincy, MA 02169
FAX: (617) 984-7110
E-mail: jgovette@nfpa.org

October 13, 2011 Standards Council Agenda October 17-18, 2011 Page 103 of 331
From: Henry Reed [hreed13@cox.net]

Sent: Friday, August 05, 2011 2:34 PM

To: 'Eddie Phillips'; TIA's; Sawyer, Steve; rbarr@ci.lawrence.ks.us; liggett@ci.beloit.wi.us; John.Chartier@sfm.dps.ri.gov; chief@wfd.necoxmail.com; deputy44@aol.com; Clarence.j.leake@wv.gov; deputy44@aol.com; fireprevention@southrivernj.org; richard.mccarthy@maine.gov; smiller@townofchili.org; rgstahl@isrt.com; 'Sidney Malone'; 'Tony Apfelbeck'; e.henryortiz@gmail.com; 'Tony Apfelbeck'; 'Bill Bulman'; 'Bill Galloway'; 'Jim Goodloe'; 'Ed Paul'; rick.harrison@buechelfire.com; 'Claude O. Hutton'; 'George M. Lanier'

Subject: RE: TIA No. 1029 to NFPA 407 - WE ALL KNOW AIRPORTS DO NOT MEET NFPA AIRCRAFT LOADING WALKWAY SEAL REQUIREMENTS

October 13, 2011
Standards Council Agenda October 17-18, 2011
Page 104 of 331

To all

Researching LOADING BRIDGES on the web for "renovation" (shown below) and for sale you will not find any one offering to upgrade them to correct the fuselage seals. Those in the pasted web search below most likely are being replaced with more non-complying loading bridges.

To down grade to a less effective fire extinguisher as proposed in this TIA to protect the aircraft, rather than increasing protection to protect the passengers. This goes against what I believe. Would a terrorist fueling the aircraft, even care what kind of hand held extinguisher is present. Let us at least require a fully automatic foam system under the poor seal point of the Bridge at the Fuselage. Then maybe offer the TIA if they comply.

In a meeting at the New Orleans Airport in the 1990's, FMC representatives maintained they cannot make a seal to fit all planes. The airlines representatives at the meeting maintained it would be impossible to juggle different planes to loading bridges with the properly fitting seals.

INNOVATION = WHERE THERE IS A NEED AN INVENTOR WILL FIND A WAY.

IF WE INSIST, THEY WILL FIND A WAY. DO NOT GIVE IN. TAKE PICTURES, OF THE SEALS WHEN YOU BOARD A PLANE, BUT I WARN YOU, NOT TO TALK TOO LOUDLY ABOUT THE PROBLEM, UNLESS YOU ARE DEPLANING. I DID ONCE WHEN BOARDING IN DENVER AND THE PILOT SAID I WAS UPSETTING THE PASSENGERS. I ASKED HIM TO SHOW ME ONE. I WAS REMOVED AND HAD TO CONTINUE MY FLIGHT THE NEXT DAY.

THEN A PILOT IS ON THE NEWS AND LOST HIS JOB FOR SAYING GROUND CREWS WERE JUST WALKING IN UNCHECKED. I HOPE IT WAS THE SAME PILOT.

HENRY REED

GEORGE
CALL ME AT 225-223-6820

- Low-level loading bridge - Transport Canada

... and demonstrate a low-level loading bridge (LLLB) for boarding passengers in wheelchairs onto small commuter aircraft. ... to plans for airport upgrades or renovations


- Jetway would be airport's passenger bridge to future

... like to see a passenger loading bridge at ... enclosed passenger loading bridge, which is used at most major airports to board aircraft ... have started some interior renovations ...

www.pittsburghlive.com/x/pittsburghtrib/s_292244.html

- Located Texas Renovation, Aircraft Interiors Contractors Suppliers,
Standards Council Agenda October 17-18, 2011

Get a Free Quote from Renovation, Aircraft Interiors Contractors ... Loading ... building, Ro ro terminal, Lighthouse, Road bridge ...

www.macraesbluebook.com/search/product_company_list.cfm?prod_code=9002634&region=Texas-TX

- Connect with Custom Aircraft Cabinets Inc in North Little Rock, AR.

Learn information about Custom Aircraft Cabinets Inc ... CONTRACTORS: Renovation, Aircraft Interiors; CONTROLS: Aircraft ... Loading Map...

www.macraesbluebook.com/search/company.cfm?company=553058

- Related Searches for aircraft loading bridge renovations
  - Jetway Bridges
  - Air Bridges
  - Stearns_Airport_Equipment
  - Jet Bridge
  - Passenger_Boarding_Bridge_Man...
  - Aerobridge

- NOVA | Smart Bridges: Expert Q&A - PBS: Public Broadcasting Service

... is nothing to be alarmed about-bridge renovation and ... is literally rebuilt to ensure the aircraft ... leads to better understanding of bridge behavior during seismic loading ...

www.pbs.org/wgbh/nova/tech/lynch-structural.html

- Airport Construction — Hawaii Airports

Construction of a concrete aircraft hardstand and ... Passenger Loading Bridge Replacement. Replace bridges at Gates ... Building Renovation, Air Conditioning of Vault Y and ...

www.hawaii.gov/hnl%20/airport-information/airport-construction

- City of Wichita - 2004 50 Years of Serving Kansas: Wichita Mid ...

All civil aircraft activities were transferred to the ... gift and restaurant/snack bar expansions and renovations. ... for passengers to board aircraft via a loading bridge.

www.wichita.gov/News/Announcements/2004/08-26-2004b.htm

- Euro Painting & Renovation, Inc - Goldens Bridge, NY - Painter in ...

  - (Map)
  - Painters
  - 29 Old Bedford Road Goldens Bridge, NY

Euro Painting & Renovation, Inc in Goldens Bridge, NY ... like Euro Painting & Renovation, Inc usually offer: 40k Painting Services, Aircraft ... Loading, please wait...

www.manta.com/c/m/t130x7/euro-painting-renovation-inc

- Renovation of airport terminal creates sparkling new building

Renovation of airport terminal creates ... grant for the new passenger loading bridge, plus ... The new bridge can accommodate smaller aircraft so passengers don't have ...

www.siuocityjournal.com/news/local/govt-and-politics/article_6c713430-4179-52d5-6cb6...
LAX to the Max

In addition, renovations are planned for two gates on ... Terminal concourses to enable dual loading bridge capability ... and turning radii of turnouts so the aircraft can ...

www.aci-na.org/static/entransit/LAX_Airport_Spotlight_Summer2005.pdf · PDF file

From: Eddie Phillips [mailto:EPhillips@eastridgepd.org]
Sent: Thursday, July 28, 2011 3:20 PM
To: Henry Reed; TIAs_Errata_FIs@nfpa.org; ssawyer@nfpa.org; rbarr@cl.lawrence.ks.us; liggettb@cl.beloiit.wi.us; John.Chartier@sfm.dps.rg.i; chief@wfd.necoxmail.com; deputy44@aol.com; Clarence.j.leake@wvg.gov; deputy44@aol.com; fireprevention@southrivernj.org; richard.mccarthy@maine.gov; smiller@townofchili.org; rgstahl@isrt.com; Sidney Malone; Tony Apfelbeck; e.henryortiz@gmail.com; Tony Apfelbeck; Bill Bulman; Bill Galloway; Jim Goodloe; Ed Paulk; rick.harrison@buechelfire.com; Claude O. Hutton; George M. Lanier
Subject: RE: TIA No. 1029 to NFPA 407 - WE ALL KNOW AIRPORTS DO NOT MEET NFPA AIRCRAFT LOADING WALKWAY SEAL REQUIREMENTS

"Some of you older guys, like Steven Sawyer, may remember me"..... Henry, you’re right! Steven is OLD!

From: Henry Reed [mailto:hreed13@cox.net]
Sent: Thursday, July 28, 2011 4:04 PM
To: TIAs_Errata_FIs@nfpa.org; ssawyer@nfpa.org; rbarr@cl.lawrence.ks.us; liggettb@cl.beloiit.wi.us; John.Chartier@sfm.dps.rg.i; chief@wfd.necoxmail.com; deputy44@aol.com; Clarence.j.leake@wvg.gov; deputy44@aol.com; fireprevention@southrivernj.org; richard.mccarthy@maine.gov; smiller@townofchili.org; rgstahl@isrt.com; Sidney Malone; Tony Apfelbeck; e.henryortiz@gmail.com; Tony Apfelbeck; Bill Bulman; Bill Galloway; Jim Goodloe; Ed Paulk; Eddie Phillips; rick.harrison@buechelfire.com; Claude O. Hutton; George M. Lanier
Subject: TIA No. 1029 to NFPA 407 - WE ALL KNOW AIRPORTS DO NOT MEET NFPA AIRCRAFT LOADING WALKWAY SEAL REQUIREMENTS

Please help me save some lives,
TIA No. 1029 to NFPA 407 - WE ALL KNOW AIRPORTS DO NOT MEET NFPA AIRCRAFT LOADING WALKWAY SEAL REQUIREMENTS.

Who am I:
Some of you older guys, like Steven Sawyer, may remember me. I am Henry Reed, Architect; a former member of NFPA’s Southern Regional Fire Code Development Committee. At one time, I represented the Louisiana State Fire Marshal’s Office (LSFMO) and was on that committee for many years back in the late 1990’s up to 2004. After 18 years with the LSFMO, I moved on to another state office and then retired after 25 years of state service.
I never forgot what my grandfather (died 1968), a retired New Orleans firefighter said, “His worst experience of being a fireman is the smell when removing a body after a fire, especially a child.” I, like many of you devoted you life to protect people’s lives, even though we are low salaried, unappreciated civil servants, behind the scene protecting the complainers. However, that is what we do. Please help me on this issue.

Support requested of two members needed:
As per the requirements of NFPA’s process, (copied below) I wish to solicit support in writing of two members of the applicable technical committee or technical correlating committee to amend the TIA about to be issued for NFPA 407.

As stated in the rules, as the submitter, I must also provide the appropriate endorsements (you guys really should correct the spelling on your web site for “endorsements”) in writing of two members of the applicable technical committee or technical correlating committee

October 13, 2011 Standards Council Agenda October 17-18, 2011 Page 106 of 331
Requests for TIAs shall be clearly worded to provide the recommended revision and the reason as to why it is of an emergency nature requiring prompt action. Submissions shall be in writing, addressed to the Standards Council Secretary, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471. The submitter must also provide the appropriate endorsements (endorsements) in writing of two members of the applicable technical committee or technical correlating committee. For further information on submitting a TIA, please contact Codes and Standards Administration.

The problem:
WE ALL KNOW AIRPORTS DO NOT MEET NFPA AIRCRAFT LOADING WALKWAY SEAL REQUIREMENTS. While at the LSFMO I attempted to enforce the NFPA AIRCRAFT LOADING WALKWAY SEAL REQUIREMENTS and did not get anywhere, but that is another story. The airlines and the manufacturers are very powerful people. I ask all of you, “Have you ever boarded a plane that had a tight seal between the aircraft fuselage and the jet bridge?” I have NEVER seen one that did. At the bottom of this is a copy of an email I sent to watchdog@usatoday.com regarding my concerns. Let us see what happens next?

Please consider:
This TIA No. 1029 to NFPA 407 is more concerned about the aircraft than human lives. Please consider requiring a foam suppression system similar to those at gas stations under all non-compliant jet bridges if you really wish to allow the reduction in the protection of the passengers on airplanes during fueling operations just to protect the aircraft. After all the extinguisher is only used if there is a fire in the first place and the plan and passengers are in danger. Correct?

Support request of two members:
As per the requirements of NFPA’s process, (copied below) I wish to solicit support in writing of two members of the applicable technical committee or technical correlating committee to amend the TIA about to be issued for NFPA 407.

As stated in the rules, as the submitter, I must also provide the appropriate endorsements (you guys really should correct the spelling on your web site for “endorsements”) in writing of two members of the applicable technical committee or technical correlating committee

Requests for TIAs shall be clearly worded to provide the recommended revision and the reason as to why it is of an emergency nature requiring prompt action. Submissions shall be in writing, addressed to the Standards Council Secretary, NFPA, 1 Batterymarch Park, Quincy, MA 02169-7471. The submitter must also provide the appropriate endorsements (endorsements) in writing of two members of the applicable technical committee or technical correlating committee. For further information on submitting a TIA, please contact Codes and Standards Administration.

Old friends and new, please let me know what you think,

Henry
225-223-6820
From: Henry Reed [hreed15@cox.net]
To: watchdog@usatoday.com
Cc: 
Subject: Unsafe fire seal on airplanes while loading endanger many and they all know it

I am a Former State Fire Marshal Architect and I am greatly concerned about an airline pilot’s recent report regarding lack of ground crew screening. Terrorist or an accident will one day claim many lives, because the jet bridges lack fl code required pressurization and fire seal against the plane’s fuselage. Since the apron slopes away from the termina burning fuel spilled under the plane would flow toward the tail, thus the slide-shots would not be available as exits. I t have the airlines and the manufacturer (FMC) correct this in the 1990’s but failed. Due to the lack of security, the risk is much greater. Providing the required seals or foam extinguishing systems as an interim backup might help.

Please keep me out of it
These are very powerful people
If you wish to talk, that’s okay
Henry Reed
225-329-8987
Baton Rouge, LA

From: docinfo@nfpa.org [mailto:docinfo@nfpa.org]
Sent: Monday, June 06, 2011 8:20 AM
Subject: NFPA Document Information Alert
Item 11-10-7

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.

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 thread 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 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.
STATEMENT OF
RUBBER MANUFACTURERS ASSOCIATION

Tire Service Life for Passenger Car and Light Truck Tires

Tires are designed and built to provide many thousands of miles of excellent service but must be maintained properly. As explained below, the service life of a tire is affected by many factors that are independent of the chronological age of the tire.

Service Life is Not Determined by Chronological Age

Tires are composed of various materials, including rubber, having performance properties essential to the proper functioning of the tire. These component properties evolve over a combination of time, service and storage conditions. For each individual tire, this change is affected by many elements such as temperature, storage conditions, and conditions of use (e.g., load, speed, inflation pressure, impacts and road hazard injury) to which a tire is subjected throughout its life. Since service and storage conditions vary widely, accurately predicting the serviceable life of any specific tire based on simple calendar age is not possible. RMA is not aware of scientific or technical data that establishes or identifies a specific minimum or maximum service life for passenger and light truck tires. However, in some cases a tire or vehicle manufacturer may make a specific tire replacement recommendation regarding its products. If so, the consumer should consult the manufacturer with any questions with regard to following the recommendation. Further, any such recommendation should not be considered a minimum serviceable life for the tire.

The Consumer Plays A Primary Role in Tire Maintenance

The tire industry has long emphasized the consumers’ role in the regular care and maintenance of their tires. (Tire care and service manuals are available from RMA on its website, www.rma.org.) Tires should be removed from service for several reasons, including tread worn down to minimum depth, signs of damage (cuts, cracks, bulges, vibration, etc.) or signs of abuse (underinflation, overloading, etc). That is why it is recommended to have tires, including spares, inspected regularly. A monthly maintenance inspection, for which the consumer must be primarily responsible, should focus on proper inflation pressure, tread wear and tire damage. This monthly inspection should be supplemented by recurring rotation, balancing and alignment services. This inspection should occur whether or not the vehicle is equipped with a tire pressure monitoring system. Additionally, the condition of a tire should be assessed regularly to determine if there are any tactile or visual signs of damage that make replacement necessary.
Storage, Rotation, and Other Conditions That May Affect Tire Service Life

Tires should always be stored in a dry, cool, well-ventilated place. Avoid storing tires in areas that are exposed to wetness, petroleum or petroleum-based products, extreme temperatures, direct sunlight, and/or other sources of ozone, such as electric motors. Storage areas should also be clean and free of grease, gasoline or any corrosive chemicals which can deteriorate the rubber.

If a vehicle is fitted with a matching full-size spare tire (same size and type as other in-service tires) the consumer should follow the vehicle manufacturer’s recommendation for rotating the spare tire. When any spare tire is placed into service, its inflation pressure must be checked immediately.

Consumers are strongly encouraged to be aware not only of their tires’ visual condition but also of any change in dynamic performance such as increased air loss, noise or vibration. Such a change in performance could be an indication of an internal condition that might dictate removing the tires from service immediately to prevent a tire failure. In these cases, RMA recommends that consumers consult a tire service professional.

Adopted March 2006

Document:  NFPA® 1911, Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Reference:  7.3.3 and 7.3.4
(TIA Log 1030)

Comment Closing:  9/9/2011
1 Public Comment Received

TIA FINAL TC BALLOT RESULTS

According to 5.4 in the NFPA (RGCP), the final results show this TIA HAS NOT achieving the necessary votes on both Question 1 (Technical Merit) and Question 2 (Emergency Nature).

The number of affirmative votes needed to obtain a recommendation to issue the TIA is 21.

[30 (eligible to vote) – 3 (not returned) – 0 (abstentions) = 27 × 0.75 = 20.25]

In all cases, an affirmative vote of at least a simple majority of the total membership eligible to vote is required.

[30 eligible ÷ 2 = 15 + 1 = 16 (this is the simple majority)]

30 Eligible to Vote
3 Not Returned (Dorio, Haston, Pietsch)

TC FINAL Ballot results for Technical Merit are as follows:
16 Agree (McCullough, Mettler w/comment)
11 Disagree (Caldwell, Carrier, Frazeur, Handwerk, Lackore, McCombs, Piechura, Rice, Salmi, Schoenberger, Stalnaker)
0 Abstentions

FINAL ACTION: FAILED

TC FINAL Ballot results for Emergency Nature are as follows:
16 Agree (Darley, Mettler w/comment)
11 Disagree (Caldwell, Carrier, Frazeur, Handwerk, Kelker, Lackore, McCombs, Piechura, Rice, Salmi, Stalnaker)
0 Abstentions

FINAL ACTION: FAILED
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

AGREE  X  DISAGREE*  ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

There may be hidden deterioration not detectable by a mechanic. Fire service puts undue stress on tires with higher axl loads, aggressive driving & braking. Better safe than sorry.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

AGREE  X  DISAGREE*  ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

Don't want to change anything.

Signature
Walter C Coldrey Jr
Name (Please Print)
8-F-2011
Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169
Fax: (617) 984-7056
E-mail: svanzandt@nfpa.org

October 13, 2011  Standards Council Agenda October 17-18, 2011  Page 114 of 331
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

October 13, 2011

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

_______ AGREE  X DISAGREE*  _______ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

It is better to err on the side of safety and while a visual inspection will not detect internal deterioration, cost should not be a factor and proper fleet management can move tires from a low mileage vehicle to a high mileage vehicle.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

_______ AGREE  X DISAGREE*  _______ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

I see no emergency nature of this subject, fiscal matters should not over ride safety.

__________________________
Signature

__________________________
John Carrier
Name (Please Print)

8-11-11
Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169  FAX: (617) 984-7056  E-mail: svanzandt@nfpa.org

October 13, 2011  Standards Council Agenda October 17-18, 2011  Page 115 of 331
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

Approved by: [Signature]

[Name]

Date: [8.3.11]

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

Approved by: [Signature]

[Name]

Date: [8.3.11]

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169

FAX: (617) 984-7056
E-mail: svanzandt@nfpa.org

October 13, 2011
Standards Council Agenda October 17-18, 2011
Page 116 of 331
Don Frazeur  
Proposed Tentative Interim Amendment Log No. 1030

Question 1: I disagree with the Technical Merits of the Proposed TIA to revise 7.3.3 and 7.3.4 for the following reasons:

1. Currently, proposed section 7.3.4, items 2 and 3 require the same thing. The federal standards under 7.3.4 (2) require the same tread depth as 7.3.4 (3). This may not always be the case. The verbiage in section 7.3.4 should require the more restrictive of the two requirements, or stick with the federal guidelines as currently written.
2. The submitter resolves ambiguity regarding tire manufacture date (DOT tire date) and the date the tire was placed into service by requiring a “qualified” technician to determine the need for replacement based on inspection. However, the submitter has failed to establish the frequency that inspections are required. Without a specified frequency, this requirement is toothless. Also, a “qualified technician” may increase inspection cost.
3. There are three variables that should be considered when evaluating a tire that still has sufficient tread for replacement; tire age, vehicle duty cycle, and to some extent, where and how the vehicle is stored. The DOT tire date is the only way to accurately determine tire age. Seven years may be a good “rule of thumb” to decide when an evaluation for replacement that is not based on tread depth should be made.

Question 2: I disagree that the subject is of an Emergency Nature for the following reasons:

1. Let the buyer beware! Specify the DOT tire date that is acceptable to you as a purchaser, first when you purchase your apparatus and also when you replace tires.
2. Establish tire rotation programs to ensure that low mileage tires are rotated onto apparatus that receive more use in order to get full value from tires before replacement.

[Signature]

October 13, 2011
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

__ AGREE  X DISAGREE*  ___ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

AGE TIME IS AN IMPORTANT FACTOR

Question 2: I agree that the subject is of an EMERGENCY NATURE.

__ AGREE  X DISAGREE*  ___ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

E-11-11

Signature

Name (Please Print)

Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169  FAX: (617) 984-7056  E-mail: svanzandt@nfpa.org
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

X AGREE  ________ DISAGREE*  ________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

_______ AGREE  X DISAGREE*  ________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

I do not believe that this subject matter meets any of the definitions of emergency nature as defined in Appendix E.2 of the NFPA Regulatory Governors Committee Projects

Signature  

James L. Kalker

Name (Please Print)  

8/8/11

Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169  
FAX: (617) 984-7056  
E-mail: svanzandt@nfpa.org
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

   _____ AGREE  ___ X ___ DISAGREE*  ________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

   SEE ATTACHED RESPONSE

Question 2: I agree that the subject is of an EMERGENCY NATURE.

   _____ AGREE  ___ X ___ DISAGREE*  ________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

Main substitution is based on financial impact that can be mitigated by rotating older models to other municipal uses.

R. Lackore
Signature

Roger Lackore
Name (Please Print)

Aug 3, 2011
Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169  FAX: (617) 984-7056  E-mail: svanzandt@nfpa.org
Response to NFPA 1911 TIA Log 1030 (comments in red)

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.

Although some deterioration from age can be identified through inspection, inspection alone cannot reveal the chemical changes in a tire carcass.

From NHTSA safercar.gov:

“The structural integrity of a tire can degrade over an extended period of time. When that occurs, tires are more prone to catastrophic failure, which could, at best, cause an inconvenience, or, at worst, lead to a crash. The degradation of a tire occurs over time, mostly the result of a chemical reaction within the rubber components. That aging process can be accelerated by heat and sunlight.”

“NHTSA research suggests that tires age faster in warmer climates. Exposure to high ambient temperatures can accelerate the tire aging process, which could contribute to tire failures, including tread separations. Environmental conditions like exposure to sunlight and coastal climates, as well as poor storage and infrequent use can hasten the aging process.”

The effects of aging may not be visibly detectable. Since there is no standard test to assess the serviceability of a tire, even an inspection performed by an expert may not always reveal the extent of tire deterioration.

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 thread depth of 11/64". Why should the tires be replaced if they have passed the PM inspection and are only worn 2/64"

A tire with plenty of tread can still be unsafe

From NHTSA safercar.gov:

Tire aging is generally not an issue with vehicles that are driven regularly. Tires will wear out and need to be replaced before aging becomes a safety concern. But those with occasional use - like recreational vehicles or collector cars, for example - could be susceptible. The spares on all vehicles also are prone to aging problems because they seldom get used or replaced. In those instances, the structural integrity of the tire may be weakened - and potentially hazardous - even though the tire still has a great deal of remaining tread.
Not only is this a financial burden, but it also poses an environmental issue with disposal and depletion of natural resources.

There are alternative ways to reduce the financial burden. Fire apparatus are often serviced by municipal shops who also service a wide variety of other public vehicles that put on more miles annually. Aging tires less than 7 years old could be removed from the low-mileage fire apparatus and be moved to other commercial vehicles that will wear through the tread at a faster rate.

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 changed when they have only been on the vehicle for 5 and 6 years instead of 7 years.

As the TIA implies, there is not universal agreement on how to consider tires that have been stored for years before installation. That said, it seems reasonable to assume that a tire stored off a vehicle in a cool, dry location out of the sunlight will have different aging characteristics than one that has been under pressure on a vehicle and is undergoing all the heat and cold exposure from occasional operation.

The current NFPA 1911 and NFPA 1901 Annex D wording does not state that a tire must be replaced 7 years after the date of it’s manufacture. It states that the “tires should be replaced every 7 years”. I believe the original intent of the committee was that tires should not remain in service for more than seven years. If the tires are installed in January, 2010, then they should be replaced before January, 2017. This 7 year time-frame should be simple to determine from the vehicle maintenance records.

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.

RMA may not be willing to commit to the tire aging issue, but the DOT will. While NHTSA does not mention fire apparatus directly, the examples they give describe the same potential duty cycle. From NHTSA safercar.gov:

Tire aging is generally not an issue with vehicles that are driven regularly. Tires will wear out and need to be replaced before aging becomes a safety concern. But those with
occasional use - like recreational vehicles or collector cars, for example - could be susceptible. The spares on all vehicles also are prone to aging problems because they seldom get used or replaced. In those instances, the structural integrity of the tire may be weakened - and potentially hazardous - even though the tire still has a great deal of remaining tread.

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.

The 7 year replacement criterion has been stated in Annex D of NFPA 1901 since 2009. It was added after we became aware of tire blow-out induced roll-overs in old apparatus. Fire apparatus have higher axle loads and often utilize fire service tire ratings that place the tires at higher loads than they would see in standard commercial vehicle service. They accelerate more aggressively, brake more aggressively, and are expected to weave through traffic during emergency responses.

Admittedly, the choice of 7 years as the criteria has no definite basis in science. As stated by NHTSA, tire manufacturers have given ranges anywhere from 6 to 10 years. Obviously we do not expect a tire that has been on an apparatus for 7 years and 1 month to explode. We do know, however, that the older the tire the greater the danger. Given the risk involve, and all the special circumstances surrounding fire apparatus, it is my opinion that we should be “better safe than sorry” and keep the current wording as-is.

Roger Lackore, PE CSP
Director of Product Safety
Oshkosh Corporation
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

[ ] AGREE  [X] DISAGREE*  [ ] ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

DUE TO THE AGGRESSIVE NATURE THAT EMERGENCY RESPONSE VEHICLES ARE DRIVEN DURING AN EMERGENCY RESPONSE, I THINK WE SHOULD ERROR TO THE SIDE OF SAFETY AND CONTINUE TO RECOMMEND THE TIRES BE REPLACED ON SEVEN YEAR CYCLES.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

[ ] AGREE  [X] DISAGREE*  [ ] ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

I DO NOT BELIEVE THE TIA IS OF AN EMERGENCY NATURE. NO ADDITIONAL ACCIDENTS WILL RESULT FROM NOT CHANGING THE CURRENT WHEELING.

[Signature]

WILLIAM F. McCOMBS
Name (Please Print)

8-9-2011
Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169

FAX: (617) 984-7056  E-mail: svanzandt@nfpa.org
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

   AGREE  [ ]  DISAGREE*  [ ]  ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

   See Attached

Question 2: I agree that the subject is of an EMERGENCY NATURE.

   AGREE  [ ]  DISAGREE*  [ ]  ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

   See Attached

Signature

S. Jeff Piechura

Name (Please Print)

8/10/11

Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169
FAX: (617) 984-7056  E-mail: svanzandt@nfpa.org
Technical Committee Letter Ballot

Proposed TIA Log 1030 NFPA 1911

VOTE BY: S. Jeff Piechura

Question 1: DISAGREE with the technical merits of the Proposed TIA to revise 7.3.3 and 7.3.4 for the following reasons:

In conversations with a number of fire fleet service personnel throughout the Southwest United States they argued that the seven year minimum replacement term does not have any data to support the requirement, yet, they all noted instances where less than seven year old tires were inspected on low use vehicles and found to have varying degrees of dry rotting.

One agency Chief Mechanic, having reviewed the proposed 1911 standards, was upset that such a requirement would be included on expensive maintenance items. To validate their claim they pulled a set of rear-dual (2) tires that had 6 years of in-service time off a low mileage Water Tender for a breakdown inspection (taking the tires off the rims). Much to their dismay they found severe dry-rotting conditions on both tires. They pulled all 8 tires (tandem axle) off the rear of the truck and found 8 of the 8 tires (same in-service date) in varying degrees of dry-rot. (The Mechanics did not provide the date of manufacture of the tires). The District replaced all the tires on three of their Water Tenders, of the 30 tires replaced, 24 had various dry-rotting conditions, ranging from light to severe.

Standard Tire Inspections for vehicles do not include the separation of the tire from the rim.

My vote to disagree with the TIA is based on tire safety issue that is apparently prevalent in the Southwest part of the United States. Until a more in-depth tire standard can be developed that will provide a more definitive inspection and service life process is provided by the manufacturers and Fire Maintenance professionals, for the safety of the fire personnel and the public commuters, I believe the 7 year replacement requirement is appropriate.

Question 2: DISAGREE

Given the rationale stated above, I do not believe there is a need for immediate action to amend the standard as written.

S. Jeff Piechura

8/15/2011
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1038
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

AGREE  X  DISAGREE  ABSTAIN

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

I agree with Roger Lavoie's opinion on this subject.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

AGREE  X  DISAGREE  ABSTAIN

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

I agree with Roger Lavoie's opinion on this subject.

Signature

Edward C. Rowe Jr.

Name (Please Print)

08-18-11

Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zariff, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169

FAX: (617) 984-7856 E-mail: svanzarif@nfpa.org

October 13, 2011 Standards Council Agenda October 17-18, 2011 Page 127 of 331
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1039
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

☐ AGREE ☒ DISAGREE* ☐ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.
Based on supporting information from Tire & Rim Association, there are good reasons to limit tire age. Without further study of fire trucks, I don't think we should revise.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

☐ AGREE ☒ DISAGREE* ☐ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

________________________________________

James A. Salmi
Signature

James A. Salmi
Name (Please Print)

8/16/11
Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169

FAX: (617) 984-7056

E-mail: svanzandt@nfpa.org

October 13, 2011

Standards Council Agenda October 17-18, 2011

Page 128 of 331
Van Zandt, Stacey

From: Salmi, Jim A. [Jim.Salmi@crimson-fire.com]
Sent: Monday, August 22, 2011 3:01 PM
To: Van Zandt, Stacey
Subject: RE: 1911 TIA Log 1030 ballot

The negative is: It is not an urgent requirement to make this change. We are consistent with Tire and Rim Association recommendations.

Jim Salmi
Chief Operating Officer
Crimson Fire
Direct 605-582-4081
Mobile 717-413-0050
Fax 717-738-0042
www.crimson-fire.com

"This communication (including any attachments) is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged information. If you are not the intended recipient, any retransmission, dissemination, distribution, disclosing, copying, or using any of this information is strictly prohibited. If you received this communication in error, please contact the sender immediately and delete or destroy the material in its entirety."

From: Van Zandt, Stacey [mailto:svanzandt@NFPA.org]
Sent: Monday, August 22, 2011 8:42 AM
To: Salmi, Jim A.
Subject: 1911 TIA Log 1030 ballot
Importance: High

Jim: You marked question 2 on your NFPA 1911 TIA Log 1030 ballot as negative but you didn't give a reason. Please reply to this email asap with your reason. Thank you.

Stacey Van Zandt
Project Administrative Supervisor
phone - 617-984-7481
fax - 617-984-7056

CONFIDENTIALITY NOTICE: This email and any attachments are for the exclusive and confidential use of the intended recipient. If you are not the intended recipient, please do not read, distribute or take action in reliance upon this message. If you have received this in error, please notify us immediately by return email and promptly delete this message and its attachments from your computer system.

Please consider the environment before printing this email.
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

AGREE          DISAGREE*          ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

________________________________________________________________________
I agree with the position and data provided by Roger Lachere. The NFPA data applies more to fire trucks versus the statement of Rubber Mfg. Assn.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

AGREE          DISAGREE*          ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

________________________________________________________________________

Mike Schreiber
Signature

Mike Schreiber
Name (Please Print)

8-4-11
Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169    FAX: (617) 984-7066    E-mail: svanzandt@nfpa.org
Stacy  
Please record my vote as Disagree on both questions:

The explanation for question 1 is:  
While the Rubber Manufacturers Association may not be willing to admit that tires age and should be replaced, many other experts seem to disagree. By having NFPA 1911 make a specific recommendation about replacing old tires, this brings the issue to the attention of maintenance departments and gives them some leverage with the budget minders that tires do not have an infinite life life. Tire age is often cited in NHTSA investigations of rollovers and other accidents. It is easy to determine the chronological age of a tire from the DOT stamp, and even the most rudimentary maintenance records should show when the tires were installed on the vehicle.

The explanation for question 2 is:  
This statement has been in NFPA 1911 since the 2007 edition and could have been commented on previously. Nothing has changed to suddenly make this an emergency issue. The cost issue and environmental issue, while certainly significant, can at least partly be addressed by finding other higher mileage uses for the tires and sharing the usage so the tires actually get worn out before they age out.

Tom Stalnaker

On 8/11/2011 12:39 PM, Van Zandt, Stacey wrote:
To TC on Fire Department Apparatus:

This is a reminder that this ballot is due August 19, 2011, and according to my records you still have not returned your ballot. Please return your ballot by the due date.

Thank you.

From: Van Zandt, Stacey
Sent: Tuesday, August 02, 2011 11:00 AM
To: Van Zandt, Stacey
Cc: Walker, Nancy; Stewart, Larry; Baio, Debbie
Subject: NFPA 1911 TIA LOG 1030 BALLOT- Action Required

To TC on Fire Department Apparatus:
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

☐ AGREE ☐ DISAGREE* ☐ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:
*An explanation must accompany a disagreement or abstaining position.


Question 2: I agree that the subject is of an EMERGENCY NATURE.

☐ AGREE ☐ DISAGREE* ☐ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:
*An explanation must accompany a disagreement or abstaining position.

I see this as an emergency because of unjustified cost and liability.

[Signature]

[Name (Please Print)]

[Date]

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169
FAX: (617) 984-7056
E-mail: svanzandt@nfpa.org
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

_____ AGREE   _____ DISAGREE*   _____ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

Language should also include direction to follow the tire manufacturer's recommendations and guidelines on tire replacement.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

_____ AGREE   _____ DISAGREE*   _____ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

________________________
Signature

Thomas H. McCullough, Jr
Name (Please Print)

8-10-11
Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169   FAX: (617) 984-7056   E-mail: svanzandt@nfpa.org
TECHNICAL COMMITTEE LETTER BALLOT
PROPOSED TENTATIVE INTERIM AMENDMENT LOG NO. 1030
To Revise 7.3.3 and 7.3.4 of the 2007 and Proposed 2012 Editions of NFPA 1911,
Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

Question 1: I agree with the TECHNICAL MERITS of the Proposed TIA to revise 7.3.3 and 7.3.4.

X AGREE  _________ DISAGREE*  _________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

The 7-year time duration established in the 2007 edition was apparently not based on a technical justification, thus, I vote agree.

Question 2: I agree that the subject is of an EMERGENCY NATURE.

X AGREE  _________ DISAGREE*  _________ ABSTAIN*

EXPLANATION OF VOTE - Please type or print your comments:

*An explanation must accompany a disagreement or abstaining position.

I am voting to agree based on 5.2(f) of the NFPA Regulations Governing Committee Projects.

Thomas J. Mettler
Signature

Thomas J. Mettler
Name (Please Print)

Aug 17, 2011
Date

Please return the ballot on or before August 19, 2011.

PLEASE RETURN TO:
Stacey Van Zandt, Project Administrator
NFPA
1 Batterymarch Park
Quincy, MA 02169

FAX: (617) 984-7056  E-mail: svanzandt@nfpa.org
October 13, 2011
Standards Council Agenda October 17-18, 2011
Page 135 of 331

FORM FOR COMMENT ON NFPA REPORT ON PROPOSAL
All Comments Must Be Received by 5:00 pm EST/EDST
on the Published Comment Closing Date

For further information on the standards-making process, please contact the Codes and Standards Administration at 617-984-7249 or visit www.nfpa.org/codes.
For technical assistance, please call NFPA at 1-800-344-3555.

Please indicate in which format you wish to receive your ROP/ROC ☒ electronic ☐ paper ☐ download
(Note: If choosing the download option, you must view the ROP/ROC from our website; no copy will be sent to you.)

Date 7/28/11 Name Michael Thorn Tel. No. 541 689-5445
Company Oregon Apparatus Repair, Inc. Email mika@oregonapp.com
Street Address 90498 Hwy 99N, Unit 2 City Eugene State OR Zip 97402

***If you wish to receive a hard copy, a street address MUST be provided. Deliveries cannot be made to PO boxes.

Please indicate organization represented (if any)

1. (a) NFPA Document Title Standard for the Inspection, Maintenance, Testing, and Retirement of In-Service Automotive Fire Apparatus

   (b) Section/Paragraph 7.3.3 and 7.3.4

2. Comment on Proposal No. (from ROP): TIA Log No. 1030

3. Comment Recommends (check one):
   ☐ new text ☒ revised text ☐ deleted text

4. Comment (include proposed new or revised wording, or identification of wording to be deleted): [Note: Proposed text should be in legislative format; i.e., use underscore to denote wording to be inserted (inserted wording) and strike-through to denote wording to be deleted (deleted wording).]

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.

5. Statement of Problem and Substantiation for Comment: (Note: State the problem that would be resolved by your recommendation; give the specific reason for your Comment, including copies of tests, research papers, fire experience, etc. If more than 200 words, it may be abridged for publication.)

I support the referenced TIA petition without reservation. The requirement for 7-year tire replacement appears to be subjective and without practical merit. My experience with a mixed urban and rural customer base is that requirements such as this that appear to them to be frivolous are ignored. Unfortunately, the resulting compromise of the document undermines its credibility and invites the AHJ to “cherry pick” the remainder of the document.

6. Copyright Assignment
   (a) ☐ I am the author of the text or other material (such as illustrations, graphs) proposed in the Comment.
   (b) ☒ Some or all of the text or other material proposed in this Comment was not authored by me. Its source is as follows: (please identify which material and provide complete information on its source)

   Revised text from TIA Log No. 1030

I hereby grant and assign to the NFPA all and full rights in copyright in this Comment and understand that I acquire no rights in any publication of NFPA in which this Comment in this or another similar or analogous form is used. Except to the extent that I do not have authority to make an assignment in materials that I have identified in (b) above, I hereby warrant that I am the author of this Comment and that I have full power and authority to enter into this assignment.

Signature (Required) Michael L. Thorn, President, Oregon Apparatus Repair, Inc.

PLEASE USE SEPARATE FORM FOR EACH COMMENT

Mail to: Secretary, Standards Council · National Fire Protection Association

October 13, 2011 Standards Council Agenda October 17-18, 2011 Page 135 of 331
Good Morning Linda,

The Technical Committee on Technical Rescue would like to request a change of Committee Title to better reflect the committee scope and document for which they are responsible. At our most recent meeting, the committee voted to change the title of the committee to the Technical Committee on Technical Search and Rescue. I would like to submit this change for review by the Standards Council. Please let me know if there is anything else required to move this change forward. Thanks!

Current Title:
Technical Committee on Technical Rescue

Proposed Change:
Technical Committee on Technical Search and Rescue

Current Committee Scope:
This Committee shall have primary responsibility for documents on technical search and rescue techniques, operations, and procedures to develop efficient, proper, and safe utilization of personnel and equipment.

Ryan Depew FF/EMT-B  
National Fire Protection Association  
Public Fire Protection Division  
1 Batterymarch Park  
Quincy, Ma. 02169-7471  
617-984-7485- Office  

Please consider the environment before printing this email.
Item 11-10-9
September 21, 2011

Ms. Amy Cronin
Standards Council Secretary
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169

Dear Ms. Cronin:

As Technical Committee on Hazardous Materials Response Personnel (HMZ-AAA) Chair, I am requesting that the NFPA Standards Council consider the following change in the Committee Scope with the associated justification.

**Technical Committee on Hazardous Materials Response Personnel Committee Scope:** This Committee shall have primary responsibility for documents on the requirements for professional qualifications, professional competence, training, procedures, and equipment for emergency responders to hazardous materials/weapons of mass destruction incidents.

**Justification:** For several years, there has been an effort to incorporate and/or develop hazardous materials job performance requirements for fire fighters between NFPA 1001 and NFPA 472. Significant progress has been made over the past few months and a solution is within sight.

At the October 2010 Standards Council meeting:

The Council considered the request of the North American Fire Training Directors regarding a scope clarification between NFPA 472 and NFPA 1001 and a request to develop a new Professional Qualifications document on fire service hazardous materials responders. The Council voted to defer action on the requests at this time. The NFPA Staff has informed the Council that there has been a Professional Qualifications Summit proposed that will address the jurisdictional issues between these two committees, and it is anticipated that further information will be developed that will assist the Council in addressing the jurisdictional overlap of these two documents. The Council directs NFPA Staff to report back to the Council after the Summit at the August Council meeting.
In April 2011, the *Pro-Qual Summit: Now and Beyond* was convened in Dallas. The summit included members from all the Pro-Qual Technical Committees, Technical Committee Hazardous Materials Response Personnel and national fire service organizations. Many items were discussed, not the least of which was the main topic of hazardous materials. The Summit participants established the following recommendation relating to this topic:

**Reporting Structure for Hazmat Pro-Qual Requirements.** Re-align the scopes of applicable committees so that the existing NFPA Technical Committee on Hazardous Materials prepares a hazmat Pro-Qual standard that is JPR based, including but not limited to Awareness, Operations, Mission Specific Operations, Technician, and Incident Commander levels, to be processed through the Pro-Qual TCC for this document.

This recommendation was approved by the Standards Council at their August 2011 meeting:

The Council heard a report from NFPA Staff on the Professional Qualifications Summit that was convened to address the jurisdictional issues between Fire Fighter Professional Qualifications Technical Committee (TC) and the Hazardous Materials Response Personnel Technical Committee. The received the Report and has determined there is no specific action required from the Council at this time. The Council believes that the general approach that resulted from the Summit is acceptable with the exception of Item G of the Report, discussed below. Going forward, specific items requiring Council review and action should be brought to the Council as appropriate.

At this time, as Chair of the Technical Committee on Hazardous Materials Response Personnel (HCZ-AAA), I am respectfully requesting the Standards Council consideration this matter.

Respectfully submitted,

[Signature]

Gregory G. Noll, CSP  
Chair  
Technical Committee on Hazardous Materials Response Personnel
TO:     Ken Willette, Ken Holland, Tom McGowan
FROM:   Linda Fuller
DATE:   September 6, 2011
SUBJECT: Jurisdictional Issues Between the Fire Fighter Professional Qualifications Technical Committee and the Hazardous Materials Response Personnel Technical Committee

I am transmitting to you herewith the following action of the Standards Council (August 8-11, 2011):

The Council heard a report from NFPA Staff on the Professional Qualifications Summit that was convened to address the jurisdictional issues between the Fire Fighter Professional Qualifications Technical Committee (TC) and the Hazardous Materials Response Personnel Technical Committee. The Council received the Report and has determined there is no specific action required from the Council at this time. The Council believes that the general approach that resulted from the Summit is acceptable with the exception of Item G of the Report, discussed below. Going forward, specific items requiring Council review and action should be brought to the Council as appropriate.

Item G of the Report requests that Technical Committee Chairs, who currently serve on the Technical Correlating Committee (TCC) with “limited voting” status, be appointed as full voting members. The Council must deny this request since the Regulations Governing Committee Projects (Regs) at Section 3.2.6 prohibits Technical Committee Chairs from serving as voting members of the Technical Correlating Committee. Thus, even Chairs’ current limited voting status on the TCC appears to be contrary to the Regs. In light of this, Item G will be forwarded to the Standards Council Membership Task Group to review the current “limited voting” status of the TC Chairs on the TCC and to recommend reappointment of TC Chairs as non-voting members in accordance with the Regs. The Council understands that the Item G recommendation was aimed at increasing the effectiveness of the TCC. The Council is requesting that the TCC consider, within the constraints of the Regs, whether there are other recommendations that it might make regarding structure or other items that would meet its needs and promote the effective functioning of the TCC. The Council will review any specific TCC requests as received.

c:      D. Baio, C. Cronin, P. Foley, C. Grant, B. Merrifield, C. Peterson, Y. Smith, S. Van Zandt
TC Fire Fighter Professional Qualifications Technical Committee
TC Hazardous Materials Response Personnel
TCC Professional Qualifications
MEMORANDUM

TO: Secretary, Standards Council

FROM: Ken Willette, Program Manager; Ken Holland and Tom McGowan, Staff Liaisons

DATE: June 30, 2011

RE: Results of Pro-Qual Workshop and Impact on Professional Qualifications Project

Purpose

There are specific provisions of the Pro-Qual documents and associated programs that depend on continual harmonization and coordination. The Pro-Qual “Now and Beyond Workshop” for Fire and Emergency Services participants provided a variety of technical and procedural issues and questions on the future of the Pro-Qual Project. The purpose of the communication is to delineate the issues and recommend specific action by the Standards Council based on the Recommendations developed during the Pro Qual Workshop. This memo will:

1) Update on the status of the September 21, 2011 memo Re: Scope Conflict for Hazardous Materials Professional Qualifications Document to the Standards Council,
2) Present Workshop findings, and
3) Present staff recommendations for consideration by Standards Council

Background

The overarching goal of the Workshop was to establish a common understanding of how the individual elements, JPR’s, of the Pro-Qual system and the applicable organizational competency NFPA standards interact to provide best value to all of the Pro-Qual stakeholders. The workshop objectives were to:

• Briefly review the evolution, current status and anticipated direction of the professional qualification system;
• Identify the characteristics that provide best value to all stakeholders;
• Identify and prioritize the needs addressing the characteristics based on the best overall value; and
• Establish an action plan to provide guidance to the development of codes and standards to meet these needs.

There are eighteen separate standards and fifteen technical committees which are overseen by the Technical Correlating Committee on Professional Qualifications. It was recognized by our stakeholders that the infrastructure is well-developed and hope to see the evolution continue.

The Workshop was conducted over a day and a half and along with a review of the workshop goals, presentations on applicable baseline information were made. These were followed by three panel discussions, “Harmonizing Organizational and Individual Competencies”, “Recertification: Is it Needed and How do we Proceed”, and “Single and Multi Discipline Harmonization and Convergence”.

As stated in their September 21, 2010 memo to the Council, the North American Fire Training Directors (NAFTD) proposed a document in the Pro-Qual library was needed to address job performance requirements (JPRs) for fire service hazardous materials responders at several levels. Discussions between staff and the HCZ-AAA (TC on Hazardous Materials Response Personnel) and PQU-FFQ (TC on Fire Fighter Professional Qualifications) identified issues with the scope of each Technical Committee and under whose jurisdiction such a document would fall. Meetings between the parties continued and consensus on scope conflict persisted. Correlation of content between the TCs and the JPR language was met with apprehension by each TC as they questioned who had sufficient technical knowledge in hazardous materials response and who had sufficient resources to develop a JPR document. In researching these questions, Public Fire Protection Division Staff discovered several Pro-Qual documents and related NFPA organizational competency and training based documents also had scope conflict. To provide a mechanism to bring stakeholders together and seek input on how to address this, NFPA funded the Pro-Qual Summit and retained the Fire Protection Research Foundation to facilitate gathering input from the stakeholders and work towards a consensus report that would frame the issue and identify possible solutions. The goal was to provide a Report to the Standards Council for review and action as necessary to move beyond this issue and lay a stable foundation for the future of the Pro-Qual Project.

The Pro-Qual “Now and Beyond Workshop” for Fire and Emergency Services was held on April 13-14, 2011 in Irving, Texas to address professional qualifications used by the fire service and emergency response community.

The results of the workshop are available in the “Professional Qualifications “Now and Beyond Workshop” for Fire and Emergency Services Report. (Attached)

2) Workshop findings

Twenty key recommendations offer focus centered on defining jurisdictional scope of projects and document processing, recertification and requirements, training time, committee coordination, hazmat specific job performance requirements (JPR) information, terminology and a periodic review of Pro-Qual related issues for the Technical Committee and Technical Correlating Committee to consider. The Overall Summary of the Pro-Qual Now and Beyond Workshop Recommendations April 13-14, 2011 (Item 1).

3) Present staff recommendations that are specific for action by the Standards Council

Staff has reviewed the Workshop Recommendations (WR), and developed the following list for the Council's review:

High Priority Recommendations to be initiated as soon as possible:
A. Workshop Recommendation 1 - Standardized TC and Document Scope Language - Provide standardized boiler-plate language for TC scopes and document scopes, and make available for all applicable TCs to minimize scope conflicts and creep; (Note the Pro-Qual Technical Correlating Committee has accepted responsibility to oversee this task)
B. Workshop Recommendation 2 - Updated TC Scopes - Direct applicable TCs to review their existing TC scopes and identify overlap concerns and propose revisions for review by the Standards Council to clarify jurisdictional boundaries. (Note: The PQ-TCC has accepted responsibility for this task)

C. Workshop Recommendation 11 - Hazmat Specific JPR Information in Current Revision Cycle - Process the NFPA 472 and NFPA 1001 documents in their current revision cycles without hazmat specific JPR information; (Note: The respective Chairs are in agreement with this Recommendation)

D. Workshop Recommendation 12 - New Hazmat Pro-Qual Requirements - Continue to process current NFPA 1001 standard to reference NFPA 472 Awareness and Operations level requirements until such time as a new hazmat Pro-Qual standard is approved, preceding in as expeditious a manner as possible without sacrificing progress already established; (Note: The respective TC Chairs are in agreement with this Recommendation)

E. Workshop Recommendation 13 - Reporting Structure for Hazmat Pro-Qual Requirements - Re-align the scopes of applicable committees so that the existing NFPA Technical Committee on Hazardous Materials Response Personnel prepares a hazmat Pro-Qual standard that is JPR based, including but not limited to Awareness, Operations, Mission Specific Operations, Technician, and Incident Commander levels, and be processed through the Pro-Qual TCC. (Note: The Chair of NFPA 472 and the Pro-Qual TCC are in agreement with this Recommendation)

F. Workshop Recommendation 17 - Inter-Committee Coordination - Promote the continued use of task groups and other methods (i.e. extract policy) to facilitate harmonization between the Technical Committees responsible for scope overlap issues (e.g. NFPA 472 and NFPA 1001) to clearly align and coordinate the criteria in both documents to make sure all requirements will be consistent. Illustration of Proposed Action for Inter-Committee Coordination, April 2011 (Item 2).

G. Workshop Recommendation 7 - Voting Status of TC Chairs on Pro-Qual TCC - Improve the functionality of the Pro-Qual TCC by revising the “vote limited” status of the TC Chairs, to allow them to vote on issues except those directly pertaining to their assigned standards.

Intermediate Priority Recommendations to be initiated within next 12 to 24 months after further study and report back to the Council:

H. Workshop Recommendation 4 - Review of Processing Options - Review options for each new Pro-Qual project to improve processing efficiency and effectiveness without creating undue hardship on the established infrastructure. (Note: This is a reflection of Staff concern on managing the Pro Qual project effectively if the project continues to grow horizontally)

I. Workshop Recommendation 16 - Fire Service Advisory Committee - Establish an umbrella entity for correlation and on-going harmonization at a higher level than what currently exists for the Pro-Qual TCC (i.e. similar to the HRBSAC and DARAC advisory committees).
If the Standards Council accepts the Workshop Report and endorses the prioritized Recommendations listed as items A thru I, it will provide clear guidance to staff, the TCC on Professional Qualifications and Technical Committees connected with the Pro-Qual Project for a new path forward in harmonizing Professional Qualification, Organizational Competency, and Training documents.

**Endorsements**

Ken Willette and Tom McGowan attended an informal meeting of the NFPA Technical Committee on Hazardous Materials Response Personnel in Baltimore, MD on May 20, 2011. At that meeting staff highlighted the results of the workshop and shared the twenty Workshop Recommendations. Through the ensuing discussion, TC members stated their support in moving forward based on the Workshop Recommendations. Several members expressed relief that their TC would develop the HazMat JPR’s and this issue would be put to rest.

Ken Holland, Tom McGowan and Ken Willette provided a similar presentation to the Technical Correlating Committee on Professional Qualifications on June 11, 2011 in Boston, MA. After discussion, the TCC voted to endorse the Workshop Report and Recommendations, and this is reflected in the minutes of the meeting. As noted in the prioritized recommendation list, the TCC has accepted responsibility for several tasks and is ready to begin work as soon as possible.

The North American Fire Training Directors were represented at the Pro Qual Workshop and at the June 11 Technical Correlating Committee meeting. At each meeting, they expressed their support for the Workshop Recommendations and belief the actions that follow will address the concerns stated in their September 21, 2010 letter to the Council.

**Closing**

Based on the recommendations and actions of the Standards Council, the PFP and the Pro-Qual Project stands ready to fulfill the needs of the NPFA mission for a fire safe public and the safety of the fire service and emergency response community.
PROFESSIONAL QUALIFICATIONS

“NOW AND BEYOND WORKSHOP”

for

FIRE AND EMERGENCY SERVICES

IRVING, TEXAS
13-14 APRIL 2011

Workshop hosted by:
National Fire Protection Association

One Battery March Park
Quincy, MA USA  02169-7471

Report Prepared by:
Casey C. Grant, P.E. and Brian Merrifield
Fire Protection Research Foundation
One Battery March Park
Quincy, MA USA  02169-7471

12 May 2011

© Copyright, Fire Protection Research Foundation
The fire service and other emergency responders in North America have a well-developed infrastructure to address professional qualifications (Pro-Qual). A key part of this infrastructure are the multiple codes and standards that form the basis for training and professional competency for local, state, provincial, and federal fire protection and public safety personnel.

The NFPA Pro-Qual Project is responsible for eighteen separate standards that directly address specific Pro-Qual subjects. This topic is also addressed directly and indirectly by several other NFPA committee projects. The specific provisions of these documents, as well as programs that depend on them, are continually facing harmonization and coordination challenges. A vision expressed by interested stakeholders is that these challenges are addressed in the continued evolution of the professional qualification infrastructure.

To address these issues and to clarify this vision, a one and one-half day workshop was held on 13-14 April 2011 in Irving, Texas. The workshop was hosted by NFPA with support for administration, implementation and documentation provided by the Fire Protection Research Foundation (FPRF). This report provides the documentation of this workshop.

The goal of this interactive workshop was to establish a common understanding of how the individual elements of the Pro-Qual system and the applicable NFPA Standards (and related documents) interact to provide best value to all of the Pro-Qual stakeholders. The workshop objectives were:

- Briefly review the evolution, current status and anticipated direction of the professional qualification system;
- Identify the characteristics that provide best value to all stakeholders;
- Identify and prioritize needs addressing the characteristics based on the best overall value; and
- Establish an action plan to provide guidance to codes & standards to meet these needs.

Twenty key recommendations have resulted from this workshop. These twenty key points represent a compilation of all the recommendations brought forward. The following is a summary of these twenty key recommendations (taken from Table 5-3 of this report):

<table>
<thead>
<tr>
<th>Issue Category</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC/TCC Scopes</td>
<td><strong>Standardized TC and Document Scope Language.</strong> Provide standardized boiler-plate language for TC scopes and document scopes, and make available for all applicable TCs to minimize scope conflicts and creep.</td>
</tr>
<tr>
<td></td>
<td><strong>Updated TC Scopes.</strong> Direct applicable TCs to review their existing TC scopes and confirm they are (1) okay with regard to overlap concerns or (2) propose revisions for review by the Standards Council to clarify jurisdictional boundaries.</td>
</tr>
<tr>
<td></td>
<td><strong>Model Scoping Approach.</strong> Institute a model/template for overlap issues, based on the approach</td>
</tr>
<tr>
<td>Issue Category</td>
<td>Recommendation</td>
</tr>
<tr>
<td>----------------</td>
<td>----------------</td>
</tr>
<tr>
<td><strong>Document Processing</strong></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td><strong>Review of Processing Options.</strong> Review options within each project to improve processing efficiency and effectiveness without creating undue hardship on the established infrastructure.</td>
</tr>
<tr>
<td>5</td>
<td><strong>Revision Cycle Coordination.</strong> Coordinate the revision cycles of applicable standards to facilitate co-processing and overlap between different committee projects during document processing, with the intent to promote harmony and consistency (e.g. NFPA committee-weeks-model).</td>
</tr>
<tr>
<td>6</td>
<td><strong>TC Member Participation.</strong> Clarify with the Chairs of the applicable TCs and TCC the process to work with Staff to ensure Standards Council policies for TC member participation are monitored and enforced by annual reporting to the Standards Council.</td>
</tr>
<tr>
<td>7</td>
<td><strong>Voting Status of TC Chairs on Pro-Qual TCC.</strong> Improve the functionality of the Pro-Qual TCC by revising the “vote limited” status of the TC Chairs, to allow them to vote on issues except those directly pertaining to their assigned standards.</td>
</tr>
<tr>
<td><strong>General Content</strong></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td><strong>Document Titles.</strong> Review and update the titles of standards to accurately represent the scope and content, not only of the standard itself but also the overall project (in the case of large projects).</td>
</tr>
<tr>
<td>9</td>
<td><strong>Training Time Guidance.</strong> Consider providing guidance on making an assessment of required training times based on JPRS to implement their competencies.</td>
</tr>
<tr>
<td>10</td>
<td><strong>Similar Topics Across Multiple Standards.</strong> Examine ProQual standards for mutual exclusivity of certain technical topics to better coordinate requisite levels (e.g. foam is taught in multiple levels in various standards and which involves the same JPRs.</td>
</tr>
<tr>
<td><strong>Specific Content</strong></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td><strong>Hazmat Specific JPR Information in Current Revision Cycle.</strong> Process the NFPA 472 and NFPA 1001 documents in their current revision cycles without hazmat specific JPR information.</td>
</tr>
<tr>
<td>12</td>
<td><strong>New Hazmat Pro-Qual Requirements.</strong> Continue to process current NFPA 1001 standard to reference NFPA 472 Awareness and Operations level requirements until such time as a new hazmat Pro-Qual standard is approved, preceding in as expeditious a manner as possible without sacrificing progress already established.</td>
</tr>
<tr>
<td>13</td>
<td><strong>Reporting Structure for Hazmat Pro-Qual Requirements.</strong> Re-align the scopes of applicable committees so that the existing NFPA Technical Committee on Hazardous Materials prepares a hazmat Pro-Qual standard that is JPR based, including but not limited to Awareness, Operations, Mission Specific Operations, Technician, and Incident Commander levels, to be processed through the Pro-Qual TCC for this document.</td>
</tr>
<tr>
<td>14</td>
<td><strong>Recertification Impact Assessment.</strong> Fully assess the impact of recertification on organizations responsible for accreditation and certification (e.g. ProBoard, IFSAC, etc) prior to any proposed implementation.</td>
</tr>
<tr>
<td>15</td>
<td><strong>Recertification Based on Expiration Date.</strong> Instead of requiring recertification, consider an alternative approach of implementing an expiration date on current certifications.</td>
</tr>
<tr>
<td><strong>General</strong></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td><strong>Fire Service Advisory Committee.</strong> Establish an umbrella entity for correlation and on-going harmonization at a higher level than what currently exists for the Pro-Qual TCC (i.e. similar to the HRBSAC and DARAC advisory committees).</td>
</tr>
<tr>
<td>17</td>
<td><strong>Inter-Committee Coordination.</strong> Promote the continued use of task groups and other methods (i.e. extract policy) to facilitate harmonization between the Technical Committees responsible for scope overlap issues (e.g. NFPA 472 and NFPA 1001) to clearly align and coordinate the criteria in both documents to make sure all requirements will be consistent.</td>
</tr>
<tr>
<td>18</td>
<td><strong>Needs Assessment and Sunset Policy.</strong> Establish a protocol for a needs assessment to clarify the basis for retiring documents through a sunset policy (e.g. every 10 years).</td>
</tr>
<tr>
<td>19</td>
<td><strong>Terminology.</strong> Clarify the terminology used throughout all documents that are directly or indirectly addressing Pro-Qual related requirements.</td>
</tr>
<tr>
<td>20</td>
<td><strong>Periodic Review of Pro-Qual Related Issues.</strong> Consider establishing an on-going or periodic review process of Pro-Qual related issues, similar to the activities addressed by this workshop.</td>
</tr>
</tbody>
</table>
## Table of Contents

- Executive Summary ................................................................. 3
- Table of Contents ........................................................................ 5
- Acknowledgements ..................................................................... 5
- Summary of Figures and Tables ................................................... 6

1. Background and Workshop Overview ........................................... 7
2. Workshop Venue and Attendance ................................................ 10
3. Workshop Presentations .............................................................. 11
4. Summary of Panel Discussions ................................................... 16
5. Workshop Closing Discussion and Summary Observations ........... 20

Annex A: Workshop Agenda .......................................................... 27
Annex B: Standards Comparison Matrix ......................................... 30
Annex C: Comparison of Individual and Organizational Based Competencies .......... 42
Annex D: History of Professional Qualifications Project .................... 49
Annex E: Overview of JPR Development .......................................... 54
Annex F: Background on Standards Council Governance .................. 61
Annex G: Proposed Workgroup Questions ....................................... 65
Annex H: Overview of Fire Service Training and Education ............... 67
Annex I: Workshop Attendee List ..................................................... 77

## Acknowledgements

The planning for this Workshop has been guided with the support of a Planning Committee composed of: Rich Duffy (IAFF), Steve Edwards (NAFTD), Ken Holland (NFPA Staff, former ProQual Staff Liaison), Pat Marlatt (TC Chair on FF ProQual), Tom McGowan (NFPA Staff, current ProQual Staff Liaison), Clayton Moorman (IFSAC), Greg Noll (TC Chair for Hazardous Materials Response Personnel), Bill Peterson (TCC Chair for ProQual project), Fred Piechota (ProBoard), Chris Riley (IAFC), Bryant Stiles (NVFC), and Ken Willette (NFPA Staff, Public Fire Protection Division Manager). In addition to their input with planning aspects of the workshop, they also provided an active role in its implementation as presenters, panelists and facilitators. Their guidance and direction has been a valuable contribution to the success of the workshop and is genuinely appreciated.
SUMMARY OF FIGURES AND TABLES

Figure 3-1: Organizational Chart of Professional Qualification Documents
Figure 3-2: Evolution of the NFPA Pro-Qual Project
Figure 3-3: Chronology of NFPA Pro-Qual Documents
Figure 3-4: Components of a JPR
Figure 3-5: Performance Levels Used in JPR Development
Figure 4-1: Overview of Global Professional Requisite Skills, Knowledge, and Abilities
Figure 5-1: Illustration of Proposed Action Items for Inter-Committee Coordination
Figure 5-2: Summary of Discussion on Recertification
Figure 5-3: Summary of Discussion on Single and Multi Discipline
Figure 5-4: Summary of Discussion on Single and Multi Discipline (continued)

Table 1-1: Summary of the Standards Addressed by the NFPA Professional Qualifications Project
Table 1-2: Examples of Standards Coordination Issues
Table 3-1: Summary of Workshop Presentations
Table 4-1: Overview of Workshop Panel Discussions
Table 5-1: Summary of Day-One Key Points
Table 5-2: Proposed Action Items for Inter-Committee Coordination
Table 5-3: Overall Summary of Workshop Recommendations
1) BACKGROUND AND WORKSHOP OVERVIEW

This report summarizes a day and one-half workshop held on 13-14 April 2011 in Irving, Texas to address professional qualifications (Pro-Qual) used by the emergency response community. The workshop was hosted by NFPA with support for administration, implementation and documentation provided by the Fire Protection Research Foundation (FPRF). The FPRF is an affiliate of the NFPA that focuses on research-related topics.

Multiple existing codes and standards form the basis for training and professional competency for local, state, provincial, and federal fire protection and public safety personnel throughout North America. These documents are widely used in multiple venues, such as, for example, several being adopted by the Department of Homeland Security to qualify individuals involved in a wide range of national security activities. Table 1-1 provides a summary of the eighteen standards within the NFPA Pro-Qual Project, administered by the Pro-Qual Technical Correlating Committee and fifteen separate Technical Committees in the Pro-Qual project.

Table 1-1: Summary of the Standards Addressed by the NFPA Professional Qualifications Project

<table>
<thead>
<tr>
<th>DESIGNATION</th>
<th>DOCUMENT TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NFPA 1000: Standard for Fire Service Professional Qualifications Accreditation and Certification Systems</td>
</tr>
<tr>
<td>2</td>
<td>NFPA 1001: Standard for Fire Fighter Professional Qualifications</td>
</tr>
<tr>
<td>3</td>
<td>NFPA 1002: Standard for Fire Apparatus Driver/Operator Professional Qualifications</td>
</tr>
<tr>
<td>4</td>
<td>NFPA 1003: Standard for Airport Fire Fighter Professional Qualifications</td>
</tr>
<tr>
<td>5</td>
<td>NFPA 1005: Standard for Professional Qualifications for Marine Fire Fighting for Land-Based Fire Fighters</td>
</tr>
<tr>
<td>6</td>
<td>NFPA 1006: Standard for Technical Rescuer Professional Qualifications</td>
</tr>
<tr>
<td>7</td>
<td>NFPA 1021: Standard for Fire Officer Professional Qualifications</td>
</tr>
<tr>
<td>8</td>
<td>NFPA 1026: Standard for Incident Management Personnel Professional Qualifications</td>
</tr>
<tr>
<td>9</td>
<td>NFPA 1031: Standard for Professional Qualifications for Fire Inspector and Plan Examiner</td>
</tr>
<tr>
<td>10</td>
<td>NFPA 1033: Standard for Professional Qualifications for Fire Investigator</td>
</tr>
<tr>
<td>11</td>
<td>NFPA 1035: Standard for Professional Qualifications for Fire and Life Safety Educator, Public Information Officer, and Juvenile Arsonist Intervention Specialist</td>
</tr>
<tr>
<td>12</td>
<td>NFPA 1037: Standard for Professional Qualifications for Fire Marshal</td>
</tr>
<tr>
<td>13</td>
<td>NFPA 1041: Standard for Fire Service Instructor Professional Qualifications</td>
</tr>
<tr>
<td>14</td>
<td>NFPA 1051: Standard for Wildland Fire Fighter Professional Qualifications</td>
</tr>
<tr>
<td>15</td>
<td>NFPA 1061: Standard for Professional Qualifications for Public Safety Telecommunicator</td>
</tr>
<tr>
<td>16</td>
<td>NFPA 1071: Standard for Emergency Vehicle Technician Professional Qualifications</td>
</tr>
<tr>
<td>17</td>
<td>NFPA 1081: Standard for Industrial Fire Brigade Member Professional Qualifications</td>
</tr>
<tr>
<td>18</td>
<td>NFPA 1091: Standard on Traffic Control Incident Management Professional Qualifications</td>
</tr>
</tbody>
</table>
In addition to the eighteen standards indicated in Table 1-1, multiple other NFPA standards are directly or indirectly addressing professional qualification related topics. These other standards are not handled by the Pro-Qual project and instead are administratively handled by other NFPA Technical Committees. Three of these in particular are noteworthy because they provide accreditation requirements similar to the eighteen standards in the Pro-Qual project. These three documents are:

- **NFPA 1521, Standard for Fire Department Safety Officer**

NFPA 472 and NFPA 473 are maintained by the NFPA Technical Committee on Hazardous Materials Response Personnel and NFPA 1521 is assigned to the NFPA Technical Committee on Fire Service Occupational Safety and Health. The specific details of these documents, as well as programs that depend on them are continually facing harmonization and coordination challenges. Addressing these challenges speaks to the vision of how interested stakeholders hope to see the continual evolution of the professional qualification infrastructure. Table 1-2 summarizes examples of the coordination issues between documents within and outside of the current Pro-Qual Project. Further details on these documents are included in Annex C.

**Table 1-2: Examples of Standards Coordination Issues**

<table>
<thead>
<tr>
<th>Organization Based Documents</th>
<th>Individual Based Documents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Designation</strong></td>
<td><strong>Document Title</strong></td>
</tr>
<tr>
<td>NFPA 405</td>
<td>Reoccurring Proficiency of Airport Fire Fighters</td>
</tr>
<tr>
<td>NFPA 472</td>
<td>Hazardous Materials/Weapons of Mass Destruction Professional Qualifications</td>
</tr>
<tr>
<td>NFPA 600</td>
<td>Industrial Fire Brigade</td>
</tr>
<tr>
<td>NFPA 921</td>
<td>Guide for Fire and Explosion Investigations</td>
</tr>
<tr>
<td>NFPA 1143</td>
<td>Wildland Fire Management</td>
</tr>
<tr>
<td>NFPA 1403</td>
<td>Live Fire Training Evolutions</td>
</tr>
<tr>
<td>NFPA 1404</td>
<td>Respiratory Protection Training Program</td>
</tr>
<tr>
<td>NFPA 1405</td>
<td>Land Based FF Responding to Marine Vessel Fires</td>
</tr>
<tr>
<td>NFPA 1410</td>
<td>Training for Initial Emergency Scene Operations</td>
</tr>
<tr>
<td>NFPA 1451</td>
<td>Vehicle Operations Training Program</td>
</tr>
<tr>
<td>NFPA 1521</td>
<td>Standard for Fire Department Safety Officer</td>
</tr>
<tr>
<td>NFPA 1561</td>
<td>Emergency Services Incident Management System</td>
</tr>
<tr>
<td>NFPA 1670</td>
<td>Operations and Training for Technical Search and Rescue Incidents</td>
</tr>
</tbody>
</table>
The goal of this workshop has been to establish a common understanding of how the individual elements of the Pro-Qual system and the applicable NFPA Standards (and related documents) interact to provide best value to all of the Pro-Qual stakeholders. Achieving this goal has involved the following workshop objectives through an interactive approach involving workshop participants:

- Briefly review the evolution, current status and anticipated direction of the professional qualification system;
- Identify the characteristics that provide best value to all stakeholders;
- Identify and prioritize needs addressing the characteristics based on the best overall value; and
- Establish an action plan to provide guidance to codes & standards to meet these needs.

The challenges of this topic are somewhat unique. The concepts herein addressing professional qualifications involve certification and accreditation issues and tend to be more abstract than other topics often addressed by workshops of this type (e.g. clarifying fire protection needs for a particular type of application). The current Pro-Qual infrastructure is relatively well evolved, resulting in multiple stakeholders having significant short-term and long-term interests. Additional information and an overview of fire service and emergency responders training and education are provided in Annex H.

Multiple NFPA Technical Committees are involved with different aspects of professional qualifications, and their focus and interests are not always well-coordinated. This concern involves jurisdictional scope issues, and thus this is a topic of interest to the NFPA Standards Council based on the need to properly coordinate the scopes of impacted NFPA Technical Committees. Specifically, this is an item for review at the upcoming August 2011 meeting of the NFPA Standards Council.
2) WORKSHOP VENUE AND ATTENDANCE

This one and a half day workshop was held from 8:00 am to 6:00 pm on Wednesday 13 April 2011 and from 8:00 am to 12:00 noon on Thursday 14 April 2011. In addition the attendees had a group dinner at the end of the first day. The workshop agenda and expanded program is included in Annex A.

The event was held at the Doubletree DFW North located at 4441 W. John Carpenter Freeway, Irving Texas, on the edge of the Dallas Fort Worth International Airport. As a notation for the record, some of the handouts and other documentation (e.g. Annex G) indicate the host facility as the “Wyndham DFW Airport North”, and this is due to the host hotel unexpectedly changing its name to “Doubletree DFW North” approximately two weeks before the workshop.

The venue planned for the workshop was composed of the four basic components. The first morning was dedicated to background review and assuring that all attendees were fully in-tune with critical concepts, and the challenges and concerns of the overall workshop issues. The balance of the workshop during the afternoon of the first day and morning of the second day was committed to an exhaustive discussion of these issues, and clarifying recommended steps to move forward that would be most beneficial for all parties.

Specifically, the four main parts of the workshop programs (as indicated in the expanded program in Annex A) were:

1) Call the workshop to order with (a) workshop welcome, (b) self-introductions, (c) review of the logistics, and (d) review of goals and objectives;
2) Address the overall topic in plenary session with background presentations;
3) Consider certain key specific issues in plenary session led by three separate discussion panels; and
4) Separate workgroup discussions that would address a defined set of questions and report back to the full group in plenary session.

The attendees for the workshop were invited from a wide range of interest backgrounds, and the final attendance list is included in Annex H. Due to logistics and space availability the workshop was limited to approximately forty attendees. In addition to the Chairs of the Pro-Qual TCC and TCs, the Chairs of multiple other affected NFPA Technical Committees were invited, as well as representatives from key fire and emergency services organizations impacted by these issues.
3) WORKSHOP PRESENTATIONS

Of the four main parts of the workshop, the first and second parts provided the attendees with key background information to facilitate awareness of the issues and improve dialogue. This section describes these activities in further detail.

First, the workshop opened with a review of logistics and self-introductions led by Casey Grant. Ken Willette provided a formal welcome and reviewed the workshop goals, objectives and baseline information. Multiple handouts were provided electronically to the attendees prior to the workshop, and these were reviewed in detail. Key handouts are included here in Annex A through I.

Illustrations and tables were reviewed in detail during the initial workshop presentations, and several of these were continually referenced throughout the workshop and rose in stature as key instruments of summary information. Of particular note are the “Standards Comparison Matrix” included in Annex B and the “Comparison of Individual and Organizational Based Competencies” included in Annex C. Also noteworthy is Figure 3-1: Organizational Chart of Professional Qualification Documents, which provides a single clear overview of the Pro-Qual project and other related NFPA documents outside of the project.
The second main part of the workshop program was intended to provide a consistent understanding and appreciation for the background on this overall topic. This involved four presentations, each approximately 20 minutes in duration. The applicable presentations and their associated handouts are included herein in Annexes D, E, and F. These four presentations and their presenters are summarized in Table 3-1.

Table 3-1: Summary of Workshop Presentations

<table>
<thead>
<tr>
<th>Annex</th>
<th>Presentation Title</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>History of Professional Qualification Project</td>
<td>Doug Forsman (former Pro-Qual TCC Chair, former Standards Council member, former Board of Directors member)</td>
</tr>
<tr>
<td>E</td>
<td>Job Performance Requirement (JPR) Development</td>
<td>Bill Peterson (current Pro-Qual TCC Chair, former Standards Council member)</td>
</tr>
<tr>
<td>F</td>
<td>Standards Council Governance</td>
<td>Casey Grant (former Standards Council Secretary)</td>
</tr>
<tr>
<td>---</td>
<td>Overview of Issues of Debate</td>
<td>Ken Willette (Manager of NFPA Public Fire Protection Division)</td>
</tr>
</tbody>
</table>

Doug Forsman provided a historical background of how the fire and emergency services professional qualifications have evolved to their current status. His presentation was based on his years of direct participation with this project, including having previously served as the Chair of the Pro-Qual Technical Correlating Committee. Handouts and his presentation are included in Annex D.

![Figure 3-2: Evolution of the NFPA Pro-Qual Project](image)

Issues addressed by Doug included: the activities of the Joint Council (of national fire service organizations, circa 1970); the new era of organization (1990 to present); benchmarks along the way (1990 to present); development of JPRs; and a higher education nexus. Two useful illustrations that summarize the history of the NFPA Professional Qualification’s project are included in Figure 3-2, Evolution of the NFPA Pro-Qual Project and Figure 3-3: Chronology of NFPA Pro-Qual Documents.
Bill Peterson presented an overview of Job Performance Requirements (JPRs) to the group, since this is a critical instrument used within today’s professional qualification system. Handouts and his presentation are included in Annex E. Issues he addressed included: goal of JPR development; role of committee; job task analysis process; component of a JPR (i.e. task, given, so that); task statement; written in behavioral terms; performance levels; selecting the action verb; writing the task statement; sample JPR; requisite knowledge; use of annex notes; developing training materials using JPRs; using JPRs for training; and quality control issues.

The presentation by Bill provided a useful overview of the development and implementation of JPRs, as well as a review of the mechanics of how they work. Two illustrations used during his presentation are included here that provide additional background on the JPR concept. These are Figure 3-4: Components of a JPR, and Figure 3-5: Performance Levels Used in JPR Development.
The Peterson presentation prompted several questions and comments from the attendees, and this resulted in an involved group discussion. The following are examples of these questions:

- How is the JPR concept used in other professions (e.g. aviation)?
- How are these NFPA JPRs used beyond the fire service, such as with industry?
- What are the additional check and balances in today’s system?
- How is the current system policed?
- What is the process for a needs assessment for new proposed standards, and how do we evaluate existing standards and ultimately retire/sunset those no longer needed?
- Are we comfortable that we are properly focused on minimum requirements, for any level?
- How do we maintain “objective” performance requirements, to assure JPRs are written broad enough to provide flexibility?

Casey Grant presented background on the NFPA codes and standards making process in his presentation on “Standards Council Governance”. He provided an overview of the overall process and focused on the key governing bodies, most notably the Technical Committees that serve as the primary consensus bodies, and the Standards Council. He emphasized the Standards Council critical role of approving TC scopes and thus their direct interest in this workshop because of jurisdictional scope issues.
Clarification was provided on important Council policies that should be considered in this situation and which may serve as useful tools for harmonizing issues, including the Policy on Jurisdictional Scopes and the Extract Policy. Examples were provided of how other large projects are handled in the NFPA systems (e.g. projects handling NFPA 13, 72, 70, 101, and 5000) and how they operate. A novel approach that has been effectively used for the multiple committees handling NFPA 101 and NFPA 5000 is the ‘two-hatted’ committee concept, where the same committee is individually responsible for similar requirements in these two separate code projects.

This discussion included a focus on how these other large NFPA projects manage their multiple documents. Generally, they have one critical logistical difference: they tend to have one single central code in addition to several small satellite standards. It was noted that the current Pro-Qual project, with eighteen separate standards of relatively equal stature, has far more individual standards under a Technical Correlating Committee structure than any other NFPA project.

Questions from the attendees provoked further discussion on the concept of possible document consolidation. Strong points were made on the well-established characteristics of the current infrastructure. For example, having the individual standards revised on an individual basis rather than all at once is critical to managing the workload of state fire training agencies, textbook publishers, and others directly using this information. The discussion indicated that efforts going forward to address document consolidation will need to balance the impact on the established infrastructure with the need to alleviate multiple logistics issues that can be onerous on committee volunteers and staff alike.

Grant acknowledged that combining standards can be a significant undertaking, and requires a master plan proposed by the Technical Correlating Committee to the Standards Council. This type of initiative is sometimes handled in multiple phases over several revision cycles due to the complexity of the task.

The final presentation during the session of the workshop program providing background information was by Ken Willette. He addressed issues that related to the preparation of the Panel Discussions that were about to follow. Details are addressed in the following section of this report.
4) SUMMARY OF PANEL DISCUSSIONS

The third main part of the workshop program was the Panel Discussions. The purpose of these Panel Discussions was to focus on several specific topics that were perceived to be points of ongoing debate and future planning.

The Panel Discussions were immediately preceded by a presentation from Ken Willette on the “Overview of Issues of Debate”, which provided useful clarification for the background and reasoning for addressing the three Panel sub-topics. These sub-topics are summarized in Table 4-1, Overview of Workshop Panel Discussions.

<table>
<thead>
<tr>
<th>Panel Title</th>
<th>Facilitator</th>
<th>Panelists</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Organizational &amp; Individual Competencies</td>
<td>Ken Willette</td>
<td>Steve Edwards, Casey Grant, Greg Noll, Mike Wieder</td>
</tr>
<tr>
<td>B1 Recertification: Is it Needed?</td>
<td>Tom McGowan</td>
<td>Kirby Kiefer, Marc Revere, Jim Ridley, Bryant Stiles</td>
</tr>
<tr>
<td>B2 Recertification: How to Proceed?</td>
<td>Tom McGowan</td>
<td>Steve Austin, Dave Bryson, Dave Couvelha, Fred Piechota</td>
</tr>
<tr>
<td>C Single &amp; Multi Discipline</td>
<td>Ken Holland</td>
<td>Christina Baxter, Ernest Grant, Larry Preston, Charles Wright</td>
</tr>
</tbody>
</table>

During Ken’s opening presentation he provided clarification that the issue being addressed by Panel A on “Organizational Competencies and Individual Competencies” has worked its way up to the attention of the Standards Council and is on their agenda for their upcoming August 2011 meeting. Over time, the details of concern on this topic have been addressed with a vertical focus, and a question before the group is how best to harmonize the details on a horizontal level.

Ken’s opening presentation also introduced the issues for Panels B and C on “Recertification” and “Single & Multi Discipline”. These are not new issues and are being addressed more in the context of establishing a vision for the future. For recertification, the questions before the group are: how does this fit within the current infrastructure, is it needed, and how should it be addressed assuming it is needed. The single & multi discipline issue seeks to clarify the approach of fire-service-only in contrast to addressing other professionals within the emergency responder framework.

Panel A: “Organizational Competencies and Individual Competencies”
Panel A on “Organizational Competencies and Individual Competencies” had some of the more controversial and polarized points of discussion. The needs of certain NFPA Technical Committees to address organizational competencies within their documents (e.g. NFPA 472 and...
473) have led to an overlap of certain professional qualification requirements with the Pro-Qual standards (e.g. NFPA 1001).

Today’s emergency responder landscape is composed of organizational and individual competency needs. An illustration describing this landscape, and recognizing the requisite skills, knowledge and abilities required to complete the emergency response mission, is offered by Figure 4-1, Overview of Global Professional Requisite Skills, Knowledge, and Abilities.

The debate over how to address organizational and individual competencies, and who should be responsible for these requirements, is partly driven by the need to broadly address all emergency responders required to mitigate complex emergency situations. An example is a hazardous materials event, which might require technical experts from multiple agencies and organizations. The “organizational” capabilities required to successfully handle a hazardous materials event are important for documents such as NFPA 472 and NFPA 473.

However, in addressing their organizational needs, these other NFPA activities outside the NFPA Pro-Qual Project are also addressing individual competencies. This is indicated as resulting in confusion and hardship among stakeholders dependent on the current Pro-Qual infrastructure, such as those who ultimately implement the requirements through certification (e.g. ProBoard & IFSAC), as well as end-user delivery organizations of training materials (e.g. NAFTD).

The Panel A discussion included questions as to which consensus bodies should have ultimate responsibility for the range of applicable requirements, and various concepts were mentioned.
that might serve as useful tools to allow forward progress in resolving differences (e.g. Extract Policy). Despite the differences of opinion on this sub-topic, the participants of Panel A agreed on certain points such as the overall status of the current Pro-Qual infrastructure, which, while not perfect, has evolved quite far and is better than what is used by some other professions.

Panel B: “Recertification”
Panel B addressed the concept of recertification for fire and emergency services. Two separate panels (i.e. Panel B1 and Panel B2) addressed this in two distinct steps based on the questions of: is it needed; and if yes, how to proceed. The current infrastructure does not require certification (and recertification), and this is a significant conceptual consideration for future development of the Pro-Qual system.

The combined discussion of Panels B1 and B2 clarified a general mindset that recertification is desirable, noting that other established professional qualification systems utilize recertification (e.g. EMS, aircraft pilots, etc). However, discussion on its implementation yielded indication that it will result in multiple new challenges on the existing established infrastructure, and dealing with these challenges is potentially daunting. It was noted that certification itself is not uniformly mandated, and this should be more collectively embraced before requiring recertification.

Panel C: “Single and Multi Discipline”
The discussion on Panel C was conceived with the thinking that this, like the Panel B discussion, was another topic of future consideration based on managing the evolution of the current Pro-Qual system. However, as the panel addressed the concerns it became apparent that this issue is inherently intertwined with the Panel A debate on “Organizational Competencies and Individual Competencies”.

In the simplest of terms, the root question is whether the focus of today’s professional qualification system should be exclusively on the fire service (i.e. single discipline) or if it should address both the fire service and other closely related professionals (i.e. multi discipline). Panel discussion indicated that the personality of today’s Pro-Qual project has evolved such that arguably it is not clear on this topic. For example, from the perspective of the TCC on Professional Qualifications the project is relatively expansive, based on the TCC title and TCC scope that does not restrict it to the fire service, while on the other hand some of their responsible Technical Committees and standards are fire service centric according to their TC titles and/or TC scopes.

Further panel discussion indicated that certain job tasks bring focus to this philosophical question of single and multi discipline. Perhaps among the most noteworthy examples is the topic of hazardous materials. This is a key philosophical underpinning of the current debate between the Technical Committee on Hazardous Materials and the Pro-Qual Project. By their very nature, incidents involving hazardous materials are complex events, and its not unusual for them to require multiple emergency responders beyond only the fire service. It was indicated that a need exists to address professional qualification on an organizational level as well as an
individual level, to properly address organizational capabilities as well as individual competencies.

The fourth main part of the workshop program was based on separate workgroup discussions. However, the purpose of the separate workgroup discussions was to promote improved individual feedback by all attendees, and as the morning of the first day proceeded it was clear the attendees were highly engaged and providing significant feedback in the full plenary session. As a result, following the Panel discussions the attendees never separated into the three planned workgroups, and instead addressed the primary questions and concerns as a single collective body. This adjustment to the workshop venue appeared to serve the best interest of the attendees and functioned effectively.
5) WORKSHOP CLOSING DISCUSSION AND SUMMARY OBSERVATIONS

The Panel discussions concluded during the afternoon of the first day and was followed by intense discussion involving all attendees. This continued throughout the remainder of day one and for most of the morning of day two.

Review of Day-One Discussions
To stimulate the discussion on the morning of the second day, Staff presented a re-cap of the key points from the Day-One discussions. This information is presented in Table 5-1: Summary of Day One Key Points.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1  Standardized TC and Document Scope Language</td>
<td>Standardized boiler-plate language needs to be created/utilized in stating TC scopes and document scopes and made available for all applicable TCs and documents to minimize scope conflicts and creep.</td>
</tr>
<tr>
<td>2  Confirm/Revise TC Scopes</td>
<td>Applicable TCs should be directed to review their existing TC scopes and confirm they are okay with regard to overlap concerns or propose revisions for review by the Standards Council to clarify jurisdictional boundaries.</td>
</tr>
<tr>
<td>3  Document Titles</td>
<td>Existing document titles should be examined for clarity of scope and language.</td>
</tr>
<tr>
<td>4  TC Member Participation</td>
<td>Chairs of the applicable TCs and TCC will work with Staff to ensure Standards Council policies for TC member participation are monitored and enforced by annual reporting to the Standards Council.</td>
</tr>
<tr>
<td>5  TC Chair Vote Limited Status on TCC</td>
<td>Based on the large number of standards in the Pro-Qual Project and the wide range of diversity of the subject matter they address, Staff will forward to the Standards Council a request (from this Workshop) to expand the voting status of TC Chairs on the Pro-Qual TCC, such that TC Chairs would be eligible to vote on matters except for those directly pertaining to their specific TC.</td>
</tr>
<tr>
<td>6  Inter-Committee Coordination</td>
<td>For the Technical Committees responsible for NFPA 472 and NFPA 1001, as well as other documents with similar overlap, the TC Chairs should continue working together with their committees and Staff to clearly align and coordinate the criteria in both documents to make sure all requirements will be consistent.</td>
</tr>
</tbody>
</table>

The intent is that they would be initiated and/or facilitated by Staff in support of the applicable TCs and TCC(s) where appropriate, and subject to approval by the Standards Council as needed.

Organizational Capabilities and Individual Competencies
During the Day Two wrap-up discussion, the first five of these six items were collectively embraced by the attendees. The sixth item provoked further intense debate. Additional discussion yielded the three proposed action items. These are summarized in Table 5-2, Proposed Action Items for Inter-Committee Coordination.

To get a sense of the attendees on these three considerations, a straw poll was taken to clarify general support for each. In doing so, it was noted that although the attendees were generally representative of the various stakeholders, the group was not balanced by interest, committee representation, or any other relative criterion. The straw poll proceeded with this understanding, and recognized the poll was intended to simply establish a general sense of the
workshop participants (and further, that changes to the codes and standards process requires consideration by the TCs, TCC and Standards Council). The straw poll indicated the majority of attendees were supportive of consideration (a1) and (a2), and similarly a majority was supportive of consideration (b) with the understanding this would be for Awareness, Operations, Technician levels, and Incident Commander. It was agreed that these proposed action items should proceed in as expeditious a manner as possible, without sacrificing progress already established.

Table 5-2: Proposed Action Items for Inter-Committee Coordination

<table>
<thead>
<tr>
<th>Proposed Action Items</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a1</strong></td>
</tr>
<tr>
<td><strong>a2</strong></td>
</tr>
</tbody>
</table>
| **b** | The applicable TCs should have their scopes revised, with the existing NFPA TC on Hazardous Materials scope re-aligned to prepare a hazmat Pro-Qual standard that is JPR based, including but not limited to Awareness, Operations, Mission Specific Operations, Technician, and Incident Commander levels. This will also be processed through the Pro-Qual TCC. The following proposed revised-scopes for the two directly affected Technical Committees are offered to support this approach:

  - TC Scope for PQU-FFQ (responsible for NFPA 1001): This Committee shall have primary responsibility for documents on professional competence required of fire fighters.
  - TC Scope for HCZ-AAA (responsible for NFPA 472): This Committee shall have primary responsibility for documents on the requirements for the professional competence, professional qualifications, training, procedures, and equipment for emergency responders to hazardous materials incidents. |

Additional discussion indicated that this approach should proceed in the most expeditious manner. Further, this approach could serve as a model for the other NFPA projects that have or potentially may have overlap with the Pro-Qual Project. A visual model of this approach is provided in Figure 5-1, Illustration of Proposed Action Items for Inter-Committee Coordination.
Recertification
The other summary issues from the earlier Panel Discussions were discussed to capture all the various issues of concern. The next topic of focus by the group during the closing discussions was on recertification.

The current infrastructure is relatively well-established, and if recertification is introduced it raises questions on how to best minimize the alterations that will be required. Thoughts were expressed that prior to trying to address recertification, more widespread and consistent implementation of certification is required via the existing system at the State and local level. An illustration of the recertification discussion from the previous day was provided by Staff, and this is illustrated in Figure 5-2: Summary of Discussion on Recertification.

![Figure 5-2: Summary of Discussion on Recertification](image)

The group engaged in discussion with a focus on bullets 4 and 5 in Figure 5-2. It was acknowledged that for documents that address maintenance of skills, the intent would be to consider adding recertification (currently the Pro-Qual TCC requires all documents to have a skills maintenance requirement). It was indicated that recertification is a significant issue and should be addressed by the TCC with direction to the TCs. The resulting discussion yielded the following key points:

- The Pro-Qual TCC should directly address this issue.
- Be sensitive to the impact on accreditation and certification, and work directly with ProBoard and IFSAC Boards on this issue.
- Clarify the terminology on this specific issue (e.g. certification, credential, license, etc).
- An alternative approach is to indicate an expiration date on current certifications, rather than require recertification.

Single and Multi Discipline Harmonization and Convergence
The third of the three earlier Panel Discussions addressed single- and multi discipline harmonization and convergence. The previous day’s discussion had led full circle back to the other discussion on organizational and individual competencies. Figures 5-3 and 5-4 provide a
summary presented by Staff on the earlier discussion on single- and multi discipline”. The information in these figures was further refined based on subsequent discussion by the attendees.

Among the various additional details discussed by the group, the key point expressed by the attendees was to emphasize the need for the single and multi discipline issue to be philosophically clarified at the highest levels of management and leadership within NFPA. This would provide useful guidance for the TCC and applicable TCs as they further address this subject. It was noted that a definition of “multi discipline” is not obvious and is not uniformly understood between committees. For example, “multi discipline” is interpreted by some committees as multiple areas of the fire service (e.g. NFPA 1031 for fire inspector & plans examiner, or NFPA 1035 for life safety educator, public information officer & juvenile firesetter intervention specialist), as compared to those that deal with multiple disciplines on a broader scale (e.g. NFPA 472 for fire services, emergency medical services, law enforcement, emergency managers, etc, or NFPA 1061 for telecommunicators) of which the fire service is one element.
Other Issues Raised by Attendees

As the workshop was in its closing stages, the group was asked for any other issues of importance that should be noted, and for clarification of any issues already discussed. This yielded the following key points:

- Provide a needs assessment that readdresses all documents based on a sunset policy, i.e. every 10 years (expanding on the current TCC requirement that all standards have a job/task analysis at the start of every revisions cycle to ensure that they are still relevant).
- Consider approach to address hazardous materials as a model/template for other overlap issues.
- Consider co-locating and/or co-processing documents so that there is overlap during the document processing to encourage cross-pollination.
- Consider an umbrella entity for correlation and on-going harmonization at a higher level than what currently exists for the Pro-Qual TCC, similar to the HRBSAC and DARAC advisory committees.
- Better coordinate the revision cycles of all applicable documents, e.g. NFPA committee-weeks-model.
- Review processing options within each project to clarify the most efficient and effective arrangement that also minimizes potential adverse impact on the established infrastructure.
- Clarify requiring Pro-Qual TCs making an assessment of required training times based on JPRS to implement their competencies (possibly as annex guidance).
- In standards process, ProQual standards should be examined and assessed for mutual exclusivity to remove redundancy from prerequisite levels. For example, foam is taught in multiple levels in various standards and which involves the same JPRs.
- Need to address the problem of TC Chairs not being able to vote in the Pro-Qual TCC on issues other than those directly related to their respective standards.
- Need this review process stimulated by this workshop done on a regular basis.

In summary, the key points from this workshop are consolidated in Table 5-3, Overall Summary of Workshop Recommendations. This represents a compilation of all the recommendations brought forward as a result of this workshop. For convenience, the twenty recommendations shown are grouped into five main categories of:

- TC/TCC Scopes;
- Document Processing;
- General Content;
- Specific Content; and
- General
<table>
<thead>
<tr>
<th>Issue Category</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>TC/TCC Scopes</td>
<td><strong>Standardized TC and Document Scope Language.</strong> Provide standardized boiler-plate language for TC scopes and document scopes, and make available for all applicable TCs to minimize scope conflicts and creep.</td>
</tr>
<tr>
<td>TC/TCC Scopes</td>
<td><strong>Updated TC Scopes.</strong> Direct applicable TCs to review their existing TC scopes and confirm they are (1) okay with regard to overlap concerns or (2) propose revisions for review by the Standards Council to clarify jurisdictional boundaries.</td>
</tr>
<tr>
<td>TC/TCC Scopes</td>
<td><strong>Model Scoping Approach.</strong> Institute a model/template for overlap issues, based on the approach used to address hazardous materials.</td>
</tr>
<tr>
<td>Document Processing</td>
<td><strong>Review of Processing Options.</strong> Review options within each project to improve processing efficiency and effectiveness without creating undue hardship on the established infrastructure.</td>
</tr>
<tr>
<td>Document Processing</td>
<td><strong>Revision Cycle Coordination.</strong> Coordinate the revision cycles of applicable standards to facilitate co-processing and overlap between different committee projects during document processing, with the intent to promote harmony and consistency (e.g. NFPA committee-weeks-model).</td>
</tr>
<tr>
<td>Document Processing</td>
<td><strong>TC Member Participation.</strong> Clarify with the Chairs of the applicable TCs and TCC the process to work with Staff to ensure Standards Council policies for TC member participation are monitored and enforced by annual reporting to the Standards Council.</td>
</tr>
<tr>
<td>General Content</td>
<td><strong>Voting Status of TC Chairs on Pro-Qual TCC.</strong> Improve the functionality of the Pro-Qual TCC by revising the “vote limited” status of the TC Chairs, to allow them to vote on issues except those directly pertaining to their assigned standards.</td>
</tr>
<tr>
<td>General Content</td>
<td><strong>Document Titles.</strong> Review and update the titles of standards to accurately represent the scope and content, not only of the standard itself but also the overall project (in the case of large projects).</td>
</tr>
<tr>
<td>General Content</td>
<td><strong>Training Time Guidance.</strong> Consider providing guidance on making an assessment of required training times based on JPRS to implement their competencies.</td>
</tr>
<tr>
<td>General Content</td>
<td><strong>Similar Topics Across Multiple Standards.</strong> Examine ProQual standards for mutual exclusivity of certain technical topics to better coordinate requisite levels (e.g. foam is taught in multiple levels in various standards and which involves the same JPRs).</td>
</tr>
<tr>
<td>Specific Content</td>
<td><strong>Hazmat Specific JPR Information in Current Revision Cycle.</strong> Process the NFPA 472 and NFPA 1001 documents in their current revision cycles without hazmat specific JPR information.</td>
</tr>
<tr>
<td>Specific Content</td>
<td><strong>New Hazmat Pro-Qual Requirements.</strong> Continue to process current NFPA 1001 standard to reference NFPA 472 Awareness and Operations level requirements until such time as a new hazmat Pro-Qual standard is approved, preceding in as expeditious a manner as possible without sacrificing progress already established.</td>
</tr>
<tr>
<td>Specific Content</td>
<td><strong>Reporting Structure for Hazmat Pro-Qual Requirements.</strong> Re-align the scopes of applicable committees so that the existing NFPA Technical Committee on Hazardous Materials prepares a hazmat Pro-Qual standard that is JPR based, including but not limited to Awareness, Operations, Mission Specific Operations, Technician, and Incident Commander levels, to be processed through the Pro-Qual TCC for this document.</td>
</tr>
<tr>
<td>Specific Content</td>
<td><strong>Recertification Impact Assessment.</strong> Fully assess the impact of recertification on organizations responsible for accreditation and certification (e.g. ProBoard, IFSAC, etc) prior to any proposed implementation.</td>
</tr>
<tr>
<td>Specific Content</td>
<td><strong>Recertification Based on Expiration Date.</strong> Instead of requiring recertification, consider an alternative approach of implementing an expiration date on current certifications.</td>
</tr>
<tr>
<td>General</td>
<td><strong>Fire Service Advisory Committee.</strong> Establish an umbrella entity for correlation and on-going harmonization at a higher level than what currently exists for the Pro-Qual TCC (i.e. similar to the HRBSAC and DARAC advisory committees).</td>
</tr>
</tbody>
</table>
### Issue Category

<table>
<thead>
<tr>
<th>Issue Category</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td><strong>Inter-Committee Coordination.</strong> Promote the continued use of task groups and other methods (i.e. extract policy) to facilitate harmonization between the Technical Committees responsible for scope overlap issues (e.g. NFPA 472 and NFPA 1001) to clearly align and coordinate the criteria in both documents to make sure all requirements will be consistent.</td>
</tr>
<tr>
<td>18</td>
<td><strong>Needs Assessment and Sunset Policy.</strong> Establish a protocol for a needs assessment to clarify the basis for retiring documents through a sunset policy (e.g. every 10 years).</td>
</tr>
<tr>
<td>19</td>
<td><strong>Terminology.</strong> Clarify the terminology used throughout all documents that are directly or indirectly addressing Pro-Qual related requirements.</td>
</tr>
<tr>
<td>20</td>
<td><strong>Periodic Review of Pro-Qual Related Issues.</strong> Consider establishing an on-going or periodic review process of Pro-Qual related issues, similar to the activities addressed by this workshop.</td>
</tr>
</tbody>
</table>

The workshop adjourned with thanks provided to all participants.
ANNEX A

WORKSHOP AGENDA

PROFESSIONAL QUALIFICATIONS
“NOW AND BEYOND WORKSHOP”
FOR
FIRE AND EMERGENCY SERVICES

IRVING, TEXAS
13-14 APRIL 2011
Professional Qualifications: Now and Beyond

Fire and Emergency Services Professional Qualifications Workshop

Location: Wyndham DFW Airport North, 4441 W. John Carpenter Freeway, Irving TX

Workshop Dates: 13-14 April 2011

(Flyer Last Updated: 5 April 2011; subject to update)

Background: Multiple existing codes and standards form the basis for training and professional competency for local, state, provincial, and federal fire protection and public safety personnel throughout North America. These documents are widely used in multiple venues, such as, for example, several being adopted by the Department of Homeland Security to qualify individuals involved in a wide range of national security activities. The specific details of these documents, as well as programs that depend on them are continually facing harmonization and coordination challenges. Addressing these challenges speaks to the vision of how interested stakeholders hope to see the continued evolution of the professional qualification infrastructure.

Workshop Goal and Objectives: This meeting will seek to establish a common understanding of how the individual elements of the fire service professional qualifications system and the applicable NFPA Standards and related documents interact to provide best value to all of the professional qualifications stakeholders. This will be accomplished through an interactive approach involving interested stakeholders that will focus on the following workshop objectives:

- Briefly review the evolution, current status and anticipated direction of the pro-qual system;
- Identify the characteristics that provide best value to all stakeholders;
- Identify and prioritize needs addressing the characteristics based on the best overall value; and
- Establish an action plan to provide guidance to codes & standards to meet these needs.

Workshop Format: The following format and agenda is planned for this workshop:

<table>
<thead>
<tr>
<th>Time</th>
<th>Day1 Welcome and Introductions</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am</td>
<td></td>
</tr>
<tr>
<td>Presenters</td>
<td>1) Review of Workshop Goal, Objectives, and Deliverables</td>
</tr>
<tr>
<td>Presenters</td>
<td>2) Presentations on Applicable Baseline Information</td>
</tr>
<tr>
<td>Panelists/All Participants</td>
<td>3) Panel Discussions of Key Issues</td>
</tr>
<tr>
<td>Workgroups</td>
<td>4) Workgroup Discussions of Key issues</td>
</tr>
<tr>
<td>All Participants</td>
<td>5) Workgroup Reports and Plenary Discussion</td>
</tr>
<tr>
<td>Recess for Day</td>
<td>6)</td>
</tr>
<tr>
<td>10:00 am</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time</th>
<th>Day 2 Welcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 am</td>
<td></td>
</tr>
<tr>
<td>Presenters/All Participants</td>
<td>6) Summary of Day1 Results &amp; Framing of Day2 Discussion</td>
</tr>
<tr>
<td>Workgroups</td>
<td>7) Workgroup Discussions on Day1 Findings</td>
</tr>
<tr>
<td>All Participants</td>
<td>8) Workgroup Reports and Plenary Discussion</td>
</tr>
<tr>
<td>Presenters/All Participants</td>
<td>9) Discussion of Next Steps</td>
</tr>
<tr>
<td>Presenters/All Participants</td>
<td>10) Plenary Review and Closing Remarks</td>
</tr>
<tr>
<td>Adjourn</td>
<td></td>
</tr>
<tr>
<td>12:00 pm</td>
<td></td>
</tr>
</tbody>
</table>

Further Information: Attendance is based on invitation only due to space limitations. Attendees will be expected to be familiar with materials provided beforehand to make the most efficient use of limited time. If you are interested in participating or would like more information, please contact cgrant@nfpa.org no later than 18 February 2011. After the Workshop a report of the results will be available for interested parties.
### Expanded Program

<table>
<thead>
<tr>
<th>Day1 Welcome and Introductions</th>
<th>8:00 am, Day1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1)</strong> Review of Workshop Goal, Objectives, and Deliverables</td>
<td>(Ken Willette and Staff) 8:15 am, Day1</td>
</tr>
<tr>
<td><strong>2)</strong> Presentations on Applicable Baseline Information (20 minute presentations)</td>
<td>8:30 am, Day1</td>
</tr>
<tr>
<td>History of ProQual Project</td>
<td>Doug Forsman</td>
</tr>
<tr>
<td>JPR Development</td>
<td>Bill Peterson</td>
</tr>
<tr>
<td>Standards Council Governance</td>
<td>Casey Grant</td>
</tr>
<tr>
<td>Overview of Issues of Debate</td>
<td>Ken Willette</td>
</tr>
<tr>
<td>* Organizational &amp; Individual Competencies * Recertification, * Single &amp; Multi Discipline</td>
<td></td>
</tr>
<tr>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3) Panel Discussions of Key Issues (55 minutes/Issue) (Panelists / All Participants)</td>
<td>10:00 am, Day1</td>
</tr>
<tr>
<td>A) Harmonizing Organizational &amp; Individual Competencies (Facilitator: Ken Willette)</td>
<td>11:00 am, Day1</td>
</tr>
<tr>
<td>(Panel: Steve Edwards, Casey Grant, Greg Noll, Jim Podolske, Mike Wieder)</td>
<td></td>
</tr>
<tr>
<td>B) Recertification: Is it Needed and How to Proceed? (Facilitator: Tom McGowan)</td>
<td>1:00 pm, Day1</td>
</tr>
<tr>
<td>(Panel on &quot;Is it Needed?&quot;: Kirby Kiefer, Marc Revere, Jim Ridley, Bryant Stiles, Marc Tonnaciff)</td>
<td></td>
</tr>
<tr>
<td>(Panel on &quot;How to Proceed?&quot;: Steve Austin, Dave Bryson, Dave Couvelha, Fred Piechota)</td>
<td></td>
</tr>
<tr>
<td>C) Single &amp; Multi Discipline Harmonization &amp; Convergence (Facilitator: Ken Holland)</td>
<td></td>
</tr>
<tr>
<td>(Panel: Christina Baxter, Ernest Grant, Larry Preston, Charles Wright)</td>
<td></td>
</tr>
<tr>
<td>Lunch</td>
<td>12:00 pm Day1</td>
</tr>
<tr>
<td>4) Workgroup Discussions of Key issues</td>
<td>2:00 pm, Day1</td>
</tr>
<tr>
<td>(Workgroups)</td>
<td></td>
</tr>
<tr>
<td>5) Workgroup Reports and Plenary Discussion</td>
<td>4:00 pm, Day1</td>
</tr>
<tr>
<td>(All Participants)</td>
<td></td>
</tr>
<tr>
<td>Recess for Day</td>
<td>6:00 pm, Day1</td>
</tr>
<tr>
<td>Day 2 Welcome</td>
<td>8:00 am, Day2</td>
</tr>
<tr>
<td>6) Summary of Day1 Results &amp; Framing of Day2 Discussion</td>
<td>8:15 am, Day2</td>
</tr>
<tr>
<td>(All participants, led by Ken Willette and Staff)</td>
<td></td>
</tr>
<tr>
<td>7) Workgroup Discussions on Day1 Findings</td>
<td>8:30 am, Day2</td>
</tr>
<tr>
<td>(Workgroups)</td>
<td></td>
</tr>
<tr>
<td>Break</td>
<td>9:50 am, Day2</td>
</tr>
<tr>
<td>8) Workgroup Reports and Plenary Discussion</td>
<td>10:00 am, Day2</td>
</tr>
<tr>
<td>(All Participants)</td>
<td></td>
</tr>
<tr>
<td>9) Discussion of Next Steps</td>
<td>11:00 am, Day2</td>
</tr>
<tr>
<td>(Presenters / All Participants)</td>
<td></td>
</tr>
<tr>
<td>10) Plenary Review and Closing Remarks</td>
<td>11:30 am, Day2</td>
</tr>
<tr>
<td>(Presenters / All Participants)</td>
<td></td>
</tr>
<tr>
<td>Adjourn</td>
<td>12:00 pm, Day2</td>
</tr>
</tbody>
</table>
ANNEX B

STANDARDS COMPARISON MATRIX

PROFESSIONAL QUALIFICATIONS
“NOW AND BEYOND WORKSHOP”
FOR
FIRE AND EMERGENCY SERVICES

IRVING, TEXAS
13-14 APRIL 2011
<table>
<thead>
<tr>
<th>Doc Number / TC Acronym / Edition / Rev Cycle</th>
<th>Document Title</th>
<th>Committee Scope</th>
<th>Document Scope</th>
<th>Source Documents</th>
<th>ProBoard Related Certifications</th>
<th>IFSAC Related Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Qualifications Technical Correlating Committee (all Pro Qual Docs)</td>
<td>PQU-AAC</td>
<td>Responsible for the management of the NFPA Professional Qualifications Project and documents related to professional qualifications for the fire service, public safety and related personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NFPA 1000</td>
<td>PQU-ACF 2011 A2015</td>
<td>Fire Service Professional Qualifications Accreditation and Certification Systems</td>
<td>Responsible for documents on (1) procedures for fire service personnel certification to NFPA Professional Fire Service Qualifications Standards of other standards adopted by the authority having jurisdiction, and (2) procedures for accrediting national, state, provincial, and local jurisdictions as certifying entities for NFPA Professional Fire Service Qualifications Standards of other standards adopted by the AHJ</td>
<td>Establishes the minimum criteria for accrediting bodies, assessment and validation of the process used to certify fire and related emergency response personnel to professional qualifications and non-engineering, fire-related, academic, degree-granting programs offered by institutions of higher education</td>
<td>NFPA 472 HMWMD Response Personnel NFPA 1001 Fire Fighter NFPA 1002 Driver/Operator NFPA 1003 ARFF NFPA 1006 Rescue Technician NFPA 1021 Fire Officer NFPA 1031 Fire Inspector/Plan Examiner NFPA 1033 Investigator NFPA 1035 FLSE, PIO, JFIS NFPA 1041 Fire Service Instructor NFPA 1051 Wildland Fire Fighter NFPA 1061 Telecommunicator NFPA 1071 Emergency Vehicle Technician NFPA 1081 Industrial Fire Brigade NFPA 1500 Occupational Safety &amp; Health NFPA 1521 Safety Officer</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• Fire Fighter I</td>
<td>• Alternative Standard Ontario Office of the Fire Marshal Fire Services Fire Fighter</td>
</tr>
<tr>
<td>Doc Number</td>
<td>Document Title</td>
<td>Committee Scope</td>
<td>Document Scope</td>
<td>Source Documents</td>
<td>ProBoard Related Certifications</td>
<td>IFSAC Related Certifications</td>
</tr>
<tr>
<td>------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>---------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>NFPA 1005</td>
<td>Marine Fire Fighting for Land-Based Fire Fighters</td>
<td>Responsible for documents on professional competence required of the firefighters</td>
<td>Identifies the minimum job performance requirements (JPRs) for land-based fire fighters responsible for firefighting operations aboard</td>
<td>NFPA 1000 Certification/Accreditation NFPA 1001 Fire Fighter NFPA 1002 Driver/Operator NFPA 1031 Fire Inspector/Plan Examiner NFPA 1081 Industrial Fire Brigade NFPA 1500 Occupational Safety and Health NFPA 1405 Land Based FF responding to Marine Vessel Fires</td>
<td>• Marine Fire Fighter I • Marine Fire Fighter II</td>
<td>• Marine Fire Fighter I • Marine Fire Fighter II • Marine Fire Fighter II</td>
</tr>
<tr>
<td>Doc Number / TC Acronym / Edition / Rev Cycle</td>
<td>Document Title</td>
<td>Committee Scope</td>
<td>Document Scope</td>
<td>Source Documents</td>
<td>ProBoard Related Certifications</td>
<td>IFSAC Related Certifications</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>-------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Doc Number / TC Acronym / Edition / Rev Cycle</td>
<td>Document Title</td>
<td>Committee Scope</td>
<td>Document Scope</td>
<td>Source Documents</td>
<td>ProBoard Related Certifications</td>
<td>IFSA Related Certifications</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>-------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>NFPA 1021 PQU-FOF 2009 A2013</td>
<td>Fire Officer Professional Qualifications</td>
<td>Responsible for documents on professional competence required of fire service officers</td>
<td>Identifies the minimum job performance requirements necessary to perform the duties of a fire officer and specifically identify four levels of</td>
<td>NFPA 1000 Certification/Accreditation NFPA 1001 Fire Fighter NFPA 1002 Driver/Operator NFPA 1031 Fire Inspector/Plan Examiner NFPA 1033 Fire Investigator NFPA 1041 Fire Service Instructor NFPA 1521 Safety Officer NFPA 1600 Disaster/Emergency Management and Business</td>
<td>• Fire Officer I • Fire Officer II • Fire Officer III • Fire Officer IV</td>
<td>• Fire Officer I • Fire Officer II • Fire Officer III • Fire Officer IV</td>
</tr>
</tbody>
</table>

Protocol AIHA Decontamination for Hazardous Materials Emergency Timothy Henry

Swiftwater Rescue II
• Rescue Technician, Ice Rescue I
• Rescue Technician, Ice Rescue II
• Rescue Technician, Surf Rescue I
• Rescue Technician, Surf Rescue II
• Rescue Technician, Mine and Tunnel Rescue I
• Rescue Technician, Mine and Tunnel Rescue II

Rescue II
• Rescue Technician, Dive Rescue I
• Rescue Technician, Dive Rescue II
• Rescue Technician, Wilderness Rescue I
• Rescue Technician, Wilderness Rescue II
• Rescue Technician, Swiftwater Rescue I
• Rescue Technician, Swiftwater Rescue II
• Rescue Technician, Ice Rescue I
• Rescue Technician, Ice Rescue II
• Rescue Technician, Surf Rescue I
• Rescue Technician, Surf Rescue II
• Rescue Technician, Mine and Tunnel Rescue I
• Rescue Technician, Mine and Tunnel Rescue II

* Alternative Standard North Carolina Fire and Rescue Commission Agriculture
<table>
<thead>
<tr>
<th>Doc Number / TC Acronym / Edition / Rev Cycle</th>
<th>Document Title</th>
<th>Committee Scope</th>
<th>Document Scope</th>
<th>Source Documents</th>
<th>ProBoard Related Certifications</th>
<th>IFSAC Related Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA 1031 PQU-FIS 2009 A2013</td>
<td>Professional Qualifications for Fire Inspector and Plan Examiner</td>
<td>Responsible for documents on professional competence required of fire inspectors</td>
<td>Identify the professional levels of performance required for fire inspectors and plan examiners,</td>
<td>NFPA 472 HMWMD Response Personnel NFPA 101 Life Safety Code Refer to Frequency of Use of Standards Annex E of NFPA 1031 NFPA 10 Portable Fire Extinguishers</td>
<td>** Fire Inspector I</td>
<td>** Fire Inspector II</td>
</tr>
<tr>
<td>Doc Number / TC Acronym / Edition / Rev Cycle</td>
<td>Document Title</td>
<td>Committee Scope</td>
<td>Document Scope</td>
<td>Source Documents</td>
<td>ProBoard Related Certifications</td>
<td>IFSAC Related Certifications</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>---------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>PQU-FIV</td>
<td>Professional Qualifications for Fire and Life Safety Educator, Public Fire Educator and Juvenile Firesetter Intervention Specialist</td>
<td>Responsible for documents on professional competence of public fire educators, public information officers, and juvenile firesetter educators</td>
<td>Identifies the levels of professional performance required for public fire and life safety educators, public information officers, and juvenile firesetter intervention specialists</td>
<td>NFPA 1000 Certification/Accreditation NFPA 1002 Driver/Operator NFPA 1031 Fire Inspector/Plan Examiner Preventing Childhood Emergencies: A Guide to Developing Effective Injury Prevention Initiatives Injury Prevention and Control for Children and Youth Community Education Leadership The National Juvenile Firesetter/Arson Control and Prevention Program IFSTA Fire and Life Safety Educator IFSTA FSLE Resource Kit Intervention, Resource Materials: FIRE Solutions, Inc Legal Issues in Child Abuse and Neglect</td>
<td>• Public Fire and Life Safety Educator I • Public Fire and Life Safety Educator II • Public Fire and Life Safety Educator III • Public Information Officer • Juvenile Firesetter Intervention Specialist I • Juvenile Firesetter Intervention Specialist II</td>
<td>• Public Fire and Life Safety Educator I • Public Fire and Life Safety Educator II • Public Fire and Life Safety Educator III • Public Information Officer • Juvenile Firesetter Intervention Specialist I • Juvenile Firesetter Intervention Specialist II</td>
</tr>
<tr>
<td>A2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NFPA 1035</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doc Number / TC Acronym / Edition / Rev Cycle</td>
<td>Document Title</td>
<td>Committee Scope</td>
<td>Document Scope</td>
<td>Source Documents</td>
<td>ProBoard Related Certifications</td>
<td>IFSAC Related Certifications</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>----------------</td>
<td>-----------------</td>
<td>-------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>NFPA 1041 PQU-FSI 2007 F2011</td>
<td>Fire Service Instructor Professional Qualifications</td>
<td>Responsible for documents on professional competence required of fire service instructors</td>
<td>Identifies minimum job performance requirements (JPRs) for fire service instructors</td>
<td>NFPA 1000 Certification/Accreditation NFPA 1002 Driver/Operator NFPA 1401 Recommended Practice for Fire Service Training Reports and Records NFPA 1403 Live Fire Training Evolutions</td>
<td>• Fire Service Instructor I</td>
<td>• Fire Service Instructor I</td>
</tr>
<tr>
<td>NFPA 1051 PQU-WSP 2007 F2011</td>
<td>Wildland Fire Fighter Professional Qualifications</td>
<td>Responsible for documents on professional qualifications for personnel engaged in wildland fire management</td>
<td>Identify the minimum job performance requirements (JPRs) for wildland fire duties and responsibilities</td>
<td>NFPA 472 HMWMD Response Personnel NFPA 1001 Fire Fighter NFPA 1002 Driver/Operator NFPA 1021 Fire Officer NFPA 1033 Fire Investigator NFPA 1035 FSLE, PIO, JFIS NFPA 1143 Wildland Fire Management NFPA 1144 Protection for Life and Property from Wildfire NFPA 1500 Occupational Safety and Health NFPA 1561 Emergency Services IMS NFPA 1582 Occupational Medical Program NFPA 1977 Protective Clothing and Equipment for Wildland Fire Fighting Refer to various NWCG handbooks, pamphlets, training packages</td>
<td>• Wildland Fire Fighter I</td>
<td>• Wildland Fire Fighter II</td>
</tr>
</tbody>
</table>

* Alternative Standard Ontario Office of the Fire Marshal Fire Training Officer
<table>
<thead>
<tr>
<th>Doc Number / TC Acronym / Edition / Rev Cycle</th>
<th>Document Title</th>
<th>Committee Scope</th>
<th>Document Scope</th>
<th>Source Documents</th>
<th>ProBoard Related Certifications</th>
<th>IF SAC Related Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA 1081 PQU-IFB 2007 A2011</td>
<td>Industrial Fire Brigade Member Professional Qualifications</td>
<td>Responsible for documents on the professional competence required for personnel who participate as members of industrial fire brigades</td>
<td>Identifies the minimum job performance requirements (JPRs) necessary to perform the duties as a member of an organized industrial fire brigade providing services at a specific facility or site</td>
<td>NFPA 10 Portable Fire Extinguishers NFPA 14 Installation of Standpipe and Hose NFPA 472 HMWMD Response Personnel NFPA 600 Industrial Fire Brigade NFPA 1000 Certification/Accreditation NFPA 1002 Driver/Operator NFPA 1021 Fire Officer NFPA 1031 Fire Inspector/Plan Examiner NFPA 1403 Live Fire Training NFPA 1404 Respiratory Protection Training NFPA 1500 Occupational Safety &amp; Health NFPA 1521 Safety Officer NFPA 1561 Emergency Services IMS NFPA 1582 Occupational Medical Program NFPA 1620 Recommended Practice for Pre-Incident Planning NFPA 1961 Fire Hose</td>
<td>Incipient Industrial Fire Brigade Member Advanced Exterior Industrial Fire Brigade Member Interior Structural Industrial Fire Brigade Member Industrial Fire Brigade Leader Advanced Exterior/Interior Structural Fire Brigade Member</td>
<td>Incipient Industrial Fire Brigade Member Advanced Exterior Industrial Fire Brigade Member Interior Structural Industrial Fire Brigade Member Industrial Fire Brigade Leader</td>
</tr>
</tbody>
</table>

October 13, 2011 Standards Council Agenda October 17-18, 2011 Page 183 of 331
<table>
<thead>
<tr>
<th>Doc Number / TC Acronym / Edition / Rev Cycle</th>
<th>Document Title</th>
<th>Committee Scope</th>
<th>Document Scope</th>
<th>Source Documents</th>
<th>ProBoard Related Certifications</th>
<th>IFSAC Related Certifications</th>
</tr>
</thead>
</table>
| NFPA 1091 PQU-TCM Initial Initial           | Professional Qualifications for Traffic Control Incident Management | Responsible for documents on the professional competence required for personnel who participate as traffic control personnel | Identifies the minimum job performance requirements (JPRs) for career and volunteer fire fighters necessary to perform the duties of traffic control personnel and specifically identify four levels of progression | NFPA 1962 Hose, Couplings, Nozzles  
NFPA 1710 Organization/Deployment of Fire Suppression Operations – Career  
29 CFR 1910.120 HAZWOPER  
29 CFR 1910.134 Respiratory Protection  
29 CFR 1910.156 Subpart L Fire Brigade | | | |
| NFPA 1521 FIX-AAA 2008 F2013               | Standard for Fire Department Safety Officer | Responsible for documents on occupational safety and health in the working environment of the fire service. | Contains minimum requirements for the assignment, duties, and responsibilities of a health and safety officer (HSO) and an incident safety officer (ISO) for a fire department | NFPA 472 HMWMD Response Personnel  
NFPA 600 Industrial Fire Brigade  
NFPA 1002 Driver/Operator  
NFPA 1451 Fire Services Vehicle Operations Training Program  
NFPA 1500 Occupational Safety and Health  
NFPA 1561 Emergency Services IMS  
NFPA 1581 FD Infection Control Program  
NFPA 1670 Operations and Training for Technical Search and Rescue Incidents  
NFPA 1710 Organization/Deployment of Fire Suppression Operations – Career  
NFPA 1901 Automobile Fire Apparatus  
29 USC Part 654 Duties of employers and employees  
FA-197 Developing Effective Standard Operating Procedures for FIRE and EMS Departments  
29 CFR 1910.120 HAZWOPER | • Health and Safety Officer  
• Incident Safety Officer  
• Incident Safety Officer, Fire Suppression  
• Incident Safety Officer, Emergency Medical Service Operations  
• Incident Safety Officer, Hazardous Materials Operations  
• Incident Safety Officer, Technical Rescue | • Health and Safety Officer |
| NFPA 472 HCZ-AAA 2008 A2012               | Hazardous Materials/Weapons of Mass Destruction Professional Qualifications | Responsible for documents on the requirements for the professional competence, training, procedures, and equipment for hazardous | Identify the minimum levels of competence required by responders to emergencies involving hazardous | NFPA 11 Low, Medium, High Expansion Foam  
NFPA 25 Inspection, Testing, Maintenance of Water-Based Fire Protection Systems  
NFPA 30 Flammable and Combustible Liquids Code  
NFPA 58 Liquefied Petroleum Gas | • Competencies for the First Responder at the Awareness Level  
• Competencies for the First Responder at the Operational Level | • Competencies for the First Responder at the Awareness Level  
• Competencies for the First Responder at the Operational Level |
<table>
<thead>
<tr>
<th>Document Title</th>
<th>Committee Scope</th>
<th>Document Scope</th>
<th>Source Documents</th>
<th>ProBoard Related Certifications</th>
<th>IFSAC Related Certifications</th>
</tr>
</thead>
</table>

• Competencies for the First Responder at the Awareness and Operational Level
• Core Competencies
• Competencies: Personal Protective Equipment
• Competencies: Mass Decontamination
• Competencies: Technical Decontamination
• Competencies: Evidence Preservation and Sampling
• Competencies: Product Control
• Competencies: Air Monitoring and Sampling
• Competencies: Victim Rescue and Recovery
• Competencies: Response to Illicit Laboratory Incidents
• Competencies for the Hazardous Materials Technician
• Competencies for the Incident Commander
• Competencies with Awareness and Operations and All Mission Specific
<table>
<thead>
<tr>
<th>Doc Number / TC Acronym / Edition / Rev Cycle</th>
<th>Document Title</th>
<th>Committee Scope</th>
<th>Document Scope</th>
<th>Source Documents</th>
<th>ProBoard Related Certifications</th>
<th>IFSAC Related Certifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA 473 HCZ-AAA 2008 A2012</td>
<td>EMS Personnel Responding to Hazardous Material/Weapons of Mass Destruction Professional Qualifications</td>
<td>Responsible for documents on the requirements for the professional competence, training, procedures, and equipment for emergency responders to hazardous materials incidents</td>
<td>Identifies the levels of competence required of emergency medical services (EMS) personnel who respond to incidents involving hazardous materials or weapons of mass destruction (WMD). It especially covers the requirements for basic life support and advanced life support personnel in the pre-hospital setting</td>
<td>NFPA 11 Low, Medium, High Expansion Foam NFPA 30 Flammable and Combustible Liquids Code NFPA 58 Liquefied Petroleum Gas Code NFPA 472 HMWMD Response Personnel NFPA 704 Identification of the Hazards of Materials for Emergency Response NFPA 1651 Emergency Services IMS NFPA 1681 FD Infection Control Program NFPA 1991 Vapor-Protective Ensembles for Hazardous Materials Emergencies NFPA 1992 Liquid Splash-Protective Ensembles and Clothing for Hazardous Materials Emergencies Emergency Response Guidebook DOT 18 USC Section 2332a Use of Weapons of Mass Destruction Various publications from ACC, API, IMO, NRT, US Government and et.al.</td>
<td>• Competencies for the Technician with a Cargo Tank Specialty • Competencies for the Technician with an Intermodal Tank Specialty • Competencies for the Technician with a Marine Tank Vessel Specialty • Competencies with Operations and PPE • Competencies with Awareness &amp; Ops &amp; Product Control • Competencies with Operations and Product Control • Competencies with Awareness and Operations and All Mission Specific</td>
<td>• Competencies for Haz Mat/WMD BLS Responder • Competencies for Haz Mat/WMD ALS Responder • Competencies for Haz Mat/WMD BLS Responder • Competencies for Haz Mat/WMD ALS Responder</td>
</tr>
</tbody>
</table>
ANNEX C

COMPARISON OF INDIVIDUAL AND ORGANIZATIONAL BASED COMPETENCIES

PROFESSIONAL QUALIFICATIONS
“NOW AND BEYOND WORKSHOP”
FOR
FIRE AND EMERGENCY SERVICES

IRVING, TEXAS
13-14 APRIL 2011
<table>
<thead>
<tr>
<th>Individual-Based Competency Docs (i.e. ProQual Docs)</th>
<th>Organization-Based Competency Docs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doc # / Committee / Title / Year</strong></td>
<td><strong>Committee Scope</strong></td>
</tr>
<tr>
<td>Professional Qualifications Technical Correlating Committee PQU-AAC</td>
<td>Responsible for the management of the NFPA Professional Qualifications Project and documents related to professional qualifications for the fire service, public safety and related personnel.</td>
</tr>
<tr>
<td><strong>NFPA 1000</strong></td>
<td>Responsible for documents on (1) procedures for fire service personnel certification to NFPA Professional Fire Service Qualifications Standards of other standards adopted by the authority having jurisdiction, and (2) procedures for accrediting national, state, provincial, and local jurisdictions as certifying entities for NFPA Professional Fire Service Qualifications Standards of other standards adopted by the authority having jurisdiction.</td>
</tr>
<tr>
<td><strong>NFPA 1001</strong></td>
<td>Responsible for documents on professional competence required of the firefighters.</td>
</tr>
<tr>
<td><strong>NFPA 1404</strong></td>
<td>Responsible for all fire service training techniques, operations, and procedures to develop maximum efficiency and proper utilization of available personnel. Such activities can include training guides for fire prevention, fire suppression, and other missions for which the fire service has responsibility.</td>
</tr>
<tr>
<td><strong>NFPA 1410</strong></td>
<td>Responsible for all fire service training techniques, operations, and procedures to develop maximum efficiency and proper utilization of available personnel. Such activities can include training guides for fire prevention, fire suppression, and other missions for which the fire service has responsibility.</td>
</tr>
<tr>
<td>Individual-Based Competency Docs (i.e. ProQual Docs)</td>
<td>Organization-Based Competency Docs</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Doc # / Committee / Title / Year</td>
<td>Committee Scope</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>NFPA 1002 PQU-FFQ</td>
<td>Responsible for documents on professional competence required of fire fighters.</td>
</tr>
<tr>
<td>Fire Apparatus Driver/Operator Professional Qualifications 2009</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>NFPA 1003 PQU-FFQ</td>
<td>Responsible for documents on professional competence required of fire fighters.</td>
</tr>
<tr>
<td>Airport Fire Fighter Professional Qualifications 2010</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>NFPA 1005 PQU-FFQ</td>
<td>Responsible for documents on professional competence required of fire fighters.</td>
</tr>
<tr>
<td>Marine Fire</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

October 13, 2011  Standards Council Agenda October 17-18, 2011  Page 189 of 331
<table>
<thead>
<tr>
<th>Individual-Based Competency Docs (i.e. ProQual Docs)</th>
<th>Organization-Based Competency Docs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doc # / Committee / Title / Year</strong></td>
<td><strong>Committee Scope</strong></td>
</tr>
<tr>
<td>Fighting for Land-Based Fire Fighters 2007</td>
<td>Responsible for documents on the professional qualifications for fire service and related personnel who will perform rescue operations.</td>
</tr>
<tr>
<td>NFPA 1006</td>
<td>PQU-RES</td>
</tr>
<tr>
<td>NFPA 1021</td>
<td>PQU-FOF</td>
</tr>
<tr>
<td>NFPA 1026</td>
<td>PQU-ICM</td>
</tr>
<tr>
<td>NFPA 1031</td>
<td>PQU-FIS</td>
</tr>
</tbody>
</table>

*1.1.1* It is not the intent of this document to be applied to individuals and their associated skills and/or qualifications.
<table>
<thead>
<tr>
<th>Individual-Based Competency Docs (i.e. ProQual Docs)</th>
<th>Organization-Based Competency Docs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Doc # / Committee / Title / Year</strong></td>
<td><strong>Committee Scope</strong></td>
</tr>
<tr>
<td>NFPA 1033</td>
<td>Responsible for documents on professional competence required of fire investigators.</td>
</tr>
<tr>
<td>NFPA 1035</td>
<td>Responsible for documents on professional competence of public fire educators, public information officers, and juvenile firesetter educators.</td>
</tr>
<tr>
<td>PQU-PFE</td>
<td>Professional Qualifications for Fire and Life Safety Educator, Public Fire Educator and Juvenile Firesetter Intervention Specialist 2007</td>
</tr>
<tr>
<td>NFPA 1037</td>
<td>Responsible for documents on professional competence required of fire marshals.</td>
</tr>
<tr>
<td>PQU-FMA</td>
<td>Professional Qualifications for Fire Marshal 2007</td>
</tr>
<tr>
<td>NFPA 1041</td>
<td>Responsible for documents on professional competence required of fire service instructors.</td>
</tr>
<tr>
<td>PQU-FSI</td>
<td>Fire Service Instructor Professional Qualifications 2007</td>
</tr>
<tr>
<td>Doc # / Committee / Title / Year</td>
<td>Committee Scope</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>NFPA 1051 PQU-WSP Wildland Fire Fighter Professional Qualifications 2007</td>
<td>Responsible for documents on professional qualifications for personnel engaged in wildland fire management.</td>
</tr>
<tr>
<td>NFPA 1061 PQU-PST Public Safety Communicator 2007</td>
<td>Responsible for documents on the professional qualifications for public safety dispatchers.</td>
</tr>
<tr>
<td>NFPA 1071 PQU-EVM Emergency Vehicle Technician Professional Qualifications 2011</td>
<td>Responsible for documents on professional qualifications required of personnel engaged in the diagnosis, maintenance, and repair of systems and components that are unique to emergency response vehicles.</td>
</tr>
<tr>
<td>NFPA 1081 PQU-IFB Industrial Fire Brigade Member Professional Qualifications 2007</td>
<td>Responsible for documents on the professional competence required for personnel who participate as members of industrial fire brigades.</td>
</tr>
<tr>
<td>Individual-Based Competency Docs (i.e. ProQual Docs)</td>
<td>Organization-Based Competency Docs</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td><strong>Doc # / Committee / Title / Year</strong></td>
<td><strong>Committee Scope</strong></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>NFPA 1091 PQU-TCM</strong></td>
<td>Responsible for documents on the professional competence required for personnel who participate as traffic control personnel.</td>
</tr>
<tr>
<td><strong>NFPA 1521 FIX-AAA</strong></td>
<td>Responsible for documents on occupational safety and health in the working environment of the fire service.</td>
</tr>
<tr>
<td><strong>NFPA 472 HCZ-AAA</strong></td>
<td>Responsible for documents on the requirements for the professional competence, training, procedures, and equipment for emergency responders to hazardous materials incidents.</td>
</tr>
<tr>
<td><strong>NFPA 473 HCZ-AAA</strong></td>
<td>Responsible for documents on the requirements for the professional competence, training, procedures, and equipment for emergency responders to hazardous materials incidents.</td>
</tr>
</tbody>
</table>
ANNEX D

HISTORY OF
PROFESSIONAL QUALIFICATIONS PROJECT

PROFESSIONAL QUALIFICATIONS
“NOW AND BEYOND WORKSHOP”
FOR
FIRE AND EMERGENCY SERVICES

IRVING, TEXAS
13-14 APRIL 2011
History of ProQual Documents

In 1971, the Joint Council of National Fire Service Organizations (JCNFSO) created the National Professional Qualifications Board (NPQB) for the fire service to facilitate the development of nationally applicable performance standards for uniformed fire service personnel. On December 14, 1972, the Board established four Technical Committees to develop those standards using the National Fire Protection Association (NFPA) standards-making system. The initial committees addressed the following career areas: fire fighter, fire officer, fire service instructor, and fire inspector and investigator.

The various levels of achievement in the standards were to build on each other within a strictly defined career ladder. In the late 1980s, revisions of the standards recognized that the documents should stand on their own merit in terms of job performance requirements (JPRs) for a given field. Accordingly, the strict career-ladder concept was abandoned, except for the progression from fire fighter to fire officer.

In 1990, responsibility for the appointment of professional qualifications committees and the development of the professional qualifications standards were assumed by the NFPA. The Correlating Committee on Professional Qualifications was appointed by the NFPA Standards Council in 1990 and assumed the responsibility for coordinating the requirements of all of the Professional Qualifications documents.

From 1997 onward, JPR format was used to be consistent with the other standards in the Professional Qualifications Project. Each JPR consists of the task to be performed; the tools, equipment, or materials that must be provided to successfully complete the task; evaluation parameters and/or performance outcomes; and lists of requisite knowledge and skills one must have to be able to perform the task.

- **NFPA 1001**
  - Adopted by the Association in November 1974 as part of the four original standards.
  - 2008: A complete revision was done to include: a skills maintenance requirement was added, specific knot-tying requirements were deleted and replaced with those required by the authority having jurisdiction, the inspection and public education requirements were moved.

- **NFPA 1002**
  - Adopted by the Association in 1976.
  - 2009: The purpose and scope were re-written, the term “certification” was replaced with “qualifying”, and a “skills maintenance” section was added.

- **NFPA 1003**
  - Adopted by the Association in 1978.
  - 2005: The required experience for an airport firefighter was raised to require Fire Fighter II minimum.

- **NFPA 1004**
  - Standards Council established the Technical Committee in 1984.
  - Only published in one edition (1985) and was not incorporated into any other standards.
  - 1990: The Standard was withdrawn and is no longer used.
- **NFPA 1005**
  - Originated in July 2000 when the Standards Council received a letter from the Department of Defense (DoD), requesting consideration for a new project on shipboard firefighting for land based units.

- **NFPA 1006**
  - Standards Council established the Technical Committee in 1994 to specify job requirements both for general and specific technical rescue applications.
  - 2008: Swiftwater, Ice, and Surf Rescue chapters were added, and Subterranean was divided into Mines & Tunnels and the other Caves. Addition of Level I & II.

- **NFPA 1021**
  - Standards Council established the Technical Committee in December 1972 as part of the four original standards.
  - NFPA adopted the standard in July 1976.
  - 1992: Reduced levels of progression to four levels.
  - 2009: Changed “certification” to “qualification”, revised scope, and added skill maintenance requirements.

- **NFPA 1026**
  - Originated in August 2000 when the standards council received a letter from the National Fire Service Incident Management System Consortium.
  - Scope and need for the project was verified in 2001 and 2002 Task group meetings.
  - Standards Council approved project in July 2003.

- **NFPA 1031**
  - Standards Council established the Technical Committee in December 1972 as part of the four original standards which was adopted by the NFPA in May 1977.
  - 1986: Developed separate documents for each job function in the original NFPA 1031 (Fire Inspector, Investigator, Fire Prevention Education Officer).
  - 2009: Complete revision according to TCC to provide ProQual consistency.

- **NFPA 1033**
  - Standards Council established the Technical Committee in December 1972 as part of the four original standards which was adopted by the NFPA in May 1977.
  - 1986: Joint Council directed the committee to create separate standards for each job.
  - 2009: The Technical Committee added an explanatory annex to the scope to clarify the inclusion of vehicles, outside, and other non-structural fires. Also added skills maintenance section.

- **NFPA 1035**
  - Standards Council established the Technical Committee in December 1972 as part of the four original standards which was adopted by the NFPA in May 1977.
1986: Joint Council directed the committee to create separate standards for each job.
2000: New chapters were added for Public Information Officer, Juvenile Firesetter Intervention Specialist I & II.

**NFPA 1037**
- Standard Council approved the project in October 2001 as requested by the International Fire Marshals Association.

**NFPA 1041**
- Standards Council established the Technical Committee in December 1972 as part of the four original standards.
- 1975: Separated into four distinct levels of instructor responsibilities: 1) to teach, 2) to develop teaching material, 3) to supervise teaching staff and program, and 4) to manage, budget, and implement the program.
- 1976: This standard was first issued then revised in 1981 and 1987.
- 1996: Standard was revised into JPRs based on complete job task analysis to focus more on instructor and developer rather than management aspects.
- 2007: The Standard was updated for ProQual consistency.

**NFPA 1051**
- Standards Council established the Technical Committee in 1991.
- 2002: The Technical Committee changed the purpose, scope, and completely revised the document to include suppression and pre-suppression activities, removed Wildland Fire officer I & II, Wildland firefighter III & IV, and added Wildland/Urban Interface Coordinator and Specialist.

**NFPA 1061**
- 2002: Updated JPRs, requisite knowledge, and requisite skills.
- 2007: Revised Chapters and terminology and added Public Safety Telecommunicator III regarding the command post at a large incident.

**NFPA 1071**
- Standards Council established the Technical Committee in 1995 at the request of the Maintenance section of the International Association of Fire Chiefs.

**NFPA 1081**
- Standards Council approved the Technical Committee in 1996.
- 2007: Complete revision of document including editorial changes to JPRs, requisite knowledge, requisite skill statements, and site-specific requirements.

**NFPA 1091**
- While the Standards Council approved the formation in August 2010, the document is still in the draft development stage.
PROFESSIONAL QUALIFICATIONS FOR THE FIRE SERVICE
A Brief and Uncomplicated History

Joint Council of National Fire Service Organizations (circa 1970)
- NFPA
- IAFC
- IAFF
- IFSTA
- ISFSI
- FMANA
- IAAI
- NABPFF
- NVFC
- State Training Directors

National Professional Qualifications System (1972 – 1989)
- Standards Committees
  - 1001, 1021, 1031, 1041
- National Certificates
- Accredit Certifiers
- Establish Pro Board

NEW ERA OF ORGANIZATIONS (1990 +)
- NBFSPO
  - NFPA, IAFC, IAAL, NASFM & NAFTD
  - Accreditation, Certificates and Forums
- IFSAC
  - User agencies
  - Accreditation, Certificates and Forums
- NFPA TCC
  - Balanced committees, Correlation and Review

BENCHMARKS ALONG THE WAY (1990 TO PRESENT)
- Job Performance Requirements
- Measurable provisions
- New Standards
  - Establishing need
- Higher Education Nexus
  - IFSAC Degree Assembly
- Old issues
- New issues

THANKS TO NFPA RESEARCH FOUNDATION
- HISTORY IS A TEACHER NOT A LIMITER
- WORK HARD AND KEEP AN OPEN MIND
ANNEX E

OVERVIEW OF JPR DEVELOPMENT

PROFESSIONAL QUALIFICATIONS
“NOW AND BEYOND WORKSHOP”
FOR
FIRE AND EMERGENCY SERVICES

IRVING, TEXAS
13-14 April 2011
Overview: Job Performance Requirements

Job Performance Requirements (JPRs) are principal to the National Fire Protection Association (NFPA) Professional Qualifications (ProQual) standards. It is recognized that JPRs benchmark a framework for the fire service and others who endorse the use of NFPA professional qualifications standards. JPRs enhance professionalism, organizational growth and development, and standardization of practices.

NFPA is responsible for the standards development process. Technical Committees (TC) are responsible for the content of the ProQual Standards and JPR methodology. NFPA relies on public input, openness, consensus and balance to establish a ProQual document representative of the duties and responsibilities for the various positions and levels. The JPRs are primarily used for training design and evaluation, certification and accreditation, measuring and critiquing on-the-job performance, defining hiring practices, and setting organizational policies, procedures, and goals. The ProQual standards and JPRs are minimum knowledge and skill proficiencies established by peers of the fire service and consent entity members which comprise a TC.

Components of a JPR

The JPR is the assembly of three critical components:

1. Task that is to be performed - brief statement of what the person is to accomplish
2. Tools, equipment, or materials that must be provided to successfully complete the task - listing of items allows the performer and evaluator to know what must be provided in order to complete the task
3. Evaluation parameters and/or performance outcomes - defines expectation of performance required and promotes consistency in evaluation by reducing the variables

JPR contains requisite knowledge and skills. Requisite knowledge and skills are the foundation for task performance. These are the necessary knowledge and skills one must have prior to being able to perform the task.

Sample JPR 1.
The Fire Fighter I shall ventilate a pitched roof, given an ax, a pike pole, an extension ladder, and a roof ladder, so that a 1.22 m × 1.22 m (4 ft × 4 ft) hole is created, all ventilation barriers are removed, ladders are properly positioned for ventilation, and ventilation holes are correctly placed.

(A) Requisite Knowledge. Pitched roof construction, safety considerations with roof ventilation, dangers associated with improper ventilation, knowledge of ventilation tools, effects of ventilation on fire growth, smoke movement in structures, signs of backdraft, and knowledge of vertical and forced ventilation.

(B) Requisite Skills. Ability to remove roof covering; properly initiate roof cuts; use pike pole to clear ventilation barriers; use ax properly for sounding, cutting, and stripping; position ladders; and climb and position self on ladder.

Sample JPR 2.
The Fire Investigator shall interpret burn patterns, given standard equipment and tools and some structural/content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.
(A) **Requisite Knowledge.** Knowledge of fire development and the interrelationship of heat release rate, form, and ignitibility of materials.

(B) **Requisite Skills.** Ability to interpret effects of burning characteristics on different types of materials.

**Linking JPRs and Instructional Objectives**

JPRs state what is necessary to perform the task(s) on the job. Instructional objectives are used to identify what students must do at the end of a training session and are stated in behavioral terms that are measurable in the training environment. Requisite skills and knowledge should be converted into enabling objectives. Enabling objectives assist in defining the course content. The course content would include each of the requisite knowledge and skills.
Goal of JPR Development

To develop job performance requirements (JPRs) in a clear and concise manner so that individuals recognized as knowledgeable in a particular NFPA Professional Qualification Standard can be evaluated on their ability to successfully perform essential job tasks.

Committee Responsibility

- Conduct a Job Task Analysis
- Use the correct format for JPRs
- Include measurable requirements
- Committee intent clear to end user

Role of Committee

- Conduct a complete Task Analysis
- Develop JPRs using standard format
- Consider end user when developing JPRs
  - Complete list of requisites
  - Provide measurable evaluation criteria

Job Task Analysis Process

- Determine precisely what a person does in a specific job
- Results in detailed description the activities performed on the job
- Develop relevant job tasks
- Organize tasks into primary areas of responsibility
- Utilize Job Inventory Worksheet

Components of a JPR

1. Task
   - What
   - Action Verb

2. Given
   - Provided items to accomplish task

3. So That (Standard)
   - How performance of task is evaluated
Task Statement

- Behavioral terms (action verb)
- Describes clearly the action or activity to be performed
- Verb selection defines performance level of task

Selecting the Action Verb

- Should describe mental and physical skills needed to perform task
- Level of performance is determined by verb selection
- Select best verb to describe task

Writing Task Statement

- Be Brief
- Be Precise
- Use consistent language
- Avoid qualifiers – accurately, correctly, safely

Sample JPR

5.3.16* **Extinguish** incipient Class A, Class B and Class C fires, **given** a selection of portable fire extinguishers, **so that** the correct extinguisher is chosen, the fire is completely extinguished and correct extinguisher-handling techniques are followed.

Requisite Knowledge

- **(a) Requisite Knowledge:** The classifications of fire; and portable extinguisher types, rating systems, risks associated with each class of fire, operating methods and limitations.
Requisite Skills

(b) **Requisite Skills**: The ability to operate portable fire extinguishers, approach fire with portable fire extinguishers, select an appropriate extinguisher based on the size and type of fire and safely carry portable fire extinguishers.

Annex Note

A.5.3.16 The Fire Fighter I should be able to extinguish incipient Class A fires such as wastebaskets, small piles of pallets, wood or hay; Class B fires of approximately $9 \text{ ft}^2 (0.84 \text{ m}^2)$; and Class C fires where the electrical equipment is energized.

Developing Training Materials Using JPRs

- Define training objective
- Identify applicable document and resource materials
- Develop lesson plans with enabling objectives

Using JPRs for Training

- Converted into lessons or objectives
  - Audience
  - Behaviors
  - Conditions
  - Degrees for evaluating
- Requisite Skills and Knowledge Lists
  - Become enabling objectives
  - Enabling objectives help define course content

Quality Control Issues

- Did the committee conduct a job task analysis?
- Are the JPRs in the correct format?
- Are the requirements measurable?
- Is the intent of the committee clear to the end user?

From Standards to Effective Training

- Assists with creating performance checklists
- Includes each item from JPR “So That” list
- Identifies critical items for competency
- Determines the evaluation passing score
JPR Development

• Thanks for your attention!
ANNEX F

BACKGROUND ON
STANDARDS COUNCIL GOVERNANCE

PROFESSIONAL QUALIFICATIONS
“NOW AND BEYOND WORKSHOP”
FOR
FIRE AND EMERGENCY SERVICES

IRVING, TEXAS
13-14 APRIL 2011
Standards Council Governance

The Big Picture

The Participants

- (The public)
- ~75,000 Members
- 1) Board of Directors
  - Approximately 23 members
  - Elected by Membership
- 2) Standards Council
- 3) Technical Committees
- (NFPA Staff)

Technical Committees

- "Consensus bodies" in system
- Typical maximum size of 30
- Overall; ~7,000 Volunteers
- ~235 Technical Committees, balanced by interest categories
- ~300 Codes & Standards

Standards Council

Standards Council

- 13 Members
- Appointed by Board
- Responsibilities:
  - A) Adjudicate Appeals
  - B) Issue documents & TIAs
  - C) Appoint Committee Members
  - DJ Assign Committee Scopes
- Typically meet 3 times/year

Committee Scopes

- Approved by Standards Council
- Ideally: They should clearly delineate the responsibilities between Technical Committee Projects
- Tools to Assist:
  - "Jurisdictional Scope Policy"
  - "Extract Policy"
Governance Issues

- Balance of:
  - Consensus Body Administration
  - Extensive Public Input
    - 1) Proposal
    - 2) Comments
    - 3) Annual/Fall Meeting
    - 4) SC Issuance (Appeals)
- ~Two Year Revision Cycle
- Documents Revised every 3 – 5 Years (per ANSI requirements)

Governance and Document Management

Other Large NFPA Projects
- Concept: Single Document Approach
  - NFPA 13, NFPA 70, NFPA 72, NFPA 85, NFPA 101/5000, NFPA 1971
- Trend has been to combine documents
- Separate individual standards are NOT PREFERRED!
  - Reason: Burden on entire system, i.e. volunteers, staff, Standards Council
- Concept: Two-Hatted Technical Committees
  - Example; NFPA 101/5000

TCCs and TCs
- Correlating Role of TCC
- Role of TCs: Primary Technical Consensus Body

Large Projects
- Technical Consensus Committee
- Technical Committee
- Task Group(s)

Small Projects
- Task Group(s)

Governance and Document Management

Organizational Chart of ProQual Documents

NFPA Building Code TCC/TC Structure

Product Development and Approval Process
- Standards Council
- TCC
- TC
- Task Group(s)
- SC Issuance (Appeals)
Governance and Document Management

Next Steps
What is needed for the future?
- Define Terminology
- Define Technical Details and Clarify Jurisdictional Responsibilities
- Consider:
  - Extract Policy
  - Single vs. Multiple Document Approach
  - Other (e.g. Two-Hatted TCs)

National Fire Protection Association

ProQual Workshop
13-14 April 2011; Irving, Texas
ANNEX G

PROPOSED WORKGROUP QUESTIONS

PROFESSIONAL QUALIFICATIONS
“NOW AND BEYOND WORKSHOP”
FOR
FIRE AND EMERGENCY SERVICES

IRVING, TEXAS
13-14 APRIL 2011
Each of the working groups should individually address the following set of specific topics/questions, and report back to the whole group:

1) General
   a) Key Topics. This workshop has identified three key areas for focused discussion (1-Organizational & Individual Competencies, e.g. NFPA 472 & NFPA 1001; 2-Recertification; and 3-Single & Multi Discipline). Are there others, and what is the priority of all these issues?
   b) Today’s Infrastructure. What needs to be addressed or is missing in today’s infrastructure to assure the necessary credentials for emergency responders (e.g. recertification, etc)?
   c) Other Approaches. Are there other professions, methods, or jurisdictions that use a different infrastructure model that should be considered (e.g. military, maritime, aviation, other countries, etc)?

2) Current Issues
   a) Current Status. What is the single most important strength of today’s infrastructure? What is the weakness that presents the greatest challenge?
   b) Points of Commonality. How are individual competencies and organizational competencies used and how do they intersect (i.e. what are their points of commonality)?
   c) Scoping. How should the scope be defined for individual competencies and organizational competencies, and how do they relate to single and multi discipline?
   d) Responsibilities. Who should be assigned responsibility for which critical aspects, and will changes be needed (e.g. membership) to properly handle these critical aspects?

3) Future Issues
   a) Knowledge Gaps. What areas of expertise need to be enhanced or addressed, and in what priority?
   b) Logistical Approaches. What approaches or directions should be considered to assure a vibrant future for emergency responder professional qualifications (e.g. addressing new topics, consolidating standards, etc)?
   c) Optimum infrastructure. Describe the optimum infrastructure arrangement in 10 or 20 years.
ANNEX H

OVERVIEW OF
FIRE SERVICE TRAINING AND EDUCATION

PROFESSIONAL QUALIFICATIONS
“NOW AND BEYOND WORKSHOP”
FOR
FIRE AND EMERGENCY SERVICES

IRVING, TEXAS
13-14 APRIL 2011
Overview of Fire Service Training and Education

This information is extracted from the FPRF Report
“Reaching the U.S. Fire Service with Hydrogen Safety Information: A Roadmap”, September 2009,
(Note: Figure H-1 has been updated to reflect the Pro-Qual Standards as of May 2011)

There are an estimated 1.1 million fire fighters in the United States today.\(^{206}\) This estimate is based on a sample survey with a confidence level associated with each estimate, and does not include certain fire fighter constituency groups such as industrial fire departments and federal fire departments.

Approximately 75 percent of these fire fighters serve as volunteers with the remainder serving as career fire fighters. As expected, the more populated jurisdictions are protected primarily by career fire fighters while rural areas are protected primarily by volunteer fire fighters. Some fire departments are a mix of career and volunteer fire fighters in what are considered combination fire departments.

This section covers the preparation and process infrastructure utilized by fire fighters to perform their duties, with a focus on how they prepare for handling emergencies such as those involving electric and hybrid electric vehicles. A review is provided on what is typically included in fire service training and education programs, as well as an overview of fire service standard operating procedures and guidelines commonly used by fire fighters.

Defining the Profession of Fire Fighting

Fire fighters face a bewildering spectrum of possible emergency events. As a result they are generalists in their core knowledge and acquire specialized additional skills to handle certain duties.

Fire service personnel require skills that are already adequately learned and ready to be used before an emergency occurs. Beyond the obvious hazards associated with fireground operations, the duties of a fire fighter include the need for training on additional topics commonly shared with other professions. Examples include bio-hazards associated with handling of victims requiring emergency medical services, and transportation safety relating to the hazards of large mobile fire apparatus.

Fire service training and education is a critical part of the activities addressed by fire fighters. It is not uncommon for fire fighters to be in a situation where their own personal survival depends on this training and education, and they are continually subjected to learning on a wide range of important topics. For all topics of interest to fire service emergency responders, an on-going need exists for updated, accurate, consistent, readily understandable training information.
What distinguishes a fire fighter from someone who is not a fire fighter? Most obvious is an individual’s formal relationship (e.g., employment or membership) with a recognized fire service organization. Equally important, however, is the individual’s training and education that qualifies them to adequately perform the tasks expected of a fire fighter.

To be “qualified by training and examination” are critical defining characteristics for today’s fire service. Among the various definitions of fire fighter in the common literature, the following reflects the baseline importance of qualification by training and examination:

“Fire Fighter: An individual qualified by training and examination to perform activities for the control and suppression of unwanted fires and related events”

Fire fighter professional qualifications are key to defining the profession of fire fighting. Standards that set baseline requirements have been subject to ongoing enhancements for decades (as exemplified by documents such as NFPA 1961, Standard on Fire Hose, which was first issued in 1898, or NFPA 1410, Standard on Training for Initial Emergency Scene Operations, first issued in 1966).

Of particular interest for addressing fire fighter performance is the set of 18 NFPA standards addressing fire fighter professional qualifications. These documents are summarized in Figure H-1, and they clarify fire fighting disciplines and establish required levels of knowledge that can be used for training and other purposes.
The fire service operates as a quasi-military type organization, with the need for potentially large numbers of fire service members to be quickly deployed to handle complicated emergencies. Further, efficient and effective handling of the event is necessary to minimize danger to life and property, which means that there is normally very little time to implement mitigating action.

As a result, multiple specialized fire fighting disciplines have evolved to address certain tasks and duties as defined by the level of training and education they receive. Table H-1 summarizes examples of fire fighting disciplines and the standardized levels to which fire fighters can be qualified.

The last several years has seen a more widespread use of these standards, partly because five (NFPA 1000, 1001, 1002, 1006, and 1021) are among the 27 NFPA standards adopted as national preparedness standards by the U.S. Department of Homeland Security. Each year

<table>
<thead>
<tr>
<th>FIRE FIGHTING DISCIPLINE</th>
<th>EXAMPLES OF LEVELS</th>
<th>NFPA STANDARD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airport Fire Fighter</td>
<td>Pumper; Aerial, Tiller; ARFF; Mobile Water Supply; Wildland</td>
<td>1003</td>
</tr>
<tr>
<td>Driver/Operator</td>
<td></td>
<td>1002</td>
</tr>
<tr>
<td>EMS HazMat</td>
<td>Health/Safety Officer; Incident Safety Officer; ISO-Fire Suppression; ISO – EMS Operations; ISO – HazMat Operations; ISO – Special Operations</td>
<td>473</td>
</tr>
<tr>
<td>Fire Department Safety Officer</td>
<td></td>
<td>1521</td>
</tr>
<tr>
<td>Fire Fighter</td>
<td>I; II</td>
<td>1001</td>
</tr>
<tr>
<td>Fire Inspector</td>
<td>I; II; III; Plans Examiner</td>
<td>1031</td>
</tr>
<tr>
<td>Fire Investigator</td>
<td></td>
<td>1033</td>
</tr>
<tr>
<td>Fire Officer</td>
<td>I; II; III; IV</td>
<td>1021</td>
</tr>
<tr>
<td>Fire Service Instructor</td>
<td></td>
<td>1041</td>
</tr>
<tr>
<td>Hazardous Materials</td>
<td>Awareness; Operations; Technician; Incident Commander; Branch Safety Officer; Private Sector Specialist A, B, C; Tech w/Tank Car Specialty, Tech w/Cargo Tank Specialty; Tech w/Intermodal Tank Specialty; Tech w/ Flammable Gases Bulk Storage Specialty; Tech w/ Flammable Liquids Bulk Storage Specialty</td>
<td>472</td>
</tr>
<tr>
<td>Industrial Fire Brigade</td>
<td>Incipient; Advanced Exterior; Interior Structural; Advanced Structural; Leader</td>
<td>1081</td>
</tr>
<tr>
<td>Marine Fire Fighter</td>
<td>I, II</td>
<td>1005</td>
</tr>
<tr>
<td>Public Fire &amp; Life Safety Educator</td>
<td>I; II; III; Public Information Officer; Juvenile Firesetter Intervention Specialist</td>
<td>1035</td>
</tr>
<tr>
<td>Public Safety Telecommunicator</td>
<td>I; II</td>
<td>1061</td>
</tr>
<tr>
<td>Rescue Technician</td>
<td>Rope; Confined Space; Trench; Structural Collapse; Surface Water; Vehicle &amp; Machinery</td>
<td>1006</td>
</tr>
<tr>
<td>Wildland Fire Fighter</td>
<td>I, II</td>
<td>1051</td>
</tr>
</tbody>
</table>

Table H-1: Examples of Fire Fighting Disciplines and Training Levels

As a result, multiple specialized fire fighting disciplines have evolved to address certain tasks and duties as defined by the level of training and education they receive. Table H-1 summarizes examples of fire fighting disciplines and the standardized levels to which fire fighters can be qualified.

The last several years has seen a more widespread use of these standards, partly because five (NFPA 1000, 1001, 1002, 1006, and 1021) are among the 27 NFPA standards adopted as national preparedness standards by the U.S. Department of Homeland Security. Each year
DHS distributes millions of dollars in aid through their “Assistance to Firefighters Grant” (AFG) to U.S. fire departments, which is administered by the U.S. Federal Emergency Management Agency (FEMA). A prerequisite for applying for this support is conformance to these DHS national preparedness standards. The 19,791 applications requesting more than $3.1 billion in AFG grants in 2009 indicate the level of activity in this DHS/FEMA program.\textsuperscript{212}

**Training versus Education**

In today’s fire service the terms training and education are sometime used synonymously; however, they have different meanings.\textsuperscript{213} While both refer to the transfer of information from a body of knowledge to a recipient, each has a different focus on the purpose and details of the information transfer methodology.

Training is an exercise in focused learning, and refers to the exchange of specific information intended to enhance the proficiency of a particular skill. An example of training is a fire fighter class that teaches the skills necessary for certification at the “Awareness Level” for a hazardous materials incident. Training is more applicable to specific emergency events such as handling a motor vehicle accident.

In contrast, education refers to broad-based learning, with the intent of providing a foundation of general knowledge that supports efficient analytical techniques for effective problem solving. An example is a college degree in business administration, which will provide a fire service officer with the skill set needed to manage a large city fire department.

In general, the technical content for fire service training is well-established and addresses a wide range of topics faced by fire fighters. Much of this is captured in the mainstream literature and national standards (e.g., NFPA standards) addressing a wide range of fire fighting tasks, equipment, and other fire service detail. Some of this information has been developed and refined in various arenas for decades.

Specifically, multiple sources of training materials are available that extensively address useful content on the topic of motor vehicle emergencies. These training materials can be readily adapted and used directly by members of the fire service and other emergency responders. A wide assortment of broadly developed training materials and guidance materials are available that provide support. This includes, for example, the training manuals provided by the International Fire Service Training Association (since 1932), fire service training materials provided by Jones and Bartlett Publishers, and various books and publications provided through Delmar Learning.\textsuperscript{214,215,216}

**The Fire Service Training Infrastructure**

Fire departments are the basic organizations used by fire fighters to deliver their services. These can range from a small volunteer fire department in rural areas, to large fire departments with all career personnel protecting a major metropolitan city. Training will also depend on the
specific hazards within the protected jurisdiction, such as the difference between an industrial district and a bedroom community.

Fire departments, regardless of their size or type, have two distinct sources for their training needs: (1) training programs that originate and operate internally within the organization, and (2) those that originate and operate externally. Figure H-2 illustrates the two basic sources of training information and materials for the fire service.

![Figure H-2: Types of Training Sources](image)

The extent of internal training sources depends on the available resources of the particular fire department, and as a result, these internal sources tend to be more extensive and sophisticated for larger fire departments (e.g., large city or county fire departments). These larger fire departments generally have their own dedicated training divisions as well as training facilities (i.e., training academy), and are able to effectively handle recruit training and in-service training. Specialized training may be offered for specific duties such as fire apparatus operators, incident commanders, or safety officers. They may also offer specialized courses like those intended for duties beyond the front-line emergency responders, such as fire investigators, fire prevention and inspection personnel (i.e., permitting officials), and public fire and life safety educators.

Multiple external sources of training information and materials are available from a number of sources. These are available to directly support the many fire departments (and especially smaller departments) with limited resources for training. In addition, they also help to supplement and support larger fire departments with their own training departments, and while doing so promote general consistency throughout the fire service. In some cases, regional training centers fulfill internal training needs despite their external characteristics, and these may be operated at the county or state level, or simply by multiple fire service organizations joining together for this purpose. Figure H-3 provides an overview of fire service
training, from the perspective of the external sources that directly influence today’s fire service training.

State governments are a key external resource for fire departments, and many states have designated an official agency to provide statewide training for fire and emergency personnel. Similarly but at a higher level, the federal government provides important support through the National Fire Academy and other resources. Depending on the legislative and funding arrangements in a particular state or region, certain colleges and universities may serve as centers for fire service training, with or without the involvement of their respective state agency. Supporting these training programs is a group of national fire service organizations and private training service organizations that provide valuable components for the fire service training infrastructure.

State training agencies and state training directors are central players in the fire service training infrastructure. Training directors sometimes report to the state fire marshal in each state, and many states operate a statewide training academy. In addition, many also coordinate the training materials and curriculums used throughout the state. In some states fire departments within the state are required to mandatorily use this information and material, and in others they can voluntarily utilize it as they deem appropriate.
Independent public and private training programs that exist within the state often work in coordination with state training programs. These may include the fire service training activities of regional fire districts, large city fire departments, colleges and universities, and other public or private fire service training programs. The relationships among these entities vary significantly from state to state. For example, one state may not have a dedicated state fire training academy and instead have multiple separate but similar training programs throughout the state in conjunction with the state community college system. Elsewhere there may be a state training academy, but the large city fire departments use their own training resources and do not participate in the state programs.

On a national level, several key programs, activities and initiatives feed into the multitude of fire service training activities found at the local and state levels. An example is the National Fire Academy that assists state and local organizations with curriculum development and the national promotion of technical training content. Important baseline requirements are set by the applicable standards that manage the training content and provide a level of agreement on the applicable professional qualifications. These baseline requirements are effectively implemented through accreditation and certification processes.

Administering Qualifications for the Fire Service

Fire fighting as a profession has been recognized for centuries among various civilizations. It was not until more recently, however, that its professional status has become more distinctly defined, with the development of standardized baseline requirements and the implementation and quality assurance process that supports the use of these requirements.

Starting in 1974, NFPA’s professional qualifications standards began to appear, becoming increasingly used by state agencies responsible for fire service training in the years since. The use of national standards for fire fighter professional qualifications is a concept that political leaders have been able to widely support, and the appearance of these documents has independently coincided with a general rise in funding and recognition for state fire service training programs.217

As a result, most states utilize these standards as the defining measure of professional qualifications for fire fighters. However, certification programs in many states are voluntary, and states often do not have mandatory minimum qualifications requirements for fire service personnel.

The baseline requirements included in national standards provide a foundation for fire fighter professional qualifications, but how these are applied is equally important. To achieve consistent implementation, the processes of accreditation, certification, and degree granting have evolved. The organizations that administer these training and educational programs are known as accrediting bodies, certifying entities, and degree-granting entities, respectively. These are summarized in Figure H-4, which provides an overview of the entities that accredit, certify, and grant degrees.
As further explanation, accreditation refers to enabling oversight (within a recognized framework that measures and assures quality implementation), bestowed upon another organization. Once accredited, that organization will in turn provide certifications and/or grants degrees to individuals. The following are definitions for accredit, certification, and degree:

"Accredit. To give official authorization to or to approve a process or procedure to recognize as conforming to specific criteria, and to recognize an entity as maintaining standards appropriate to the provision of its services."\(^{220}\)

"Certification. An authoritative attestment; specifically, the issuance of a document that states that an individual has demonstrated the knowledge and skills necessary to function in a particular fire service professional field."\(^{221}\)

"Degree. A formal recognition of completion of a prescribed program of study at the postsecondary level."\(^{222}\)

Annex H References


214) “About Us”, International Fire Service Training Association”, Stillwater OK, Website: [imis-ext.osufpp.org/imispublish/Content/NavigationMenu/AboutUs/Our75YearHistory/default.htm](http://imis-ext.osufpp.org/imispublish/Content/NavigationMenu/AboutUs/Our75YearHistory/default.htm), cited: 3 August 2009


216) DELMAR CENGAGE Learning, Florence KY, Website: [www.delmarlearning.com](http://www.delmarlearning.com), cited: 17 August 2009


218) NFPA 1000, *Standard for Fire Service Professional Qualifications Accreditation and Certification Systems*, National Fire Protection Association, Quincy MA, section 3.3.2 through 3.3.6, 2006 edition


ANNEX I

WORKSHOP ATTENDEE LIST

PROFESSIONAL QUALIFICATIONS
“NOW AND BEYOND WORKSHOP”
FOR
FIRE AND EMERGENCY SERVICES

IRVING, TEXAS
13-14 APRIL 2011
<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Interest / Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephen</td>
<td>Austin</td>
<td>ProQual TC Chair (PQU-TCM)</td>
</tr>
<tr>
<td>Christina</td>
<td>Baxter</td>
<td>TSWG Rep</td>
</tr>
<tr>
<td>Glenn</td>
<td>Benarick</td>
<td>FSOSH TC Chair, Former Standards Council Member</td>
</tr>
<tr>
<td>Dave</td>
<td>Bryson</td>
<td>FICEMS/NHSTA Rep</td>
</tr>
<tr>
<td>Eddie</td>
<td>Buchannan</td>
<td>ISFSI Rep</td>
</tr>
<tr>
<td>Richard</td>
<td>Carlson</td>
<td>ProQual TC Chair (PQU-FIS)</td>
</tr>
<tr>
<td>Donald</td>
<td>Cooper</td>
<td>TC Chair (TEC-AAA, Tech Rescue)</td>
</tr>
<tr>
<td>Dave</td>
<td>Couvelha</td>
<td>IFSAC Rep designated by IFSAC</td>
</tr>
<tr>
<td>Jim</td>
<td>Crawford</td>
<td>ProQual TC Chair (PQU-FMA), former member of Standards Council</td>
</tr>
<tr>
<td>Rich</td>
<td>Duffy</td>
<td>IAFF Rep, Workshop Steering Committee</td>
</tr>
<tr>
<td>Steve</td>
<td>Edwards</td>
<td>NAFTD Rep, Workshop Steering Committee, MFRI Director</td>
</tr>
<tr>
<td>Bob</td>
<td>Finley</td>
<td>FDSOA Rep</td>
</tr>
<tr>
<td>Doug</td>
<td>Forsman</td>
<td>Former ProQual TCC Chair, NFPA Standards Council, &amp; NFPA Board</td>
</tr>
<tr>
<td>Ernest</td>
<td>Grant</td>
<td>ProQual TC Chair (PQU-PFE), Member NFPA Board of Directors</td>
</tr>
<tr>
<td>Casey</td>
<td>Grant</td>
<td>Fire Protection Research Foundation Staff</td>
</tr>
<tr>
<td>Todd</td>
<td>Haines</td>
<td>At-large fire service rep, Dallas/Fort Worth International Airport</td>
</tr>
<tr>
<td>Kirk</td>
<td>Hankins</td>
<td>IAAI Rep on TCC</td>
</tr>
<tr>
<td>Edward</td>
<td>Hawthorne</td>
<td>ProQual TC Chair (PQU-IFB)</td>
</tr>
<tr>
<td>Ken</td>
<td>Holland</td>
<td>NFPA Public Fire Protection Division</td>
</tr>
<tr>
<td>Bob</td>
<td>Ingram</td>
<td>Interagency Board (IAB) Rep</td>
</tr>
<tr>
<td>Alan</td>
<td>Joos</td>
<td>IFSAC Rep on ProQual TCC</td>
</tr>
<tr>
<td>Kirby</td>
<td>Kiefer</td>
<td>USFA NFA Representative</td>
</tr>
<tr>
<td>Jacklyn</td>
<td>Kilby-Richards</td>
<td>ProQual TC Chair (PQU-PST)</td>
</tr>
<tr>
<td>Holly</td>
<td>Mann</td>
<td>At-large fire service rep, National Integration Center Rep</td>
</tr>
<tr>
<td>Pat</td>
<td>Marlatt</td>
<td>ProQual TC Chair (PQU-FFQ), Workshop Steering Committee</td>
</tr>
<tr>
<td>Tom</td>
<td>McGowan</td>
<td>NFPA Public Fire Protection Division, and ProQual Staff Liaison</td>
</tr>
<tr>
<td>Brian</td>
<td>Merrifield</td>
<td>Fire Protection Research Foundation Staff</td>
</tr>
<tr>
<td>Jerry</td>
<td>Naylis</td>
<td>ProQual TC Chair (PQU-FIV)</td>
</tr>
<tr>
<td>Greg</td>
<td>Noll</td>
<td>TC Chair (HCZ-AAA, HazMat), Workshop Steering Committee</td>
</tr>
<tr>
<td>Jeanne</td>
<td>Pashalek</td>
<td>IAWFES Rep</td>
</tr>
<tr>
<td>Bill</td>
<td>Peterson</td>
<td>ProQual TCC Chair, Training TC Chair, Workshop Steering Committee</td>
</tr>
<tr>
<td>Fred</td>
<td>Piechota</td>
<td>ProBoard Rep, Workshop Steering Committee</td>
</tr>
<tr>
<td>Lawrence</td>
<td>Preston</td>
<td>ProQual TC Chair (PQU-FOF)</td>
</tr>
<tr>
<td>Marc</td>
<td>Revere</td>
<td>IAFC Rep (alt to Chief Chris Riley)</td>
</tr>
<tr>
<td>James</td>
<td>Ridley</td>
<td>IAFF Rep, Director of IAFF HazMat/WMD Training Dept</td>
</tr>
<tr>
<td>Bryant</td>
<td>Stiles</td>
<td>NVFC Rep, Workshop Steering Committee, Div Director KY State Fire Rescue Training</td>
</tr>
<tr>
<td>Jim</td>
<td>Stumpf</td>
<td>ProQual TC Chair (PQU-WSP)</td>
</tr>
<tr>
<td>Michael</td>
<td>Wieder</td>
<td>ProQual TC Chair (PQU-ICM)</td>
</tr>
<tr>
<td>Ken</td>
<td>Willette</td>
<td>NFPA Public Fire Protection Division</td>
</tr>
<tr>
<td>Charles</td>
<td>Wright</td>
<td>HazMat TC Member. NFPA 472 Task Group for JPRs</td>
</tr>
</tbody>
</table>
TO: Ken Willette
FROM: Linda Fuller
DATE: October 25, 2010
SUBJECT: Scope Clarification between NFPA 472 and NFPA 1001

I am transmitting to you herewith the following action of the Standards Council (October 19-20, 2010):

The Council considered the request of the North American Fire Training Directors regarding a scope clarification between NFPA 472 and NFPA 1001 and a request to develop a new Professional Qualifications document on fire service hazardous materials responders. The Council voted to defer action on the requests at this time. The NFPA Staff has informed the Council that there has been a Professional Qualifications Summit proposed that will address the jurisdictional issues between these two committees, and it is anticipated that further information will be developed that will assist the Council in addressing the jurisdictional overlap of these two documents. The Council directs NFPA Staff to report back to the Council after the Summit at the August Council meeting.

c: R. Mason (NAFTD), D. Trebisacci, K. Holland, S. VanZandt, E. Carroll, C. Peterson
TC Fire Fighter Professional Qualifications (PQU-FFQ)
TC Hazardous Materials Response Personnel (HCA-AAA)

10-10-18
MEMORANDUM

TO: Secretary, Standards Council  
FROM: Ken Willette, Division Manager Public Fire Protection  
DATE: September 27, 2010  
SUBJECT: Scope Conflict for Hazardous Materials Professional Qualifications Document

The North American Fire Training Directors (NAFTD) have been pursuing a document in the Professional Qualifications library of documents that would state in Job Performance Requirement (JPR) language the skills required for fire service hazardous materials responders at the awareness, operations, and technician level.

To this end, NAFTD, following the direction communicated to them by then Standards Council Secretary, Milosh Puchovsky, via letter on February 28, 2008, submitted a request to the Technical Committee on Hazardous Materials Response Personnel, (HCZ-AAA), that a standalone document in JPR language be considered during the revision cycle, (Annual 2012), of NFPA 472, Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents.

Secretary Puchovsky also directed the Hazardous Materials Response TC and the Technical Committee on Fire Fighter Professional Qualifications (PQU-FFQ, NFPA 1001 TC) to work on a possible solution to address the NAFTD request. A task group comprised of members of the Hazardous Materials Response TC and the Fire Fighter Professional Qualifications TC has been meeting since August 18, 2009 to create a set of Job Performance Requirements (JPRs) for fire service hazardous materials Operations Level Responders. The JPRs that have been produced by the task group will be on the Hazardous Materials Response TC agenda for discussion at a pre-ROP meeting on November 3-4, 2010.

At a recent meeting of the Fire Fighter Professional Qualifications TC, a voice vote was conducted on whether or not there should be a standalone document addressing Hazardous Materials Response or Fire Fighters within the
Professional Qualifications project or if it should be contained within NFPA 472. The result of the voice vote, as noted in the meeting minutes of the July 14th, 2010 meeting, was unanimous in that it should be a standalone document as part of the Professional Qualifications project. The committee is aware of the continued work to resolve this issue between the Hazardous Materials Response TC and the NAFTD through a collaborative task group compiled of members from each technical committee. The Fire Fighter Professional Qualifications TC has chosen to follow this issue through the process and become engaged in it at the appropriate time.

After staff review, it was concluded the proposal submitted by NAFTD was not a proposal, but was a request for a new project. On August 27, 2010, Ken Holland and I met with the chairs of the Hazardous Materials Response and Fire Fighter Professional Qualifications TC, and two representatives of the NAFTD to discuss the matter. This turned out to be a very passionate discussion, with NATFD expressing deep concern over the lack of a Professional Qualifications document addressing hazardous materials response and the chairs of each TC expressing deep concern over where a professional qualifications document would reside, and the challenges each technical committee faced in trying to be the custodian of such a document.

Consensus was reached that it was beyond the scope of either committee to answer if a professional qualifications document was needed and it was not clear as to where a professional qualifications document would reside if approved.

The NATFD, following this discussion and with staff assistance, has withdrawn its proposal to the Hazardous Materials Response TC and submitted a Request for a New Project to the Council. In a parallel track, staff has suggested the draft document prepared by the Hazardous Materials Response /Fire Fighter Professional Qualifications task group be submitted as a committee or public proposal to the Hazardous Materials Response TC, to allow that committee to process the draft and develop a public record of comment and deliberation that conforms to the NFPA process.

As these actions play out, they do not address the matter of conflicting scopes, which the Council will need to consider in moving forward. The exact wording of the TC and Document Scopes can be found in Attachment A. The best way to summarize the conflict is that none of these scopes include jurisdiction for developing JPR for fire service hazardous materials response. While the Fire Fighter Professional Qualifications TC is well versed in writing JPR language for
firefighter’s whose duties are primarily structural in nature, it does not see itself as possessing the body of knowledge necessary to develop JPR language for hazardous materials response and is concerned with including such language in 1001 would have other detrimental impacts to its use by the fire service. The Hazardous Materials Response TC is well versed in writing competencies for hazardous materials response for a wide spectrum of emergency responders, non fire service included, but it does not see itself as possessing the level of knowledge to develop JPR’s specific for the fire service, and has a strong concern that a standalone document might negatively impact the status of 472 in the greater response community.

Against this backdrop, if either TC accepted the responsibility to include JPR language addressing hazardous materials response, there is no mechanism to correlate the content between the TC’s, other than a mutual understanding. Such an understanding does not look likely.

In closing, the action of the NATFD in requesting a new project and the resulting discussion between the Hazardous Materials Response TC and Fire Fighter Professional Qualifications TC has brought to light a scope conflict issue which upon further review by staff, was found to exist between several sets of documents. A similar situation exists in regards to NFPA 600, Industrial Fire Brigades and 1081, Industrial Fire Member Professional Qualifications; NFPA 1670, Operations and Training for Technical Search and Rescue Incidents; and NFPA 1405, Land Based Firefighters Who Respond to Marine Vessel Fires and 1005, Marine Firefighting for Land- Based Firefighters. It is reasonable to expect the correlation issue will emerge at some point and the time spent by the Council in careful consideration of the NATFD request and ancillary correlation issues will be useful in establishing a precedent for future use. To assist the Council, a request has been submitted in the 2011 Public Fire Protection Budget to conduct a Summit in the first quarter of 2011 to seek input from stakeholders and work towards a consensus report that will frame the issue and identify possible solutions. The goal would be for a Summit Report to be available to the Council as soon as possible, but not earlier then April of 2011, for its review as it considers moving forward.
ATTACHMENT A: Document and TC Scopes

472 Document Scope:

1.1 Scope. 1.1.1* This standard shall identify the minimum levels of competence required by responders to emergencies involving hazardous materials/weapons of mass destruction (WMD). 1.1.2 This standard shall apply to any individual or member of any organization who responds to hazardous materials/WMD incidents. 1.1.3 This standard shall cover the competencies for awareness level personnel, operations level responders, hazardous materials technicians, incident commanders, hazardous materials officers, hazardous materials safety officers, and other specialist employees. A.1.1.1 Outside the United States, hazardous materials might be called dangerous goods (see Annex H). Weapons of mass destruction (WMD) are known by many different abbreviations and acronyms, including CBRNE (chemical, biological, radiological, nuclear, explosive), B-NICE (biological, nuclear, incendiary, chemical, explosive), COBRA (chemical, ordinance, biological, radiological agents), and NBC (nuclear, biological, chemical).

472 Committee Scope:

This Committee shall have primary responsibility for documents on the requirements for the professional competence, training, procedures, and equipment for emergency responders to hazardous materials incidents.

1001 Document Scope:

1.1 Scope. This standard identifies the minimum job performance requirements (JPRs) for career and volunteer fire fighters whose duties are primarily structural in nature.

1001 Committee Scope:

This Committee shall have primary responsibility for documents on professional competence required of fire fighters.
Good Day:


We also hereby withdraw the NFPA Document Proposal Form submitted electronically on May 14, 2010 and was logged in on May 15, 2010 by Ms. Nancy Walker.

Thank you, should there be any questions please refer them to me at the contact information below or to Director Steve Edwards at:

Steven T. Edwards, Director
Maryland Fire and Rescue Institute
University of Maryland
College Park, MD 20742
301.226.9960 Fax 301.314.1497
1.800.ASK.MFRI
sedwards@mfri.org

Thanks again...Rick Mason

PERFECTION IS OUR GOAL...EXCELLENCE WILL BE TOLERATED!

Richard A. Mason, CFO, MIFireE
Director
NH Division of Fire Standards & Training and Emergency Medical Services
33 Hazen Drive (mailing)
98 Smokey Bear Blvd. (Shipping)
Concord, New Hampshire 03305

Voice: (603) 223-4220
Fax: (603) 271-1091
Mobile: (603) 419-9459
Web site: www.nh.gov/safety/divisions/fstems (PLEASE VISIT!!)

This email and any files transmitted with it are confidential and are intended solely for the use of the individual or entity to whom they are addressed. This communication may contain material protected by law. If you are not the intended recipient or the person responsible for delivering the email to the intended recipient, be advised that you have received this email in error and that any use, dissemination, forwarding, printing, or copying of this email is strictly prohibited and may be subject to criminal prosecution. If you have received this email in error, please immediately notify me by telephone at 603-223-4220. You will be reimbursed for reasonable costs incurred in notifying us.

Please consider the environment - do you really need to print this e-mail? Thanks!
**New Project Initiation Form**

*(To be completed by proponent of new project/document)*

*Additional pages may be attached if necessary.*

<table>
<thead>
<tr>
<th>a.</th>
<th>Explain the Scope of the new project/document:</th>
</tr>
</thead>
</table>

**PLEASE SEE ATTACHED POSITION PAPER.**

<table>
<thead>
<tr>
<th>b.</th>
<th>Provide an explanation and any evidence of the need for the new project/document: The NFPA has a model for operational and training/educational standards:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>NFPA 600 Standard on Industrial Fire Brigades and NFPA 1081 Standard for Industrial Fire Brigade Member Professional Qualifications; and</strong></td>
</tr>
<tr>
<td></td>
<td><strong>NFPA 1670 Standard on Operations and Training for Technical Search and Rescue and NFPA 1006 Standard for Technical Rescuer Professional Qualifications</strong></td>
</tr>
<tr>
<td></td>
<td><em>NFPA 472 Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents</em> is an operational standard that is also used as a Pro-Qual Standard, but is not consistent with the Job Performance Objectives (JPO) format of Pro-Qual standards.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c.</th>
<th>Identify intended users of the new project/document:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>North American Fire Training Directors (NAFTD) who trains and certifies more than 1-million fire service personnel annually in both the U.S.A. and Canada who unanimously support this request at their annual meetings in both 2009 and 2010.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d.</th>
<th>Identify individuals, groups and organizations that should review and provide input on the need for the proposed new project/document; and provide contact information for these groups:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>- NAFTD, c/o Richard Mason, Past President, NH Fire Training, 33 Hazen Drive, Concord, NH 03305  O: 603-223-4220</td>
</tr>
<tr>
<td></td>
<td>- International Fire Service Accreditation Congress, c/o Tim Bradley, Past Chair, 322 Chapinoke Road, Suite 200, Raleigh, NC 27603  O: 919.661.5880</td>
</tr>
<tr>
<td></td>
<td>- ProBoard Fire Service Professional Qualifications System, Fredrick W. Pichota Jr., COA Chairman, PO Box 205, Monson, MA 01057  O: 413-287-5140</td>
</tr>
<tr>
<td></td>
<td>- Other agencies charged with the certification of fire service personnel</td>
</tr>
<tr>
<td></td>
<td>- The Fire Service Publishers (i.e. Jones &amp; Bartlett, IFSTA, etc.) would benefit with having a standard in the JPR format.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e.</th>
<th>Identify individuals, groups and organizations that will be or could be affected, either directly or indirectly, by the proposed new project/document, and what benefit they will receive by having this new document available:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>See the list above who all would be affected by this new document in a very good way...it would establish a Pro-Qual Standard to train and certify fire service personnel in Hazardous Materials response which is consistent with every other standard that we train and certify with...including being written in the JPR format.</td>
</tr>
</tbody>
</table>

The existing NFPA 472 committee would be affected as well.

<table>
<thead>
<tr>
<th>f.</th>
<th>Identify other related documents and projects on the subject both within NFPA and external to NFPA:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N/A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>g.</th>
<th>Identify the technical expertise and interest necessary to develop the project/document, and if the committee membership currently contains this expertise and interest:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A similar structure as the NFPA 472 committee, however with a smaller amount of vendors and increased amount of educators and instructors.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>h.</th>
<th>Provide an estimate on the amount of time needed to develop the new project/document:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I do not have an idea of this time frame...I would presume more than a year.</td>
</tr>
</tbody>
</table>
i. Comment on the availability of data and other information that exists or would be needed to substantiate the technical requirements and other provisions of the proposed new project/document:
   Most data needed would be from the NFPA 472 standard and committee (as adjusted in "box g.") and expertise in establishing teaching objectives and JPRs.

Please send your request to:

NFPA
Codes and Standards Administration
1 Batterymarch Park
Quincy, MA 02169
Stds_admin@nfpa.org
Rev. 10/09

Signature: [Signature]

Name: Richard A. Mason
(please print)

Affiliation: Past President & Board Member, NAFTD

The North American Fire Training Directors (NAFTD) is an international organization that promotes the common interests of providing a quality fire training and educational experience for firefighters. With membership comprised of State Fire Training Directors of each of the fifty states and all Canadian provinces and territories, NAFTD members serve as the primary point of contact for fire training and education conducted across the United States and Canada. State fire training systems are typically based in a university or a state government entity such as the state fire marshal’s office or state fire commission.

Each year the NAFTD membership provides training to over one million firefighters ranging from basic entry level fire fighting instruction to professional development courses for chief fire officers. Many NAFTD members offer certification programs in conjunction with course deliveries. In addition to coordinating and delivering their own training programs the NAFTD works in concert with the National Fire Academy (NFA) and the United States Fire Administration to provide training to over 80,000 fire service students. As the face of the National Fire Academy within each state, we maintain the quality of instruction and high standards already established by both the National Fire Academy and the state fire training system.

Recognized by other major fire service organizations and governmental entities and legislators as key stakeholders, the North American Fire Training Directors organization is often sought out as a source of input, information and resource on fire service related issues and policy. In this regard we wish to request that the National Fire Protection Association (NFPA) establish a “Standard for Fire Service Hazardous Materials Professional Qualifications.”

The proposed Standard for Fire Service Hazardous Materials Professional Qualifications would compliment and support the outstanding work of the NFPA 472 Technical Committee on NFPA 472 Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents. Unfortunately, since there is no corresponding Professional Qualification Standard with respect to hazardous materials response it is very difficult to properly and consistently test and evaluate the students who are trained NFPA 472 standards. This is the collective opinion of the North American Fire Training Directors as well as the National Professional Qualifications Board (NPQB) and the International Fire Service Accreditation Congress (IFSAC). All of these organizations have voted to support the creation of a “Standard for Fire Service Hazardous Materials Professional Qualifications.” So in essence the organization that instructs the majority of fire service students and the organizations that provide national certification are in full agreement as to the need for this standard.
The essential element that is missing from the current system regarding hazardous materials is the ability to fairly and consistently test student competence. The professional qualifications standards are built upon the application of appropriate job performance requirements (JPR’s). Job performance requirements are a written statement that describes a specific job task, lists the items necessary to complete the task, and defines measurable or observable outcomes and evaluation for a specific task. This is the method used to construct the professional qualifications series and is what is missing regarding hazardous materials. In essence, each jurisdiction is assuming or developing independent exams and evaluations to test competence to NFPA 472, so the consistency required for a national standard is nonexistent. This is the crux of the current situation and the main issue that requires a solution.

The obvious solution to this issue is the NFPA to following its standard practice and create a professional qualifications standard to provide for the appropriate JPR’s and allow all jurisdictions that test and certify firefighters to have a standard document and scope of practice to work from.

The National Fire Protection Association has a model which is utilized in at least two circumstances in its current standards:

- **NFPA 600 Standard on Industrial Fire Brigades** which has a scope of identifying the minimum requirements for organizing, operating, training, and equipping industrial fire brigades.
- **NFPA 1081 Standard for Industrial Fire Brigade Member Professional Qualifications** which has a scope of identifying job performance requirements (JPRs) necessary to perform duties as a member of an organized industrial fire brigade.
- **NFPA 1670 Standard on Operations and Training for Technical Search and Rescue Incidents** which has a scope of identifying and establishing the functional capability for conducting operations at technical search and rescue incidents.
- **NFPA 1006 Standard for Technical Rescuer Professional Qualifications** which has a scope of establishing the minimum requirements necessary for fire service and other emergency response personnel who perform technical rescue operations.

The common theme is having an operational standard which would have a sister professional qualifications standard. This seems to both make sense and has proven to be very successful. The Pro-Board in its mission relating to accreditation “accredits fire service training agencies that use the National Fire Protection Association’s professional qualification standards.”
This is true except when relating to the professional qualification of hazardous materials/weapons of mass destruction standards:

- **NFPA 472 Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents, and NFPA 473 Standard for Competencies of EMS Personnel responding to Hazardous Materials/Weapons of Mass destruction Incident**, both have a scope of identifying the minimum level of competence required by responders to emergencies involving hazardous materials and weapons of mass destruction. These are not written in the typical JPR format utilized in the Professional Qualifications Standards developed under the guidance of the Standards Council.

The purpose of this communication is to initiate the process to develop a professional qualification standard (in the 1000 series of the NFPA Codes) that would become a sister standard to NFPA 472 and NFPA 473, written in the JPR format as the other related standards. This would include the levels of hazardous materials awareness, operations, and technician. The scope of this standard would be solely intended for the fire service and not other audiences that may use NFPA 472.

NAFTD would diligently work with a Task Force under your supervision including members of the NFPA 472 & NFPA 1001 committees to address this issue. NAFTD feels that this would bring continuity to the standards making process, which we feel would eliminate the one exception for accreditation to the professional standards, and that this enhancement would be easier to follow for our constituents…the approximate one million firefighters we train and certify every year.

Our Board and Membership stands ready to assist in any manner possible through this process. Thank you for your time and actions regarding this request.

Sincerely,

Eriks Gabliks, President
North American Fire Training Directors
Minutes

JPR Working Group
MFRI
November 12, 2009

1. The meeting was called to order at 10:00 a.m. on November 12, 2009.

2. Self-introductions were made. Those in attendance were Steve Edwards, Kenn Fontenot, Bruce Kelly, Pat Marlatt, Leslie Miller, Greg Noll, Larry Preston, Glen Rudner, Chris Tracy, and NFPA staff Ken Holland and Dave Trebisacci.

3. The Working Group established Greg Noll and Pat Marlatt as co-chairs.

4. The Working Group continued its review of the draft of goals and proposed JPRs for the Awareness and Operations Levels of NFPA 472 from Leslie Miller.

5. The Working Group established the following official statements:

   - The NFPA 472, 1001 and 1021 technical committees are jointly developing JPRs to meet the requirements of NFPA 472 Operations Level for the fire service

   - A draft of the document will be shared for review with the appropriate technical committees in the second quarter of 2010

6. The next meeting of the Working Group will be via web conference on December 8, 2009 at 11:00 a.m. ET. Dave Trebisacci and Leslie Miller will coordinate this meeting, and send participant instructions to the Working Group prior to the meeting.

7. The meeting was adjourned at 3:00 p.m. on November 12, 2009.

Respectfully submitted by Dave Trebisacci, NFPA Staff
NFPA® 472 Awareness, Ops Core, and Mission-Specific PPE and Product Control Proposed JPRs

Awareness Level – Proposed JPRs

**Awareness Level JPR #1**

Recognize indicators of hazardous materials/WMD incidents, given a hazardous materials/WMD incident, reporting procedures, and an assignment, so that the correct nature of the incident and materials involved are identified, correct information is transmitted to the appropriate authority, and the area is secured.

(A) **Requisite Knowledge.** * Occupancy and locations, container shapes, placards and labels, markings and colors, shipping documents and safety data sheets, sensory clues indicating the presence of hazardous materials/WMD; procedures for reporting the potential presence of hazardous materials/WMD; and methods to secure the area. *add annex item including indicators of terrorist attacks and other potentials

(B) **Requisite Skills.** Ability to recognize the potential presence of hazardous materials/WMD, transmit that information to their supervisor, and secure the area.

For Committee Reference Only:

**OSHA says Awareness-level responders must have:**
- The ability to recognize the presence of hazardous substances in an emergency. 1910.120(q)(6)(i)(C)
- The ability to identify the hazardous substances, if possible. 1910.120(q)(6)(i)(D)
- An understanding of the role of the first responder awareness individual in the employer’s emergency response plan including site security and control and the U.S. Department of Transportation’s Emergency Response Guidebook. 1910.120(q)(6)(i)(E)
- The ability to realize the need for additional resources, and to make appropriate notifications to the communication center. 1910.120(q)(6)(i)(F)

**NFPA® 472 says that Awareness-level personnel must be able to:**
- Detect the presence of hazardous materials/WMD
- Survey a hazardous materials/WMD incident from a safe location to identify the name, UN/NA identification number, type of placard, or other distinctive marking applied for the hazardous materials/WMD involved
- Implement actions consistent with the emergency response plan, the standard operating procedures, and the current edition of the Emergency Response Guidebook
- Initiate the notification process
Awareness Level JPR #2

Collect information about the materials involved in a potential hazardous materials incident, given a hazardous materials/WMD incident, UN DOT hazard class information, a safety data sheet (SDS), the Emergency Response Guidebook, and an assignment, so that the material involved is correctly identified, and potential hazards are identified.

(A) **Requisite Knowledge.** Awareness and use of the Emergency Response Guidebook, safety data sheets, and UN DOT hazard class information.

(B) **Requisite Skills.** Ability to collect information about potential hazardous materials and use reference documents to identify the materials, their hazards, and recommended protective actions.

For Committee Reference Only

**OSHA says Awareness-level responders must have:**
- An understanding of what hazardous substances are, and the risks associated with them in an incident. 1910.120(q)(6)(i)(A)
- An understanding of the potential outcomes associated with an emergency created when hazardous substances are present. 1910.120(q)(6)(i)(B)

**NFPA® 472 says that Awareness-level personnel must be able to:**
- Collect hazard information from the current edition of the Emergency Response Guidebook
- Initiate protective actions

Operations-Level Core Competencies – Proposed JPRs

Operations-Level Core JPR #1

Collect basic hazard and risk information, given a hazardous materials/WMD incident, safety data sheet, Emergency Response Guidebook, information provided by CHEMTREC/CANUTEC/SETIQ, and an assignment, so that the containers and materials involved are correctly identified, the likely behavior and potential harm of the material is recognized.

(A) **Requisite Knowledge.** Knowledge of the behavior of hazardous materials, knowledge of how hazardous materials cause harm, knowledge of how to collect hazard and response information from safety data sheets; CHEMTREC/CANUTEC/SETIQ; local, state, and federal authorities; and shipper/manufacturer contacts, and use of the Emergency Response Guidebook to estimate the scope of the incident.
(B) **Requisite Skills.** Ability to identify the containers and materials involved, determine if these materials have been released, recognize their potential behavior and harm, and collect hazard and response information from safety data sheets; CHEMTREC/CANUTEC/SETIQ; local, state, and federal authorities; and shipper/manufacturer contacts.

For Committee Reference Only

**OSHA says Ops-level responders must have:**
- An understanding of basic hazardous materials terms. 1910.120(q)(6)(ii)(C)
- Knowledge of the basic hazard and risk assessment techniques. 1910.120(q)(6)(ii)(A)

**NFPA® 472 says that Ops-level responders must be able to:**
- Collect hazard and response information from MSDS; CHEMTREC/CANUTEC/SETIQ; local, state, and federal authorities; and shipper/manufacturer contacts
- Survey a hazardous materials/WMD incident to identify the containers and materials involved, determine whether hazardous materials/WMD have been released, and evaluate the surrounding conditions
- Predict the likely behavior of a hazardous material/WMD and its container
- Estimate the potential harm at a hazardous materials/WMD incident

---

**Operations-Level Core JPR #2**

Perform scene control operations, given a hazardous materials/WMD incident, the tools and equipment readily available to engine companies, standard operating procedures, and an assignment, so that hazard control zones are established, nearby persons are protected, appropriate levels of PPE are used, safety procedures are followed, and evidence is preserved.

(A) **Requisite Knowledge.** Knowledge of scene control operations, hazard control zones, safety procedures, standard operating procedures, levels of PPE, measures to protect the public (evacuation, shelter-in-place), and preservation of criminal evidence.

(B) **Requisite Skills.** Ability to perform scene control operations, use assigned tools and equipment, follow safety procedures, and preserve evidence.

For Committee Reference Only

**OSHA says Ops-level responders must:**
- Know how to perform basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit.

**NFPA® 472 says that Ops-level responders must be able to:**
- Describe the response objectives for the hazardous materials/WMD incident
- Describe the response options available for each objective
- Determine whether the personal protective equipment provided is appropriate for implementing each option.
• Develop a plan of action including safety considerations
• Establish means of evidence preservation where criminal or terrorist acts are suspected
• Initiate an incident command system (ICS) for hazardous materials/WMD incidents
• Perform tasks assigned as identified in the incident action plan
• Evaluate the status of the actions taken in accomplishing the response objectives
• Communicate the status of the planned response

Operations-Level Core JPR #3

Perform emergency decontamination procedures at a hazardous material incident, given an individual contaminated by a hazardous material that can be decontaminated by firefighters in firefighting PPE with equipment readily available to engine companies, standard operating procedures, and an assignment, so that exposures are protected, hazards are avoided, and the victim is decontaminated.

(A) Requisite Knowledge. Knowledge of contamination and decontamination, tools and equipment used for emergency decontamination, standard operating procedures, and emergency decontamination procedures.

(B) Requisite Skills. Ability to perform emergency decontamination.

For Committee Reference Only

OSHA says Ops-level responders must:
• Know how to implement basic decontamination procedures. 1910.120(q)(6)(ii)(F)

NFPA® 472 says that Ops-level responders must be able to:
• Describe emergency decontamination procedure
• Establish and enforce scene control procedures including control zones, emergency decontamination, and communications
• Demonstrate emergency decontamination

Operations-Level Mission-Specific Competencies – Proposed JPRs

Mission-Specific Personal Protective Equipment JPR

Perform a mission specific task, given the personal protective equipment provided by the AHJ, a hazardous material/WMD incident, standard operating procedures, and a site safety and control plan, so that proper personal protective equipment is selected for the task, donned, worked in,
doffed, and the incident terminated by completing the reports and documentation pertaining to personal protective equipment.

(A) Requisite Knowledge. Knowledge of PPE including respiratory protection, structural firefighter protective clothing, and chemical protective clothing; knowledge of how to select and use the proper personal protective equipment provided by the AHJ; knowledge of the limitations of PPE; knowledge of standard operating procedures, site safety and control plans, and termination procedures.

(B) Requisite Skills. Ability to don, work in, and doff the PPE provided by the AHJ* and read site safety and control plans.

*Appendix item — This is determined by the AHJ who must provide PPE and training for what is used; this can be just structural firefighting PPE and/or different levels of CPC

For Committee Reference Only

OSHA says Ops-level responders must:
- Know how to select and use proper personal protective equipment provided to the firefigher operational level. 1910.120(q)(6)(ii)(B)
- An understanding of the relevant standard operating procedures and termination procedures. 1910.120(q)(6)(ii)(f)

NFPA® 472 says that Ops-level responders must be able to:
- Plan a response within the capabilities of personal protective equipment provided by the AHJ in order to perform mission specific tasks assigned
- Implement the planned response consistent with the standard operating procedures and site safety and control plan by donning, working in, and doffing personal protective equipment provided by the AHJ
- Terminate the incident by completing the reports and documentation pertaining to personal protective equipment

Mission-Specific Product Control JPR #1

Perform product control operations at a hazardous material incident, given an uncontrolled release of a hazardous materials product that can be controlled by firefighters in firefighting PPE, with tools and equipment readily available to engine companies, standard operating procedures, and an assignment, so that exposures are protected, hazards are avoided and/or minimized, and the product is controlled.

(A) Requisite Knowledge. Knowledge of product control operations including absorption, adsorption, damming, diking, dilution, diversion, retention, remote valve shutoff, and vapor dispersion; knowledge of standard operating procedures; and knowledge of tools and equipment for product control.
(B) **Requisite Skills.** Ability to perform product control procedures determined by the AHJ.

For Committee Reference Only

*Note: JPRs typically avoid redundancy, so items like following SOPs and site safety plans will not be repeated. 5.1.1 is general SOP competency.*

**OSHA says Ops-level responders must:**
- Know how to perform basic control, containment and/or confinement operations within the capabilities of the resources and personal protective equipment available with their unit. 1910.120(q)(6)(ii)(D)

**NFPA® 472 says that Ops-level responders must be able to:**
- Describe the control options available to the operations level responder.
- Implement the planned response to a hazardous materials/WMD incident.

---

**Mission-Specific Product Control JPR #2**

Perform product control operations at a flammable liquid spill/fire, given firefighting PPE, an appropriate extinguishing agent, with tools and equipment readily available to engine companies, an emergency response plan and/or standard operating procedures, and an assignment, so that hazards are avoided and/or minimized, the proper application technique is utilized, exposures are protected, and the spill/fire is controlled or extinguished.

(A) **Requisite Knowledge.** Knowledge of how to perform product control operations at a flammable liquid spill/fire.

(B) **Requisite Skills.** Ability to apply class B foam to a flammable liquid spill or fire.

For Committee Reference Only

*Note: Flammable liquid fires and foam are covered extensively in 1001 Firefighter I, 6.3.1.*

**NFPA® 472 says that Ops-level responders must be able to:**
- Describe the control options available for flammable liquid incidents.
- Implement the planned response to a hazardous materials/WMD incident.

---

**Mission-Specific Product Control JPR #3**

Perform product control operations at a flammable gas release/fire, given firefighting PPE, with tools and equipment readily available to engine companies, an emergency response plan and/or
standard operating procedures, and an assignment, so that hazards are avoided and/or minimized, the proper control technique is utilized, exposures are protected, and the release/fire is controlled.

**(A) Requisite Knowledge.** Knowledge of how to perform product control operations at a flammable gas release/fire.

**(B) Requisite Skills.** Ability to perform product control procedures at a flammable gas release/fire.

---

**For Committee Reference Only**

*Note: Flammable gas fires are covered extensively in 1001 Firefighter II, 6.3.3*

NFPA® 472 says that Ops-level responders must be able to:

- Describe the control options available for flammable gas incidents.
- Implement the planned response to a hazardous materials/WMD incident.
Minutes

JPR Working Group
Quincy, MA
August 18, 2009

1. The meeting was called to order at 10:00 a.m. on August 18, 2009.

2. Self-introductions were made. Those in attendance were Kenn Fontenot, Gordon Henderson, Pat Marlatt, Leslie Miller, Greg Noll, Chris Tracy and NFPA staff Ken Holland and Dave Trebisacci.

3. NFPA 472 Chair Greg Noll provided a historical perspective from his technical committee.

4. NFPA 1001 Chair Pat Marlatt provided the perspective from his technical committee.

5. NFPA 472 TC member Leslie Miller introduced her draft of goals and proposed JPRs for the Operations Level of NFPA 472. The Working Group reviewed this document and made changes to the JPRs (please see attached updated document).

6. During the Working Group’s review of the draft, the following topics were discussed:

   - OSHA has ruled that fire fighters (FF I) must be trained to the Operations Level of NFPA 472
   - A new section of NFPA 472 should be created to contain the JPRs for the Operations Level for the fire service
   - The Working Group should ultimately submit their draft JPRs in the form of a public proposal to the NFPA 472 TC
   - Work should continue on revising the JPRs in the draft with participation and input from the Technical Committee on Fire Officer Professional Qualifications (NFPA 1021)
• Requisite knowledge, requisite skills and gap identification should also be part of the overall JPR review

7. Going forward, the Working Group outlined the following items:

• Ken Holland, Kenn Fontenot, Gordon Henderson and Pat Marlatt will contact the NFPA 1021 TC to identify potential Working Group members

• Working Group members who will be representing NFPA 1021 should be submitted to Ken Holland and Dave Trebisacci by September 15, 2009

• After NFPA 1021 members have been identified, Dave Trebisacci will canvass the Working Group for availability for a one-day face-to-face meeting in November or December of this year.

8. The meeting was adjourned at 3:00 p.m. on August 18, 2009.

Respectfully submitted by Dave Trebisacci, NFPA Staff
February 28, 2008

Mr. Richard A. Mason  
President  
North American Fire Training Directors  
PO Box 80065  
Washington, DC 20018

Mr. Mason,

This letter is in response to your correspondence of February 1, 2008 to James Pauley, Chair of NFPA’s Standards Council in which you request that NFPA initiate the process to develop a professional qualification standard (in the “1000 series” of the NFPA Codes) that would become a companion standard to NFPA 472, Standard on Competence of Responders to Hazardous Materials / Weapons of Mass Destruction Incidents, and NFPA 473, Standard for Competencies of EMS Personnel Responding to Hazardous Materials / Weapons of Mass Destruction Incidents. You further request the new “1000 series” standard be written in the Job Performance Requirements (JPR) format as are other related NFPA standards in the “1000 series”. You also seem to suggest that NFPA 472 and NFPA 473 be re-written as operations standards, with the professional qualifications provisions currently in these two documents being moved to the new “1000 series” document.

Within the context of NFPA codes and standards making process, your request first needs to be considered and acted upon by the Technical Committee (TC) on Hazardous Materials Response Personnel which has been assigned, by the Standards Council, primary responsibility for documents on the requirements for the professional competence, training, procedures and equipment for emergency responders to hazardous materials incidents.

As the Standards Council has already assigned the subject of your request to a Technical Committee Project, it is my experience that the Council would not act on your request until it is first considered and acted upon by the responsible technical committee. If after consideration by the responsible technical committee you are unsatisfied with the proposed course of action, you could file an appeal with the Standards Council.

I suggest that you submit a formal proposal to both NFPA 472 and NFPA 473 which fully describes and substantiates your proposed changes to these documents as well as any recommendations and the need for the establishment of new documents. NFPA 472
and NFPA 473 are both in the Annual 2012 revision cycle which has a public proposal closing date of November 23, 2010. Public proposal forms are available on NFPA’s website (www.nfpa.org) under the codes and standards tab.

You may also wish to seek the input from the Technical Correlating Committee on Professional Qualifications which has responsibility for the “1000 series” documents on professional qualifications. The Standards Council has assigned this committee primary responsibility for the management of the NFPA Professional Qualifications Project and documents related to professional qualifications for fire service, public safety and related personnel.

I further suggest that you contact David Trebisacci, who is the NFPA staff liaison to the TC on Hazardous Materials Response Personnel, and Frank Florence, who is the NFPA staff liaison for the TC on Professional Qualifications to obtain further assistance in obtaining input from these committees on this matter. I have copied both staff liaisons on this response.

I hope you find this information helpful. I attempted to reach you by phone to discuss this matter but was unsuccessful in reaching you. Should you have any questions concerning my response or on NFPA’s codes and standards development activities, please do not hesitate to contact me.

Sincerely,

Milosh Puchovsky, P.E.
Assistant Vice President Codes & Standards Administration and
Secretary to NFPA Standards Council

c: F. Florence, Staff Liaison to TC on Professional Qualifications
L. Nisbet, Recording Secretary of NFPA Standards Council
J. Pauley, Chair of NFPA Standards Council
C. Peterson, Director of Public Fire Protection
J. Shannon, NFPA President and Chief Executive Officer
D. Trebisacci, Staff Liaison to TC on Hazardous Materials Response Personnel
February 1, 2008

Mr. James T. Pauley, Chairman
NFPA Standards Council
1 Battermarch Park
Quincy, MA 02169-7471

Dear Mr. Pauley:

On January 15, 2008 the Board of Directors for both the North American Fire Training Directors (NAFTD) and the National Board on Fire Service Professional Qualifications (Pro-Board) met in College Park, Maryland. This meeting was co-chaired by Pro-Board Chair Jim Estepp and me. This meeting was a continuation of one held last year. We have found that it is essential that the NAFTD, who represents the principal deliverers of fire service training following the Professional Qualification Standards, take a proactive partnership role in working on fire service issues and concerns with our allied entities. These meetings have confirmed that we are very strong allies for each other in the advancement of emergency services training and certification in the United States and Canada.

The National Fire Protection Association has a model which is utilized in at least two occasions in its standards:

- **NFPA 600 Standard on Industrial Fire Brigades** which has a scope of identifying the minimum requirements for organizing, operating, training, and equipping industrial fire brigades.

- **NFPA 1081 Standard for Industrial Fire Brigade Member Professional Qualifications** which has a scope of identifying job performance requirements (JPRs) necessary to perform duties as a member of an organized industrial fire brigade.

And

- **NFPA 1670 Standard on Operations and Training for Technical Search and Rescue Incidents** which has a scope of identifying and establishing the functional capability for conducting operations at technical search and rescue incidents.

- **NFPA 1006 Standard for Technical Rescuer Professional Qualifications** which has a scope of establishing the minimum requirements necessary for fire service and other emergency response personnel who perform technical rescue operations.

The common theme is having an operational standard which would have a sister professional qualifications standard. This seems to both make sense and it works! The Pro-Board in its mission relating to accreditation “accredits fire service training agencies that use the National Fire Protection Association’s professional qualification standards.”
This is true except when relating to the professional qualification of hazardous materials/weapons of mass destruction standards:

- **NFPA 472 Competence of Responders to Hazardous Materials/Weapons of Mass destruction Incidents, and NFPA 473 Standard for Competencies of EMS Personnel responding to Hazardous Materials/Weapons of Mass destruction Incident, both have a scope of identifying the minimum level of competence required by responders to emergencies involving hazardous materials and weapons of mass destruction. These are not written in the typical JPR format utilized in the Professional Qualifications Standards developed under the guidance of the Standards Council.**

The purpose of this communication is to initiate the process to develop a professional qualification standard (in the 1000 series of the NFPA Codes) that would become a sister standard to NFPA 472 and NFPA 473, written in the JPR format as the other related standards. NAFTD would gladly work with a Task Force under your supervision of members of the 472 & 1001 committees.

We feel that this would bring continuity to the standards making process, which we feel would eliminate the one exception for accreditation to the professional standards, and that this enhancement would be easier to follow for our constituents...the approximate one-million firefighters we teach and certify every year.

Our Board and Membership stands ready to assist in any manner possible through this process. Thank you for your time and actions regarding this request.

Sincerely,

Richard A. Mason
President
North American Fire Training Directors

CC: James Shannon, President/CEO NFPA
    Jim Estep, Chair, Pro-Board
    Tim Bradley, IFSAC Board of Governor
September 19th, 2011

Mr. Glenn Benarick
211 Winged Elm Circle
Aiken, SC, 29803

Amy Cronin
Standards Council Secretary
National Fire Protection Association
1 Batterymarch Park
Quincy, MA 02169

Dear Ms. Spencer-Cronin:

As Technical Committee on Fire Service and Occupational Safety and Health (FIX-AAA) Chairperson, I am requesting that the NFPA Standards Council consider the following change in the Committee Scope with the associated justification.

**Technical Committee Fire Service Occupational Safety and Health Committee Scope:** This Committee shall have primary responsibility for documents on occupational safety and health in the working environment of the fire service. The Committee shall also have responsibility for documents related to medical requirements for fire fighters, and the professional qualifications for Fire Department Safety Officer.

**Justification:** The committee is requesting the change or expansion in the committee scope so that NFPA 1521, Standard for Fire Department Safety Officer, can be re-written and converted into the JPR format that is used in the Professional Qualifications Project. This request comes out of the Pro-Qual Workshop that was held back in April 2011 in Dallas and the anticipated outcome if this request is approved is to ensure that the existing situation between NFPA 1001 and NFPA 472 is not repeated within this technical committee. NFPA 1521 is a document that certifications are issued against to those candidates who have shown to be competent to this standard. The concern is that where this document is not written in JPR format, as all of the Professional Qualifications documents are, some of the same issues that have come up against NFPA 472, which is also not in JPR format, might also arise with NFPA 1521 since certifications are offered by both the Pro-
Board and IFSAC. So in an effort to be proactive, and addressing some of the outcomes of the Pro-Qual Workshop that was held in April 2011 in Dallas, the committee is requesting the expansion of the committee scope so that NFPA 1521 can be re-written in JPR format but remain under the responsibility of this committee. It is also the intention that this new JPR document would be put through review of the Professional Qualifications TCC for correlations issues or concerns to be addressed.

Your consideration is on this matter is appreciated.

Respectfully submitted,

Glenn Benarick
Ken,

The revised scope looks fine to me. I suggest that in the "Justification" area you mention that NFPA 1521 would be put through the same process as other Pro Qual documents for correlation by the Pro Qual TCC. If they agree on this one then we can do the same with NFPA 1405 and the Fire Service Training TC.

Bill

----- Original Message -----  
From: Holland, Kendall  
To: wppfdtx@aol.com  
Cc: McGowan, Thomas  
Sent: Tuesday, September 20, 2011 9:38 AM  
Subject: FD Safety Officer

Hey Bill,

I was wondering if you could do me a favor? I have attached a proposed scope change for the FSOSH TC for 1521, Fire Department Safety Officer, so that they can convert/write JPR’s for the existing 1521 so that the next edition will be in JPR format. I think the letter/request that has to go to the standards council is pretty self explanatory but what I am looking for is just and email response that says that you, as the Pro-Qual TC chair, doesn’t have or see any problems or issues with this. If you recall there was a TC created a little while ago for just this, to create a JPR document for FD Safety Officer with Wes Kitchell as chair, but was dissolved due to the lack of getting a balanced TC seated. What was doing to happen, as I understood it, was that 1521 would go away when this TC developed the pro-qual document for FD Safety Officer. Since that didn’t happen, Glenn Benarick at the pro-qual summit suggested that we do this with 1521 so as we do not have a repeat of the 472/1001 issue with regards to certifications being issued against a non-JPR document, the existing 1521. The letter is just looking for approval from the SC for the expansion of the scope, but we can work together later on with how to make sure the JPR’s are done correctly, possibly through task group work, but we can’t begin that until we get the scope changed.

So if you wouldn’t mind taking a look at this letter and if you are OK with is can you just send back an email stating that.
If you have any questions feel free to call me in my office.

Thanks Bill.

Ken Holland FF/EMT-P, BA, MBA/PA  
National Fire Protection Association  
Public Fire Protection  
1 Batterymarch Park  
Quincy, Ma.  
617-984-7490- Office  
617-594-1514- Cell

**Important Notice:** This correspondence is not a Formal Interpretation issued pursuant to NFPA Regulations. Any opinion expressed is the personal opinion of the author and does not necessarily represent the official position of the NFPA or its Technical Committees. In addition, this correspondence is neither intended, nor should it be relied upon, to provide professional consultation or services.
November 17, 2009

Chief Michael J. McGovern
Lakewood Fire Department
10928 Pacific Highway SW
Lakewood, WA  98499

Dear Chief McGovern:

I am transmitting to you herewith the following action of the Standards Council (October 27, 2009):

The Council considered a request from the Technical Correlating Committee on Professional Qualifications to disband the Fire Department Safety Technician Professional Qualifications Committee due to the inability to formulate a suitable start-up roster. After reviewing and considering all the information available to it, the Council voted to disband the Technical Committee on Fire Department Safety Technician Professional Qualifications.

Very truly yours,

Linda Fuller, Manager
Codes and Standards Administration

c:  W. Kitchel, K. Holland, S. VanZandt, E. Carroll , C. Peterson
     Interested Parties
     TCC Professional Qualifications

09-10-26-e
Staff Note: We received a request from the Technical Correlating Committee on Professional Qualifications to disband the Fire Department Safety Technician Professional Qualifications Committee. The Committee was approved by the Standards Council at the October, 2005 Standards Council Meeting. Since it has been approved by the Council we have advertised for members in NFPA News. To date we have received 15 membership applications in the following interest categories: SE – 1, U – 10, E – 1, L – 2 The only organization that we heard from was Fire Department Safety Officers Assn.
TO: National Fire Protection Association
   Standards Council

FR: Mike McGovern, Chairperson
    Technical Correlating Committee on Fire Fighter Professional Qualifications

RE: Rescinding Approval for Fire Department Safety Technician Professional Qualification Project

21 June 2009

At the June 7, 2009 meeting of the Technical Correlating Committee for Fire Fighter Professional Qualifications members voted unanimously to recommend the Standards Council rescind its earlier approval for a Fire Department Safety Technician Professional Qualification project. The TCC has applied due diligence over the past year an attempt to secure, in line with NFPA committee membership requirements, a varied population for the proposed committee. To date, a limited number of applications have been received and a truly balanced Technical Committee cannot be achieved using these applicants. Members of the TCC have unsuccessfully endeavored over the past year to solicit applicants for the committee representing a variety of fire service organizations that could be affected by the proposed standard.

The Technical Correlating Committee does not believe there is sufficient interest to proceed with the project. Since NFPA 1582 was to be withdrawn upon development of the proposed standard, the TCC further recommends that the Fire Department Safety Technician responsibility be retained by the 1500 Committee.

tccscltr609
Agenda Item 05-10-10

At the July 2005 meeting, the Council considered the request of the Professional Qualifications Technical Correlating Committee to establish a new Professional Qualifications Committee on the Fire Department Safety Technician. The Council voted to publish a notice of receipt of the request soliciting opinions on the need for the project, information on resources on the subject matter, the names of those interested in participating on the Committee (if established), and the names of other organizations actively involved with this subject matter. No public responses were received.

Minute Item 05-10-10

It was voted to approve the request of the Professional Qualifications Technical Correlating Committee to establish a new Professional Qualifications Committee on the Fire Department Safety Technician.
Print and CD-ROM versions can be ordered by filling out the coupon on the previous page and returning it to NFPA. Under the NFPA codes- and standards-making process, recipients of the Report on Proposals have a period of time in which to make comments on the Report on Proposals. This comment period ended March 25, 2005. The Report on Comments will contain all comments received on the Report on Proposals, together with the responses of the respective committees.

Standards Council News

Proposed Hydrogen Technology Correlating Committee

The Standards Council has received a request to establish a new Hydrogen Technology Project. This project will address the safe storage, use, and handling of Hydrogen. Currently, the topic of Hydrogen is addressed in a range of various NFPA projects, and a need is rapidly emerging to consolidate and coordinate these existing requirements, based on the evolving use of Hydrogen in today’s mainstream society, into one document.

To address this need for consolidation and coordination, a Technical Correlating Committee (TCC) for Hydrogen Technologies is being proposed. The Technical Committees that currently cover various aspects of this topic would continue to have primary responsibility for their subject areas and their existing documents. The proposed Technical Correlating Committee would then be comprised of representatives of the existing affected NFPA Technical Committees and others as appropriate to consolidate and coordinate the material into one cohesive code mainly through the use of extracts from the existing documents. The Standards Council, therefore, is soliciting input from the affected committees and the public on this proposed new project.

Anyone interested in commenting on this proposed project is invited to do so in writing. Please include information on resources on the subject matter, the names of those interested in participating on the Committee (if established), the names of other organizations actively involved with this subject, and why there is a need for such a project. Responses should be sent to Codes and Standards Administration, NFPA, One Batterymarch Park, Quincy, MA 02169-7471, by October 1, 2005. For anyone that requires additional information on the proposed project, please contact NFPA Codes and Standards Administration.

Formal Interpretations Issued

The following Formal Interpretations have been issued. Copies of all FT’s (if not published here) are available from Standards Administration, NFPA, One Batterymarch Park, Quincy, MA 02169-7471, or by calling 617-984-7248.

NFPA 10-2002
Standard for Portable Fire Extinguishers
Reference: 4.3.2 and 5.7.1
F.l. No.: 10-05-1

Background: NFPA 10, subsection 4.3.2 requires that fire extinguishers provided for the protection of cooking appliances that use combustible cooking media (vegetable or animal oils and fats) be listed and labeled for Class K fires. Subsection 5.7.1 requires class K fire extinguishers be provided for hazards where there is a potential for fires involving combustible cooking media (vegetable or animal oils and fats). Based on these two requirements, there is confusion with regard to requiring class K extinguishers for stove top cooking.

Question No. 1: Do subsections 4.3.2 and 5.7.1 require class K extinguishers to be installed for commercial fryers employing combustible cooking media (vegetable or animal oils and fats)?

Answer: Yes.

Question No. 2: Do subsections 4.3.2 and 5.7.1 require class K extinguishers to be installed for a griddle?

Answer: Yes.

Question No. 3: Do subsections 4.3.2 and 5.7.1 require class K extinguishers to be installed for a stove top frying pan?

Answer: Yes.

New Project Proposed

The Standards Council has also received a request from the Professional Qualifications Technical Correlating Committee to establish a new Professional Qualifications Committee on the Fire Department Safety Technician. This Committee plans to cover documents that will address the minimum qualifications necessary to fulfill the position described in NFPA 1500 and NFPA 1521.

Anyone interested in commenting on this proposed project is invited to do so in writing. Please include information on resources on the subject matter, the names of those interested in participating.

Call for Members

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. This Committee is responsible for NFPA 150, Standard on Fire Safety in Racetrack Stables.

The Committee on Automatic Sprinklers - Foam-Water Sprinklers is seeking members in the following interest categories: labor, enforcer, manufacturer, installer/maintainer, and consumer.
August 18, 2005

Codes and Standards Administration
NFPA
1 Batterymarch Park
Quincy, MA 02169-7471

Dear Standards Council Members,

For the past decade the Fire Department Safety Officers Association has petitioned and communicated with NFPA requesting the establishment of a Professional Qualifications Technical Committee for fire service safety professionals. Along with the establishment of a ProQual TCC we have also supported the writing and adoption of Professional Qualification Standards for fire service safety professionals. NFPA’s response over the past decade has always been safety is a function of the company officer and not a job within the fire department.

The 6,980 members who have passed through our doors since 1988 along with the 1,593 FDSOA certified Health and Safety Officer and Incident Safety Officer would disagree with you. The time has come for NFPA to recognize the fire service safety professional as a job position within the fire department with its own ProQual Standard and not a function to be sub divided amongst numerous existing NFPA standards. Once again the Fire Department Safety Officers Association is asking the Standards Council to establish a Professional Qualifications Technical Committee for Fire Department Safety Technician.

In closing if a ProQual TCC is established for Fire Department Safety Technician I hope that FDSOA will have a seat, along with other fire service organizations, on the new committee to write the new standard for safety technician.

Respectfully,

Daniel L. Gregory
Chairman of the Board
June 7, 2005

Casey Grant, Secretary  
NFPA Standards Council  
1 Batterymarch  
Quincy, MA 02269-9101  

Dear Mr. Grant:

On May 17, 2005, the Technical Correlating Committee on Professional Qualifications voted to recommend to the Standards Council that a new project be established for Fire Department Safety Technician. This document will address the minimum qualifications necessary to fulfill the position described in NFPA 1500 and NFPA 1521.

This recommendation has been under consideration and development since December 14, 1998, when the Fire Department Safety Officer Association (FDSOA) submitted a request to the Standards Council to establish a stand-alone professional qualifications document for Fire Department Safety Officer. The subject of where best to place the job description and job performance requirements was thoroughly debated. In May 2001, the TCC assigned the project to the Fire Officer Committee (NFPA 1021). The 1021 Committee felt it was unable to properly address the project until a job inventory/task analysis was completed. This task is underway but not complete.

There currently exists an Incident Safety Officer curriculum developed by the Fire Department Safety Officer Association (FDSOA). This not-for-profit membership/education association has been certifying Safety Officers using NFPA 1521, Standard for Fire Department Safety Officer since 1999 under the accreditation of the National Board on Fire Service Professional Qualifications System. To date, there are 599 individuals certified as Incident Safety Officers.

Based on the information gathered through the Professional Qualifications New Project Evaluation Process, the TCC now recommends that a standalone standard be developed for Safety Technician. The TCC is recommending that the new standard use the job title “safety technician” instead of “safety officer” as not all safety technicians are fire officers and not all officers are safety technicians. In addition to recommending establishing the new Professional Qualification Standard, the TCC has proposed changes to NFPA 1500 and NFPA 1521 to change “safety officer” to “safety technician” throughout the standards. The motion was made by Chief Doug Forsman and seconded by Chief Bill Peterson to establish the standard, rename the position and address the amendments to 1500 and 1521.
Currently 1521 is in cycle and a task group meeting on this subject will be held in July 2005. At the suggestion of the Staff Liaison to the TCC, Frank Florence and the Staff Liaison to the 1521 Committee, Carl Peterson, I contacted Glen Benarick, Chairman of the 1521 Committee regarding the TCC actions. Mr. Benarick agrees that the best course of action is that the 1521 task group and committee continue to meet and complete their project while a professional qualification standard is developed. Once developed, the 1521 standard could be withdrawn. This concurrent development process would ensure that there was information in place regarding the topic without creating a void or possible confusion by the users of the document.

Your consideration and support of Technical Correlating Committee’s actions is appreciated.

Sincerely,

Barbara L. Koffron, Chairman
Technical Correlating Committee for
Professional Qualifications for the Fire Service

c: Frank Florence, NFPA Staff Liaison
    Carl Peterson, NFPA Staff Liaison
Item 11-10-11
September 23rd, 2011

Mr. Kenneth Knipper  
3157 Uhl Rd.  
Melbourne, KY 41059

Amy Cronin  
Standards Council Secretary  
National Fire Protection Association  
1 Batterymarch Park  
Quincy, MA 02169

Dear Ms. Cronin:

As Technical Committee on Emergency Medical Services Chairperson, I am requesting that the NFPA Standards Council consider the following change in the Committee Scope with the associated justification.

Committee Scope: This Committee shall have primary responsibility for documents on the training and education requirements for personnel, personal protective equipment, health and safety programs, and quality assurance programs which incorporate physicians and the community planning process. It shall also be responsible for documents relating to emergency medical services, except those documents covered by other existing NFPA committees that may have primary responsibility.

Justification: The existing committee scope limits the work of this committee based on the subjects that are specifically listed in the TC scope. With this change in committee scope it allows the committee to conduct work on the many various and changing subject matters as they relate to EMS. In making this change the committee encourages the involvement and collaboration of other existing TC’s that also have documents pertaining to EMS.

Your consideration is on this matter is appreciated.

Respectfully submitted,

Kenneth Knipper
Item 11-10-12
Linda

This is to inform you that the Technical Committee on Traffic Control Incident Management Professional Qualifications has completed the draft document NFPA 1091 *Standard for Traffic Control Incident Management Professional Qualifications*. The TC has been balloted affirmatively and unanimously in favor of the draft moving for approval to the Standards Council for a revision cycle. The TCC on Professional Qualifications has been informed of the balloting.

I have attached the draft document.

Based on our conversation I am asking for the Standards Council to place the document into the F2014 revision cycle.

I am asking that the document and revision cycle be placed on the Standards Council October 2011 Agenda for consideration.

On behalf of the Chair Steve Austin and the members of the Technical Committee, thank you in advance. Please feel free to contact if there are any concerns.

Regards Tom

*Tom McGowan*
*Senior Specialist, Emergency Services*
*Public Fire Protection Division*
*National Fire Protection Association*
*1 Batterymarch Park*
*Quincy, MA 02169-7471*
*Phone: (617) 984-7480*
*Fax: (617) 984-7056*
*tmcgowan@nfpa.org*
*www.nfpa.org*

**Important Notice:** This correspondence is not a Formal Interpretation issued pursuant to NFPA Regulations. Any opinion expressed is the personal opinion of the author and does not necessarily represent the official position of the NFPA or its Technical Committees. In addition, this correspondence is neither intended, nor should it be relied upon, to provide professional consultation or services.
Douglas P. Forsman, Fire Chief    
City of Champaign Fire Department 
307 S. Randolph St.    
Champaign, IL  61820

Dear Chief Forsman:

I am transmitting to you herewith the following action of the Standards Council (August 3-5, 2010):

At its March 2010 meeting, the Council considered the request of D. Forsman, Chief, Champaign Fire Department, Champaign, Illinois, that NFPA consider the establishment of a new proposed technical committee and document on professional qualifications for emergency responders working on roadways. This request was administratively withdrawn from the October 2009 Agenda and deferred to the March 2010 meeting while additional information was being sought. After review of all the information before it, the Council voted to publish a notice of receipt of the request soliciting opinions on the need for the document, information on resources available on the subject matter, those interested in participating if approved, and other organizations that may be actively involved with the subject matter. Forty-four responses were received which expressed support for the proposed project; many responders also volunteered to become members of the Committee when formed.

After a review of all the information before it, the Council has voted to establish a Technical Committee (TC) on Traffic Control Incident Management Professional Qualifications. Once the TC has been constituted they can review the Committee scope, and if necessary, may propose revisions to it. After the TC has developed and balloted a draft document (see Regs. 4.3.1.1), the TC can then make a request to the Council to enter an appropriate revision cycle. The Council approved the title and scope of the Committee and the document scope as follows:

Committee Title: Traffic Control Incident Management Professional Qualifications
Committee Scope: The Committee shall have jurisdiction over documents that address professional qualifications for emergency responders in relation to their operations on roadways.
Document Scope: This standard identifies the minimum job performance requirements (JPRs) necessary to perform temporary traffic control duties at emergency incidents on, or near an active roadway.

Standards Council Member Gerdes and Standards Council Member Jardin wished to be recorded as voting negatively.

Very truly yours,

Linda Fuller, Manager
Codes and Standards Administration

c: K. Willette, K. Holland, S. Baio, C. Cronin, C. Peterson
TCC Fire Service Professional Qualifications
Interested Parties 10-8-32
NFPA® 1091

Standard on

Professional Qualifications for Traffic Control Incident Management

20XX Edition

This edition of NFPA 1091, *Standard on Professional Qualifications for Traffic Control Incident Management* was prepared by the Technical Committee on Traffic Control Incident Management. It was issued by the Standards Council on (Date), with an effective date of (Date).

This edition of NFPA 1091 was approved as an American National Standard on (Date).

**Origin and Development of NFPA 1091**

This standard was developed in response to a recognized need for safe operations in the area of traffic control incident management. Roadway related incidents constitute one of first responder traffic control personnel’s greatest health and safety concerns. Fire fighters, police officers, fire police, EMS personnel, department of public works personnel, towing and recovery industry, transportation, and others who respond to roadway incidents across the country are subject to an increasing amount of dangerous situations. The Technical Committee of experts on the subject of traffic control incident management and highway safety developed the first edition of NFPA 1091. The results of the Technical Committee’s efforts are contained in the pages that follow.
Technical Correlating Committee on Professional Qualifications (PQU-AAC)

William E. Peterson, Chair

Stephen P. Austin, Cumberland Valley Volunteer Firemen’s Association, DE [L]
Rep. TC on Traffic Control Incident Management Pro Qual
VL to Professional Qualifications System Management

John Michael Brackin, Blackhawk Technical College, WI [U]
Rep. TC on Accreditation & Certification Pro Qual
VL to Professional Qualifications System Management

Richard W. Carlson, Okolona Fire Department, KY [U]
Rep. TC on Fire Inspector Pro Qual
VL to Professional Qualifications System Management

Jim A. Crawford, Consultant, WA [SE]
Rep. TC on Fire Marshal Pro Qual
VL to Professional Qualifications System Management

Douglas P. Forsman, Champaign Fire Department [E]

Ernest J. Grant, North Carolina Jaycee Burn Center, NC [U]
Rep. TC on Public Fire Educator Pro Qual
VL to Professional Qualifications System Management


Edward M. Hawthorne, Shell Oil Company, TX [U]
Rep. TC on Industrial Fire Brigades Pro Qual
VL to Professional Qualifications System Management

Ronald L. Hopkins, Eastern Kentucky University, KY [SE]
Rep. TC on Fire Service Instructor Pro Qual
VL to Professional Qualifications System Management

Alan E. Joos, Louisiana State University, LA [SE]

Jacklyn Kilby-Richards, Town of Groton Emergency Dispatch, CT [U]
Rep. TC on Public Safety Telecommunicator Pro Qual
VL to Professional Qualifications System Management

F. Patrick Marlatt, Maryland Fire and Rescue Institute, MD [SE]
Rep. TC on Fire Fighter Pro Qual
VL to Professional Qualifications System Management

Michael S. Mayers, Hilton Head Island Fire & Rescue, SC [U]
Rep. to TC on Rescue Technician Pro Qual
VL to Professional Qualifications System Management
Raymond McAllister, City of Las Vegas, NV [L]
Rep. International Association of Fire Fighters

Lawrence L. Preston, Maryland Fire and Rescue Institute, MD [E]
Rep. TC on Fire Officer Pro Qual
VL to Professional Qualifications System Management

Willie G. Shelton, Virginia Department of Fire Programs, VA [E]
Rep. National Board on Fire Service Professional Qualifications, MA

Philip C. Stittleburg, Lafarge Fire Department, WI [L]
Rep. National Volunteer Fire Council

Jim Stumpf, Organizational Quality Associates [SE]
Rep. TC on Wildfire Suppression Pro Qual
VL to Professional Qualifications System Management

George A. Wendt, Travelers Insurance Company [I]
Rep. TC on Fire Investigator Pro Qual
VL to Professional Qualifications System Management

Michael A. Wieder, Fire Protection Publications, OK [M]
Rep. TC on Incident Management Pro Qual
VL to Professional Qualifications System Management

Stephen Wilde, Certified Fleet Services, Inc., IL [U]
Rep. TC on Emergency Vehicle Mechanic Technicians Pro Qual
VL to Professional Qualifications System Management

Alternates

Frederick W. Piechota, Jr., ProBoard Fire Service Professional Qualifications System, MA [E]
Rep. ProBoard Fire Service Professional Qualifications System, MA
(Alt. to Willie G. Shelton)

Tom McGowan, NFPA Staff Liaison

This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have primary responsibility for the management of the NFPA Professional Qualifications Project and documents related to professional qualifications for fire service, public safety, and related personnel.
Technical Committee on Traffic Control Incident Management (PQU-TCM)

Stephen P. Austin, Chair
Cumberland Valley Volunteer Firemen’s Association, DE [L]

Jeffrey M. Allen, Irmo Fire District, SC [U]
James G. Austrich, DC Metropolitan Police Department, Washington, DC [U]
Allen Baldwin, Pennsylvania Turnpike Commission, PA [E]
David L. Bergner, International Municipal Signal Association, AZ [IM]
Stephen E. Carter, Town of Littleton Fire Department, MA [U]
Robert Cumberland, Westminster City Police & Fire Department, MD [XX]
Joseph W Drennan, Illinois Fire Service Institute, IL [SE]
Leslie J. Greenwood, NY State Division of Homeland Security & Emergency Services, NY [E]
Paul Jodoin, Federal Highway Administration, Washington DC [E]
Alvin Marquess, Maryland State Highway Administration, MD [E]
Carroll “Keck” Melby, Hovland, MN [SE]
Gary M. Millsap, Delcan Corporation, GA [SE]
T.J. Nedrow, National Volunteer Fire Council, WA [L]
James E. Ploumis, Peach Bottom, PA [SE]
Willard F. Preston, III, Goldfein & Joseph, PC, DE [SE]
Angela Roper, Nationwide Safety Consulting, TX [SE]
Brad Sprague, Minooka Fire/Illinois State Police, IL [XX]
John “Jack” C. Sullivan, Loss Control Innovations, VA [SE]
Richard W. Toulson, Delaware Volunteer Firefighters Association, DE [L]
Stacy C. Wertman, National Institute for Occupational Safety & Health, WV [E]
Michael A. Wieder, Fire Protection Publications, OK [M]
Tracy M. Young-Brungard, Pennsylvania Office of the State Fire Commissioner, PA [E]

Alternate

Joseph Sagel, Maryland State Highway Administration, MD [E]
(Alternate to Alvin Marquess)

Non-voting Member

Michael J. Egan, Jr., Ansonia, CT [SE]
This list represents the membership at the time the Committee was balloted on the final text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the back of the document.

NOTE: Membership on a committee shall not in and of itself constitute an endorsement of the Association or any document developed by the committee on which the member serves.

Committee Scope: This Committee shall have the primary responsibility for documents on the professional qualifications for emergency responders in relation to their operations on roadways.
Contents

Chapter 1  Administration
  1.1 Scope
  1.2 Purpose
  1.3 General
  1.4 Units

Chapter 2  Referenced Publications
  2.1 General
  2.2 NFPA Publications
  2.3 Other Publications
  2.4 References for Extracts in Mandatory Sections

Chapter 3  Definitions
  3.1 General
  3.2 NFPA Official Definitions
  3.3 General Definitions

Chapter 4  General
  4.1 General
  4.2 Certification

Chapter 5  Traffic Control Incident Management

Annex A  Explanatory Material

Annex B  Explanation of the Standard and the Concepts of JPRs

Annex C  Informational References

Index
Chapter 1 Administration

1.1 Scope.
This standard identifies the minimum job performance requirements (JPRs) necessary to perform temporary traffic control duties at emergency incidents on, or near an active roadway.

1.2 Purpose.
The purpose of this standard shall be to ensure that persons meet the requirements of this standard who are engaged in traffic control incident management. It shall not be the intent of the standard to restrict any jurisdiction from exceeding these requirements.

1.3 General.
1.3.1 All of the standards for any level of traffic control incident management shall be performed in accordance with recognized practices and procedures or as defined by an accepted authority.

1.3.2 The JPRs shall be accomplished in accordance with the requirements of the authority having jurisdiction (AHJ) and NFPA 1500, Standard on Fire Department Occupational Safety and Health Program.

1.3.3 It is not required for the objectives to be mastered in the order in which they appear. The local or state/provincial training program shall establish both the instructional priority and the program content to prepare individuals to meet the performance objectives of this standard.

1.3.4* It shall not be required that the JPRs be mastered in the order in which they appear. The AHJ shall establish instructional priority and the training program content to prepare individuals to meet the JPRs of this standard.

1.3.5* Performance of each requirement of this standard shall be evaluated by individuals approved by the AHJ.

1.3.6 Emergency first responder traffic personnel shall meet all the objectives for Traffic Control Incident Management before being qualified at the Traffic Control Incident Management level.

1.3.7 Wherever in this standard the terms rules, regulations, procedures, supplies, apparatus, or equipment are referred to, it is implied that they are those of the AHJ.

1.3.8* Traffic control incident management personnel shall remain current with traffic control incident management practices, and applicable standards, and demonstrate competency on an annual basis.

1.4 Units. In this standard, values for measurement are followed by an equivalent in SI units, but only the first stated value shall be regarded as the requirement. Equivalent values in SI units shall not be considered as the requirement, as these values can be approximate. (See Table 1.4.)

<table>
<thead>
<tr>
<th>U.S. Unit/Quantity</th>
<th>SI Unit/ Symbol</th>
<th>Symbol</th>
<th>Conversion Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>inch (in.)</td>
<td>millimeter (mm)</td>
<td>1 in. = 25.4 mm</td>
</tr>
<tr>
<td></td>
<td>foot (ft)</td>
<td>meter (m)</td>
<td>1 ft = 0.305 m</td>
</tr>
<tr>
<td>Area</td>
<td>square foot (ft²)</td>
<td>square meter (m²)</td>
<td>1ft² = 0.0929 m²</td>
</tr>
</tbody>
</table>

Chapter 2 Referenced Publications

2.1 General.
The documents or portions thereof listed in this chapter are referenced within this standard and shall be considered part of the requirements of this document.

2.2 **NFPA Publications.** National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

2.3 **Other Publications.**

2.4 **References for Extracts in Mandatory Sections.**

**Chapter 3 Definitions**

3.1 **General**
The definitions contained in this chapter shall apply to the terms used in this standard. Where terms are not defined in this chapter or within another chapter, they shall be defined using their ordinarily accepted meanings within the context in which they are used. *Merriam-Webster’s Collegiate Dictionary*, 11th edition, shall be the source for the ordinarily accepted meaning.

3.2 **NFPA Official Definitions.**

3.2.1* **Approved.** Acceptable to the authority having jurisdiction.

3.2.2* **Authority Having Jurisdiction (AHJ).** An organization, office, or individual responsible for enforcing the requirements of a code or standard, or for approving equipment, materials, an installation, or a procedure.
3.2.3* Listed. Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

3.2.4 Road Tunnel. An enclosed roadway for motor vehicles traffic with vehicle access that is limited to portals. [502, 2011]

3.2.5* Roadway. Any public or private street, including bridges and rights of way. [1141, 2008]

3.3 General Definitions.

3.3.1* Fire police officer. An individual officially deployed to provide scene security or direct traffic.

3.3.2 Job Performance Requirement (JPR). A written statement that describes a specific job task, lists the items necessary to complete the task, and defines measurable or observable outcomes and evaluation areas for the specific task. [1000, 2006]

3.3.3 Requisite Knowledge. Fundamental knowledge one must have in order to perform a specific task. [1031, 2003]

3.3.4 Requisite Skills. The essential skills one must have in order to perform a specific task. [1031, 2003]

3.3.5 Safe-Positioned. The positioning of emergency vehicles at an incident in a manner that attempts to protect both the responders performing their duties and road users traveling through the incident scene, while minimizing, to the extent practical, disruption of the adjacent traffic flow. (2009 MUTCD)

3.3.6 Task. A specific job behavior or activity. [1002, 2003]

3.3.7* Temporary Traffic Control (TTC) device. The primary functions at a traffic incident management area are to inform road users of the incident and to provide guidance information on the path to follow through the incident area.

3.3.8 Traffic Incident. An emergency road user occurrence, a natural disaster, or other unplanned event that affects or impedes the normal flow of traffic.

3.3.9* Traffic Incident Management Area. An area of a highway where temporary traffic controls are installed, as authorized by a public authority or the official having jurisdiction of the roadway.

Chapter 4 General
4.1* General Requirements.
4.1.1 Because traffic control incident management assignments are inherently dangerous and traffic control incident management personnel are frequently required to perform rigorous activities in adverse conditions, regional and national safety standards shall be included in agency policies and procedures.

4.1.2 Traffic control incident management personnel shall complete all activities in the safest possible manner and shall follow national, federal, state, provincial, and local safety standards as they apply to the traffic control incident management.

4.2* Entrance Requirements.
Before beginning training activities or engaging in rescue operations, traffic control incident management personnel shall comply with the following requirements:

(1) Age requirement established by the AHJ
(2) Minimum educational requirements established by the AHJ
(3) Minimum requirements for hazardous material incident and contact control training for entry-level personnel, validated by the AHJ

4.2.1 General. For qualification to Traffic Control Incident Management standard, the candidate shall meet the general knowledge requirements in 4.1.1, the general skill requirements in 5.1 and the job performance requirements (JPRs) defined in Sections 5.2 through 5.13.

4.2.2 Certification. To be qualified traffic control incident management professional qualifications, the candidate shall meet the requirements NFPA 1091, Standard for Traffic Control Incident Management as defined in this standard.

4.3 Safety.
4.3.1 Candidates shall safely complete job performance requirements in accordance with recognized practices and procedures.

4.3.2 Candidates also shall meet all applicable occupational safety and health requirements of the jurisdiction.

4.4 Job Performance Requirements.
4.4.1 Job performance requirements defined by this standard shall be evaluated by individuals approved by the authority having jurisdiction.

4.4.2 Job performance requirements shall not be required to be mastered in the order in which they appear.

4.4.3 The local, state/provincial, or federal training program shall establish the instructional priority and the training program content to prepare individuals to meet the job performance requirements of this standard.

4.5 Maintenance of Skills and Knowledge.
4.5.1 Personnel who could be assigned Traffic Control Incident Management shall remain current with traffic control incident management technology, traffic control incident management practices, and applicable standards as determined by the AHJ.

Chapter 5 Traffic Control Incident Management

5.1 General Requirements.
5.1.1 Qualifications. To be qualified as Traffic Control Incident Management personnel, the candidate shall meet each of the job performance requirements defined in this chapter.

5.1.1.1 Function. The primary function of the Traffic Control Incident Management personnel shall be to execute traffic control incident management activities.

5.2* Demonstrate the appropriate use of personal protective equipment, warning signals, temporary traffic control devices and vehicle lighting, given a roadway incident, vehicle, policies and procedures, personal protective equipment and temporary traffic control devices so that the responder is protected, traffic is controlled, personal protective equipment is donned in accordance with AHJ, temporary traffic control (TTC) devices and vehicle lighting is deployed.

(A) Requisite Knowledge. Principles of temporary traffic control, traffic incident management area, policies and procedures, personal protective equipment, temporary traffic control devices, types and applications, driver reactions, hazards of traffic control, traffic patterns.

(B) Requisite Skill. Personal protective equipment selection and usage, temporary traffic control devices selection and placement, flagging operations, sign placement, vehicle warning systems.

5.3 Conduct an initial size-up and establish command of a roadway incident, given procedures and policies, a roadway incident, and communication devices, so that on approach and arrival potential hazards and needed resources are identified, and communicated to responders and dispatch along with the location of the incident.

(A)* Requisite Knowledge. Policies and procedures, recognizes hazardous situations, size-up, roadway types and lane designations, roadway geometrics, basic traffic control concepts, pre-incident plans, response agencies roles and responsibilities, telecommunication procedures, personal protective equipment, and ICS.

(B) Requisite Skill. The ability to size-up, communicate orally, operate telecommunication devices, and don personal protective equipment.

5.4* Position vehicle to provide a traffic incident management area at a roadway incident, given vehicle, and a roadway incident, so that the vehicle is safe-positioned.

(A) Requisite Knowledge. Appropriate vehicle positions for protecting roadway incident scenes, knowledge of how responders enter and exit their vehicles, how responders retrieve equipment from the vehicles, and responders perform their tasks at a roadway incident scene, ability to estimate the length of time that will be required for incident mitigation.
(B) Requisite Skills. Operate the vehicle in the correct manner, position vehicle to protect responders and civilians at a roadway incident scene, position a vehicle so it does not excessively impede traffic flow, provides access for later arriving vehicles, and reduces the likelihood of secondary incidents.

5.5 Establish a traffic incident management area at a roadway incident, given a roadway incident, vehicles, temporary traffic control (TTC) devices, and personal protective equipment, so that a traffic incident management area is established to protect responders and move traffic through and around the incident.

(A) Requisite Knowledge. Types and uses of available temporary traffic control devices, rules and regulations, policies and procedures, basic traffic control concepts, road and lane designations, traffic pattern and flow, time required for establishing zone, personal protective equipment, an Incident Command System, telecommunication procedures, procedures for safe work at roadway incident.

(B) Requisite Skills. Communicate orally, operate telecommunication device, deploy temporary traffic control (TTC) devices, don personal protective equipment used at roadway incidents.

5.6 Create a traffic incident management area at a roadway incident, given an incident, rules and regulations, policies and procedures, vehicles, temporary traffic control (TTC) devices, so that the traffic incident management area is established.

(A) Requisite Knowledge. Roles and responsibilities of available and responding resources, temporary traffic control (TTC) devices, rules and regulations, policies and procedures, temporary traffic control concepts, roadway types and lane designations, telecommunication procedures.

(B) Requisite Skills. Communicate orally, operate telecommunication device, deployment techniques for available temporary traffic control (TTC) devices, rules and regulations, policies and procedures, retrieving temporary traffic control (TTC) devices when terminating an incident.

5.7 Establish advance warning for the roadway incident given an incident, rules and regulations, policies and procedures, vehicles, temporary traffic control (TTC) devices, so that advance warning is established for vehicles approaching the traffic queue to prevent secondary incidents.

(A) Requisite Knowledge. Roles and responsibilities of available and responding resources, types of temporary traffic control (TTC) devices, rules and regulations, policies and procedures, temporary traffic control concepts, roadway types and lane designations, telecommunication procedures.

(B) Requisite Skills. Communicate orally, operate telecommunication device, deployment techniques for advanced warning temporary traffic control (TTC) devices.

5.8 Operate in the traffic incident management area, given an established temporary traffic
control (TTC) area, personal protective equipment, a vehicle, and an assignment, so that personal protective equipment is worn, personnel enter or exit the vehicle and work within traffic incident management area with due regard for moving traffic and the assigned tasks are performed.

(A) Requisite Knowledge. Policies and procedures, regulations and rules, pre-incident plan, telecommunication procedures, personal protective equipment, types of temporary traffic control (TTC) devices and their uses, procedures for entering and exiting a vehicle.

(B) Requisite Skills. The ability to communicate orally, operate telecommunication devices, don personal protective equipment, entering and exiting a vehicle, work within a traffic incident management area.

5.9 Operate as a member of a team within an ICS/unified command structure at a roadway incident, given a roadway incident and an assignment, so that the assignment is accomplished, accountability is maintained, and safety policies are followed.

(A) Requisite Knowledge. Policies and regulations, rules and procedures, their role within the Incident Command System, ICS/unified command structure, pre-incident plans, personnel accountability system, telecommunication procedures.

(B) Requisite Skills. Perform assigned duties within the ICS/unified command structure, communicate orally, operate telecommunication devices, work as a team member, follow safety policies, and accountability procedures.

5.10 Manage non-authorized persons found near or within a traffic incident management area, given an incident scene, non-authorized persons, temporary traffic control (TTC) devices, local policies and procedures for entering or exiting a traffic incident management area, so that non-authorized persons are identified, denied access, and directed to a safe location.

(A) Requisite Knowledge. Scene and perimeter control techniques, limited access procedures for non-authorized personnel and victims, pre-incident plans, policies and procedures.

(B) Requisite Skills. Use of equipment and techniques to control access to and exit from the roadway incident scene, implement and operate an accountability system, communicate orally, operate telecommunication devices.

5.11 Assess the effectiveness of ongoing temporary traffic control measures at a roadway incident, given a traffic incident management area, a traffic control problem, and an ICS/unified command structure, so that traffic control problems are identified and reported through the chain of command.

(A) Requisite Knowledge. Policies and procedures, uses of temporary traffic control devices, traffic control concepts, change in work environment, telecommunication procedures, ICS/unified command structure.

(B) Requisite Skills. The ability to communicate orally, operate communication devices.
5.12 Adapt the traffic incident management area in response to a special hazard, given an existing roadway incident, special hazard, policies and procedures, personal protective equipment, temporary traffic control (TTC) devices, so that protection is maintained, the special hazard is recognized, addressed, and operations are continued.

(A)* Requisite Knowledge. Types of special hazards threats to traffic incident management area, policies and procedures, accountability, warning signals.

(B) Requisite Skills. Communicate warning signals, alter response, control and coordinate responder safety, maintain and adjust traffic incident management area, augmenting and adjusting temporary traffic control (TTC) devices.

5.13 Perform traffic control incident management area demobilization functions, given a roadway incident, orders to demobilize, and temporary traffic control (TTC) devices, so that safety and communication between all responders is maintained, all temporary traffic control (TTC) devices are removed, and all resources and personnel are cleared from the scene.

(A) Requisite Knowledge. Traffic incident management area demobilization concepts, working as a team, temporary traffic control (TTC) devices, policies and procedures, telecommunication procedures.

(B) Requisite Skills. Communicate orally, operate telecommunication devices, demobilize traffic incident management area in a manner that protects response workers and motorists, operate within a team, remove all temporary traffic control (TTC) devices and resources from the incident scene.

Annex A Explanatory Material

Annex A is not a part of the requirements of the NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

A.1.3.4 See Annex B for additional information regarding the use of JPRs for training and evaluation.

A.1.3.5 It is recommended, where practical, that evaluators be individuals who were not directly involved as instructors for the requirement being evaluated.

A.1.3.8 Ongoing training and continuing education are necessary to ensure that traffic control incident management personnel remain current in the ever-changing field of traffic control incident management. Attending workshops and seminars, reading professional publications, and participating in refresher training are ways in which traffic control incident management personnel can update their knowledge and skills. Proficiency in current traffic control incident management practices can be demonstrated by achieving and maintaining certification through a nationally recognized certifying body.
A.3.2.1 Approved. The National Fire Protection Association does not approve, inspect, or 
certify any installations, procedures, equipment, or materials; nor does it approve or evaluate 
testing laboratories. In determining the acceptability of installations, procedures, equipment, or 
materials, the authority having jurisdiction may base acceptance on compliance with NFPA or 
other appropriate standards. In the absence of such standards, said authority may require 
evidence of proper installation, procedure, or use. The authority having jurisdiction may also 
refer to the listings or labeling practices of an organization that is concerned with product 
evaluations and is thus in a position to determine compliance with appropriate standards for the 
current production of listed items.

A.3.2.2 Authority Having Jurisdiction (AHJ). The phrase “authority having jurisdiction,” or 
its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and 
approval agencies vary, as do their responsibilities. Where public safety is primary, the authority 
having jurisdiction may be a federal, state, local, or other regional department or individual such 
as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health 
department; building official; electrical inspector; or others having statutory authority. For 
insurance purposes, an insurance inspection department, rating bureau, or other insurance 
company representative may be the authority having jurisdiction. In many circumstances, the 
property owner or his or her designated agent assumes the role of the authority having 
jurisdiction; at government installations, the commanding officer or departmental official may be 
the authority having jurisdiction.

A.3.2.3 Listed. The means for identifying listed equipment may vary for each organization 
concerned with product evaluation; some organizations do not recognize equipment as listed 
unless it is also labeled. The authority having jurisdiction should utilize the system employed by 
the listing organization to identify a listed product.

A.3.2.4 Roadway. It is the intent of the Committee to recognize all classifications, types, and 
descriptions of roadways.

A.3.3.1 An individual serving in accordance with State or local law as an officially recognized or 
designated member of a legally organized public safety agency. Deployment could include 
response to any fire drill, fire call, or other fire, rescue, or police emergency; or at a planned 
special event.

A.3.3.2 Alerting road users and establishing a well defined path to guide road users through the 
incident area will serve to protect the incident responders and those involved in working at the 
incident scene and will aid in moving road users expeditiously past or around the traffic incident, 
will reduce the likelihood of secondary traffic crashes, and will preclude unnecessary use of the 
surrounding local road system. Examples include a stalled vehicle blocking a lane, a traffic crash 
blocking the traveled way, a hazardous material spill along a highway, and natural disasters such 
as floods and severe storm damage.

A.3.3.3 In response to a road user incident, natural disaster, hazardous material spill, or other 
unplanned incident. It is a type of TTC zone and extends from the first warning device (such as a
sign, light, or cone) to the last TTC device or to a point where vehicles return to the original lane alignment and are clear of the incident.

**A.4.1** All traffic control incident management activities should be carried out in the safest possible manner, including the consideration that all risks taken are to the benefit of the operation. Traffic control incident management skills require a physical activity, coordination, and operational planning and a strong knowledge of all applicable protocols. It is for this reason that entrance requirements are outlined in Section 4.2 and clarified in A.4.2.

**A.4.2** The following list elaborates these requirements:

1. **Age Requirements.** The AHJ is empowered to set minimum and maximum age requirements. Due to the fact that traffic control incident management requires a level of maturity inherent to the traffic control incident management environment, it is recommended that the minimum age required to begin training as traffic control incident management personnel be set at 18 years.

2. **Medical Requirements.** The AHJ should establish medical requirements for initiation of training and continued participation as a technical rescuer. It is recommended that the AHJ adopt NFPA 1582, *Standard on Comprehensive Occupational Medical Program for Fire Departments*, in whole or in part as part of their own standard development process.

3. **Minimum Physical Fitness.** Traffic control incident management operations involve activities that pose great physical and mental challenges. Traffic control incident management is an inherently demanding activity requiring personnel to perform challenging activities in a high-stress environment.

4. **Emergency Medical Care Training.** Prior to beginning training as traffic control incident management personnel, a minimum medical training requirement should be met.

5. **Educational Requirements.** Because traffic control incident management personnel can be required to read and comprehend standards and procedures, prepare written reports, and understand principles of mechanical advantage, structural engineering, and other related disciplines, it is recommended that the technical rescuer be at minimum a high school graduate.

6. **Training.** People having the potential for encountering hazardous materials on an incident scene should be trained to recognize the hazard and implement exposure and control methods.

**A5.2 Warning Signals.** It is the intent of the Committee to recognize whistles, air horn, hand signals, audible, or other manual devices that could be used by personnel to alert other personnel at the scene of impending danger. Vehicle lighting includes headlights, floodlights, warning lights, directional devices, based on AHJ.

**A5.3(A) Roadway Geometrics.** Roadway characteristics describing items such as vertical curves, horizontal curves, frequent and abrupt changes such as lane drops, lane narrowing,
roadway transitions that can cause rapid maneuvers or other characteristics that could potentially affect the establishment of traffic incident management area.

**A5.13 Special Hazard.** It is the intent of the Committee for the responder to recognize different types of hazards that may be encountered. Special hazards may include night time, water supply, weather, helicopter operations, herding livestock, hazardous materials, railroad crossings and schedules, tunnels, draw bridges, etc.

**Annex B Explanation of the Standard and Concepts of JPRs**

This Annex is not a part of the recommendations of this NFPA document but is included for informational purposes only.

**B.1 Explanation of the Standard and Concepts of Job Performance Requirements (JPRs).**
The primary benefit of establishing national professional qualification standards is to provide both public and private sectors with a framework of the job requirements for the fire service. Other benefits include enhancement of the profession, individual as well as organizational growth and development, and standardization of practices.

NFPA professional qualifications standards identify the minimum JPRs for specific fire service positions. The standards can be used for training design and evaluation, certification, measuring and critiquing on-the-job performance, defining hiring practices, and setting organizational policies, procedures, and goals. (Other applications are encouraged.) Professional qualifications standards for a specific job are organized by major areas of responsibility defined as duties. For example, the fire fighter’s duties might include fire suppression, rescue, and water supply, and the public fire educator’s duties might include education, planning and development, and administration. Duties are major functional areas of responsibility within a job.

The professional qualifications standards are written as JPRs. JPRs describe the performance required for a specific job. JPRs are grouped according to the duties of a job. The complete list of JPRs for each duty defines what an individual must be able to do in order to successfully perform that duty. Together, the duties and their JPRs define the job parameters — that is, the standard as a whole is a description of a job.

**B.2 Breaking Down the Components of a JPR.**
The JPR is the assembly of three critical components. (See Table B.2.) These components are as follows:

1. Task that is to be performed
2. Tools, equipment, or materials that must be provided to successfully complete the task
3. Evaluation parameters and/or performance outcomes

**Table B.2 Example of a JPR**

<table>
<thead>
<tr>
<th>Task</th>
<th>Tools, equipment, or materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ventilate a pitched roof</td>
<td>Given an ax, a pike pole, an extension</td>
</tr>
</tbody>
</table>
(3) Evaluation parameters and performance outcomes

<table>
<thead>
<tr>
<th>ladder, and a roof ladder</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3) So that a 1.22 m × 1.22 m (4 ft × 4 ft) hole is created; all ventilation barriers are removed; ladders are properly positioned for ventilation; ventilation holes are correctly placed; and smoke, heat, and combustion by-products are released from the structure</td>
</tr>
</tbody>
</table>

B.2.1 **The Task to Be Performed.** The first component is a concise, brief statement of what the person is supposed to do.

B.2.2 **Tools, Equipment, or Materials That Must be Provided to Successfully Complete the Task.** This component ensures that all individuals completing the task are given the same minimal tools, equipment, or materials when being evaluated. By listing these items, the performer and evaluator know what must be provided in order to complete the task.

B.2.3 **Evaluation Parameters and/or Performance Outcomes.** This component defines how well one must perform each task — for both the performer and the evaluator. The JPR guides performance towards successful completion by identifying evaluation parameters and/or performance outcomes. This portion of the JPR promotes consistency in evaluation by reducing the variables used to gauge performance.

In addition to these three components, the JPR contains requisite knowledge and skills. Just as the term requisite suggests, these are the necessary knowledge and skills one must have prior to being able to perform the task. Requisite knowledge and skills are the foundation for task performance.

Once the components and requisites are put together, the JPR might read as follows:

B.2.3.1 **Example 1.** The Fire Fighter I shall ventilate a pitched roof, given an ax, a pike pole, an extension ladder, and a roof ladder, so that a 1.22 m × 1.22 m (4 ft × 4 ft) hole is created, all ventilation barriers are removed, ladders are properly positioned for ventilation, and ventilation holes are correctly placed.

(A) **Requisite Knowledge.** Pitched roof construction, safety considerations with roof ventilation, the dangers associated with improper ventilation, knowledge of ventilation tools, the effects of ventilation on fire growth, smoke movement in structures, signs of backdraft, and the knowledge of vertical and forced ventilation.

(B) **Requisite Skills.** The ability to remove roof covering; properly initiate roof cuts; use the pike pole to clear ventilation barriers; use ax properly for sounding, cutting, and stripping; position ladders; and climb and position self on ladder.
B.2.3.2 Example 2. The Fire Investigator shall interpret burn patterns, given standard equipment and tools and some structural/content remains, so that each individual pattern is evaluated with respect to the burning characteristics of the material involved.

(A) Requisite Knowledge. Knowledge of fire development and the interrelationship of heat release rate, form, and ignitibility of materials.

(B) Requisite Skills. The ability to interpret the effects of burning characteristics on different types of materials.

B.3 Examples of Potential Uses.

B.3.1 Certification. JPRs can be used to establish the evaluation criteria for certification at a specific job level. When used for certification, evaluation must be based on the successful completion of JPRs.

First, the evaluator would verify the attainment of requisite knowledge and skills prior to JPR evaluation. Verification might be accomplished through documentation review or testing.

Next, the candidate would be evaluated on completing the JPRs. The candidate would perform the task and be evaluated based on the evaluation parameters, the performance outcomes, or both. This performance-based evaluation can be either practical (for psychomotor skills such as “ventilate a roof”) or written (for cognitive skills such as “interpret burn patterns”).

Note that psychomotor skills are those physical skills that can be demonstrated or observed. Cognitive skills (or mental skills) cannot be observed, but are rather evaluated on how one completes the task (process oriented) or the task outcome (product oriented).

Using Example 1, a practical performance-based evaluation would measure one’s ability to “ventilate a pitched roof.” The candidate passes this particular evaluation if the standard was met — that is, a 1.22 m × 1.22 m (4 ft × 4 ft) hole was created; all ventilation barriers were removed; ladders were properly positioned for ventilation; ventilation holes were correctly placed; and smoke, heat, and combustion by-products were released from the structure.

For Example 2, when evaluating the task “interpret burn patterns,” the candidate could be given a written assessment in the form of a scenario, photographs, and drawings and then be asked to respond to specific written questions related to the JPR’s evaluation parameters.

Remember, when evaluating performance, you must give the person the tools, equipment, or materials listed in the JPRs — for example, an ax, a pike pole, an extension ladder, and a roof ladder — before he or she can be properly evaluated.

B.3.2 Curriculum Development/Training Design and Evaluation. The statements contained in this document that refer to job performance were designed and written as JPRs. Although a resemblance to instructional objectives might be present, these statements should not be used in a teaching situation until after they have been modified for instructional use.
JPRs state the behaviors required to perform specific skill(s) on the job, as opposed to a learning situation. These statements should be converted into instructional objectives with behaviors, conditions, and standards that can be measured within the teaching/learning environment. A JPR that requires a fire fighter to “ventilate a pitched roof” should be converted into a measurable instructional objective for use when teaching the skill. [See Figure B.3.2(a).]

FIGURE B.3.2(a) Converting JPRs into Instructional Objectives.

Using Example 1, a terminal instructional objective might read as follows:

The JPR, requisite knowledge, and requisite skills are all used as information from which instructional objectives can be written.

EXAMPLE TERMINAL OBJECTIVES

The Fire Fighter I shall ventilate a pitched roof, given an ax, a pike pole, an extension ladder, and a roof ladder so that a 1.22 m × 1.22 m (4 ft × 4 ft) hole is created, all ventilation barriers are removed, ladders are properly positioned for ventilations, and ventilation holes are correctly placed.

Required Knowledge:
Pitched roof construction; safety considerations with roof ventilation; the dangers associated with improper ventilation; knowledge of ventilation tools; the effects of ventilation on fire growth; smoke movement in structures; signs of backdraft; and the knowledge of vertical and forced ventilation.

Required Skills:
Remove roof covering; properly initiate roof cuts; use the pike pole to clear ventilation barriers; use ax properly for sounding, cutting, and stripping; position ladders; and climb and position self on ladder

EXAMPLE ENABLING OBJECTIVES

The fire fighter shall describe the methods, processes, and safety precautions to be taken in order to perform ventilation on a pitched roof in a safe manner.

The fire fighter shall explain the effects of ventilation on fire growth as it relates to fire spread, intensity, and movement through structures, with “X” percent accuracy on a written evaluation.

The fire fighter shall list the safety precautions to be taken when performing roof ventilation as stated in the “XYZ” ventilation manual, with “X” percent accuracy on a written evaluation.

Given the conditions surrounding an incident, the fire fighter will identify backdraft, flashover, and other dangerous conditions created by fire and the effects of ventilation on these conditions with “X” percent accuracy on a written evaluation.

The fire fighter shall demonstrate ventilating a pitched roof, given the proper tools, with 100 percent accuracy on the skills checklist.

The fire fighter shall demonstrate the removal of ventilation obstructions (ceiling materials, insulation, and so forth) in order to clear the ventilation opening with 100 percent accuracy on the skills checklist.

The fire fighter shall demonstrate the proper use of fire-fighting tools used for ventilation with 100 percent accuracy on the skills checklist.

JPRs may be converted into any instructional objective format. For demonstration purposes, these examples have been written as terminal objectives.
The learner will ventilate a pitched roof, given a simulated roof, an ax, a pike pole, an extension ladder, and a roof ladder, so that 100 percent accuracy is attained on a skills checklist. (At a minimum, the skills checklist should include each of the measurement criterion from the JPRs.)

Figure B.3.2(b) is a sample checklist for use in evaluating this objective.

<table>
<thead>
<tr>
<th>OBJECTIVE: The fire fighter shall demonstrate ventilating a pitched roof, given the proper tools, within 5 minutes and with 100 percent accuracy on the skills checklist.</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
</tr>
<tr>
<td>1. 1.22 m × 1.22 m (4 ft × 4 ft) hole was created.</td>
</tr>
<tr>
<td>2. All ventilation barriers were removed.</td>
</tr>
<tr>
<td>3. Ladders were properly positioned.</td>
</tr>
<tr>
<td>4. Ventilation holes were correctly placed (directly over fire, highest point, and so forth).</td>
</tr>
<tr>
<td>5. Task completed within validated time parameters established by the AHJ. (Time to complete task: ____________)</td>
</tr>
</tbody>
</table>

**FIGURE B.3.2(b) Sample Skills Checklist.**

While the differences between JPRs and instructional objectives are subtle in appearance, the purpose of each statement differs greatly. JPRs state what is necessary to perform the job in the “real world.” Instructional objectives, however, are used to identify what students must do at the end of a training session and are stated in behavioral terms that are measurable in the training environment.

By converting JPRs into instructional objectives, instructors will be able to clarify performance expectations and avoid confusion related to using statements designed for purposes other than teaching. Additionally, instructors will be able to add local/state/regional elements of performance into the standards as intended by the developers.

Requisite skills and knowledge should be converted into enabling objectives. These help to define the course content. The course content would include each of the requisite knowledge and skills. Using the above example, the enabling objectives would be pitched roof construction, safety considerations with roof ventilation, removal of roof covering, properly initiated roof cuts, and so on. This ensures that the course content supports the terminal objective.

Note that it is assumed that the reader is familiar with curriculum development or training design and evaluation.

**B.4 Other Uses.**

While the professional qualifications standards are principally used to guide the development of training and certification programs, there are a number of other potential uses for the documents. Because the documents are written in JPR terms, they lend themselves well to any area of the profession where a level of performance or expertise must be determined. These areas might include the following:
(1) Employee Evaluation/Performance Critiquing. The JPRs can be used as a guide by both the supervisor and the employee during an evaluation. The JPRs for a specific job define tasks that are essential to perform on the job as well as the evaluation criteria to measure when those tasks are completed.

(2) Establishing Hiring Criteria. The professional qualifications standards can be used in a number of ways to further the establishment of hiring criteria. The AHJ could simply require certification at a specific job level — for example, Fire Fighter I. The JPRs could also be used as the basis for pre-employment screening by establishing essential minimal tasks and the related evaluation criteria. An added benefit is that individuals interested in employment can work towards the minimal hiring criteria at local colleges.

(3) Employee Development. The professional qualifications standards can be useful to both the employee and the employer in developing a plan for the individual’s growth within the organization. The JPRs and the associated requisite knowledge and skills can be used as a guide to determine additional training and education required for the employee to master his or her job or profession.

(4) Succession Planning. Succession planning or career path addresses the efficient placement of people into jobs in response to current needs and anticipated future needs. A career development path can be established for targeted individuals to prepare them for growth within the organization. The JPRs and requisite knowledge and skills could then be used to develop an educational path to aid in the individual’s advancement within the organization or profession.

(5) Establishing Organizational Policies, Procedures, and Goals. The JPRs can be incorporated into organizational policies, procedures, and goals where employee performance is addressed.

Annex C Informational References

C.1 Referenced Publications.
The documents or portions thereof listed in this annex are referenced within the informational sections of this standard and are not part of the requirements of this document unless also listed in Chapter 2 for other reasons.

C.1.1 NFPA Publications. National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.


C.1.3 Other Publications. (Reserved)

C.2 Informational References. (Reserved)

C.3 References for Extracts in Informational Sections. (Reserved)
Item 11-10-13
New Project Initiation Form
(To be completed by proponent of new project/document)
Additional pages may be attached if necessary.

a. Explain the Scope of the new project/document:

Provide a guide for using large buildings such as an arena, large sporting venues, and warehouses for mass sheltering outside of the normal sheltering provided by a Non Government Organization (NGO) such as the Red Cross.

b. Provide an explanation and any evidence of the need for the new project/document:

Events such as Katrina, major flooding events such as the Mississippi River that would require a jurisdiction to provide sheltering for several thousands of people for longer periods of time than your normal sheltering plan, which could be for two to three days. These long term sheltering plans could last several weeks and up to a couple of months.

c. Identify intended users of the new project/document:

Local, State and Federal agencies, NGO, Not-For-Profit, Faith Based Organizations (FBO)

d. Identify individuals, groups and organizations that should review and provide input on the need for the proposed new project/document; and provide contact information for these groups:

Local, State and Federal agencies, NGO, Not-For-Profit, Faith Based Organizations (FBO) [see g. below] and FEMA

e. Identify individuals, groups and organizations that will be or could be affected, either directly or indirectly, by the proposed new project/document, and what benefit they will receive by having this new document available:

Local, State and Federal agencies, emergency management coordinators and planners, NGO, Not-For-Profit, and Faith Based Organizations (FBO)

f. Identify other related documents and projects on the subject both within NFPA and external to NFPA:


U.S. Department of Health and Human Services Administration for Children and Supplies "Title 9 Sheltering Standards, Services, and Supplies,"

Red Cross Red Crescent "Guidelines for the Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance."


Guidance on Planning for Integration of Functional Needs Support Services in Genreal Population Shelters. FEMA

g. Identify the technical expertise and interest necessary to develop the project/document, and if the committee membership currently contains this expertise and interest:

Orlando Hernandez of NFPA Fire Protection has extensive first-hand experience with sheltering evacuees from Hurricanes Katrina and Rita.

Volunteers serving the following organizations represent the type of experience needed for this type of standard: Adventist Community Services, American Baptist Men, American Radio Relay League, American Red Cross, Brethren Disaster Ministries, Catholic Charities USA, Christian Disaster Response International, Christian Reformed World Relief Committee, Church World
Standards Council Agenda October 17-18, 2011

<table>
<thead>
<tr>
<th>h.</th>
<th>Provide an estimate on the amount of time needed to develop the new project/document:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Two years</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>i.</th>
<th>Comment on the availability of data and other information that exists or would be needed to substantiate the technical requirements and other provisions of the proposed new project/document:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Extensive experience gathered from long-term mass sheltering caused by Hurricane Katrina and Rita. There are several jurisdictions and Emergency Management coordinators that have firsthand knowledge of locating and supporting Mass Sheltering facilities, such as the ones used during Hurricane Katrina, and Hurricane Rita. The key is that this type of sheltering goes on for several weeks and jurisdictions will be faced with fire safety issues, ADA requirements and security issues such as unidentified pedophiles sleeping next to children in general population shelters.</td>
</tr>
</tbody>
</table>

Please send your request to:

NFPA
Codes and Standards Administration
1 Batterymarch Park
Quincy, MA 02169
Stds_admin@nfpa.org

Rev. 10/09

Signature: [Signature]

Name: Dean R. Larson PhD
(please print)

Affiliation: Member, NFPA 1000 TC
August 16, 2011

Amy Beasley Cronin
Secretary NFPA Standards Council
NFPA
1 Batterymarch Park
Quincy, MA 02269

Re: New Fire Test Recommended Practice

Dear:

At its July 7-8, 2011 meeting, the TC on Fire Tests directed me to submit a request to the Standards Council to solicit public input on a potential new recommended practice for a screening fire test standard for textiles based on the Small Scale test method contained in the 1989 Edition of NFPA 701, Standard Methods of Fire Tests for Flame-Resistant Textiles and Films. This correspondence serves as that request.

The following, quoted from the 1996 Edition, provides the history for NFPA 701 that resulted in the small scale test method being replaced with a totally new test:

“B-2 History and Background, 1996 Edition

B-2.1 In the past, curtain and drapery fabrics have been evaluated for their flammability characteristics primarily using the NFPA 701 test (1977 and 1989 editions), which has demonstrated a failure common to all similar tests that include a small-scale test using a mounting frame for the specimen. This failure occurs when thermoplastic products are tested. Thermoplastic tends to melt and pull away from the flame. Frequently, the thermoplastic melts and spills over and onto the frame, carrying some residual flame with it. When the test material and flame reach the frame, the frame acts as a wick and allows the material to continue burning for an extended time. Sometimes the flame self extinguishes shortly after reaching the frame. At other times, the frame acts as a candle wick and allows the flame to continue to consume test material. In any event, thermoplastics frequently fail the after flame criterion and sometimes the char length criterion as well.

B-2.2 In the past, NFPA 701 did permit the operator to test such thermoplastic materials using the large-scale test, which does not involve any sort of frame. In most cases, thermoplastic materials that failed the small-scale test using a frame would pass the large-scale test. This caused a problem because:

(a) More testing was needed for thermoplastic materials;

(b) Much more material was needed for the large-scale test; and
The large-scale test is much more expensive to perform. Furthermore, some regulatory jurisdictions required that materials pass both tests. 

B-2.3 During the 1980s considerable effort was expended to modify the NFPA 701 tests and to arrive at pass/fail criteria for the small-scale test that would agree more closely with the results obtained with the large-scale test. During this time, a series of tests involving multilayer composites was performed at Southwest Research Institute by Belles and Beitel. 

B-2.4 The tests by Belles and Beitel primarily involved combinations of materials, each of which passed the NFPA 701 small-scale test. The tests were performed on full-scale draperies hung close to a gypsum board wall, which was set up to be freestanding in a very large test room. A gypsum board ceiling extended out over the draperies for a distance of about 1 m (3.28 ft). The ignition source was a 280-mm (11-in.) flame from a bunsen burner. In order to ensure the validity of the test, the ignition flame was allowed to burn for 5 minutes. 

B-2.5 These tests demonstrated, in general, that draperies consisting of face and lining materials made from the same type of fiber were less likely to propagate flame extensively. Also, draperies consisting of face and lining fabrics made from dissimilar materials were very likely to propagate flame extensively and to be destroyed almost totally in less than 2 minutes. The only exception to these results were draperies consisting of face and lining materials made from cotton with nondurable, flame-resistant treatments. In these cases, the fabric tended to resist the flame for 2 minutes to 3 minutes and then to ignite and burn intensely. Since NFPA 701 is intended to evaluate fabrics for relatively short exposures to the flame, such fabrics generally pass NFPA 701 tests. 

B-2.6 In any event, these tests demonstrated a serious weakness in the NFPA 701 test, since the same combinations of fabrics that propagated the flames extensively in the SwRI tests performed well in both the NFPA 701 large and small-scale tests. This led the fiber and textile industry trade associations to work closely with NFPA, ASTM, and the Center for Fire Research at the National Institute for Science and Technology to implement a program to develop a new test that would evaluate both single-layer fabrics as well as multilayer composites, such as draperies for flame resistance, in a small-scale test that adequately predicts the results obtained at SwRI. 

B-2.7 The first phase of work at NIST confirmed the results of the SwRI tests and also showed that existing small-scale tests did not predict the SwRI results. 

B-2.8 The second phase resulted in the Test 1 method. Subsequent to the work at NIST, there has been some refinement of the test method as well as much verification testing. The Test 1 method, as presented here, does not reproduce the SwRI results precisely, since combinations that burned nearly completely (at least 95 percent destruction) in the SwRI tests showed a weight loss of approximately only 80 percent in this test. Nevertheless, the "good" performers at SwRI showed a weight loss of less than 40 percent in this test and the "bad" performers at SwRI showed a weight loss of greater than 40 percent. The one exception is vinyl-coated fabric blackout linings, which behave in a very inconsistent manner. Consequently, these linings and lined draperies containing such materials should be tested using Test 2, the large-scale test. 

B-2.9 During the development of the Test 1 method, another test method was tried and eventually abandoned because of the cost of the apparatus and potential operator safety
problems. This alternative test method was based on an analysis of the differences between the room-scale test and the NFPA 701 test. It was observed in the room-scale tests that flames usually propagated more rapidly on the portion of the specimen that faced the wall. This suggested that the radiant energy reflected back to the specimen by the wall was critical. In order to simulate this situation in a test cabinet such as the one used in the NFPA 701 test, it seemed appropriate to heat the back wall of the cabinet so that it would radiate heat to the back surface of the specimen. Consequently, a cabinet was equipped with electrical strip heaters mounted on a 1-cm (0.39-in.) aluminum plate that, in turn, was attached to the back of the cabinet. The remainder of the test was identical to ASTM D 3659, Standard Test Method for Flammability of Apparel Fabrics by Semi-Resistant Method. Back surface temperatures in excess of 240°C (465°F) were needed to duplicate the SwRI results. The quoted cost of a test chamber modified for ASTM D 3659 is $3000. The additional modification for heating the back wall surface was estimated at an additional $3000 for a total cost for the test chamber of approximately $6000. This cost would prevent many laboratories from participating in the interlaboratory test required to validate the test.

For this reason, as well as the possibility of operators sustaining burns when placing and removing specimens, this alternative method was abandoned.

**B-2.10** The present test method eliminates the need for heating the back surface by placing the specimen very close to the back surface. This tends to form a chimney that funnels the heat between the wall and the specimen. This heats the back wall, which, in turn, reradiates some of the heat onto the back surface of the specimen.”

At our July meeting, several committee members reported that, in spite of the change being in effect for over 15 years, they are seeing many if not most textile and film manufacturers still reporting performance based on the 1989 test method. Apparently this is being accepted by their customers and by AHJs. Although the committee discussed reinstating the old small scale test into the existing NFPA 701 that was rejected in favor of this request to create a recommended practice document on how to run the old test but also with documentation of its limitations and non-standard status.

Sincerely,

William E. Fitch, P.E.
Chair, TC on Fire Tests
### New Project Initiation Form

(To be completed by proponent of new project/document)

Additional pages may be attached if necessary.

<table>
<thead>
<tr>
<th>a. Explain the Scope of the new project/document:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The 1989 edition of NFPA 701, Standard Methods of Fire Tests for Flame-Resistant Textiles and Films, contained a Small Scale test method. This test method was removed and has not been published in the more recent editions of NFPA 701. The new document would be a recommended practice utilizing the original small-scale test method from the 1989 edition of NFPA 701 as a screening fire test standard for textiles that a textile manufacturer could use to compare new product performance with historical test data. It would be specifically noted as NOT being suitable for compliance with any regulatory codes or standards.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>b. Provide an explanation and any evidence of the need for the new project/document:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Committee members have reported that, in spite of the change being in effect for over 15 years, they are seeing many if not most textile and film manufacturers still reporting performance based on the 1989 test method. Apparently this is being accepted by their customers and perhaps even by AHJs.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>c. Identify intended users of the new project/document:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile and film manufacturers, testing laboratories.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>d. Identify individuals, groups and organizations that should review and provide input on the need for the proposed new project/document; and provide contact information for these groups:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile and film manufacturers, testing laboratories. National Council of Textile Organizations (NCTO), American Fiber Manufacturers Association (AFMA)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>e. Identify individuals, groups and organizations that will be or could be affected, either directly or indirectly, by the proposed new project/document, and what benefit they will receive by having this new document available:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Textile and film manufacturers, testing laboratories. National Council of Textile Organizations (NCTO), American Fiber Manufacturers Association (AFMA) It would provide a current document for manufacturers and testing labs to reference when conducting such tests.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>f. Identify other related documents and projects on the subject both within NFPA and external to NFPA:</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA 701</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>g. Identify the technical expertise and interest necessary to develop the project/document, and if the committee membership currently contains this expertise and interest:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The committee membership currently contains this expertise.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>h. Provide an estimate on the amount of time needed to develop the new project/document:</th>
</tr>
</thead>
<tbody>
<tr>
<td>One year</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>i. Comment on the availability of data and other information that exists or would be needed to substantiate the technical requirements and other provisions of the proposed new project/document:</th>
</tr>
</thead>
<tbody>
<tr>
<td>The apparatus is used by other test standards and is readily available in numerous laboratories and manufacturer’s facilities. They have data available on materials tested previously.</td>
</tr>
</tbody>
</table>

---

**Please send your request to:**

NFPA  
Codes and Standards Administration  
1 Batterymarch Park  
Quincy, MA 02169  
[Std_admin@nfpa.org](mailto:Std_admin@nfpa.org)

**Signature:** ____________________________  
Name: ____________________________  
(please print)  
Affiliation: ____________________________
I am transmitting to you herewith the following action of the Standards Council (August 8-11, 2011):

At its March 2011 meeting, the Standards Council issued several TIAs relating to ongoing review of the use of antifreeze in sprinkler systems. The extensive background and activities leading up to the development and issuance of these TIAs is set forth in the Council’s decision issuing the TIAs and in decisions and minute items cited in that decision. See Standards Council Decision 11-5 (SC #11-3-3-e, 11-3-4-e and 11-3-5-d, March 1, 2011). The TIAs were developed by the responsible technical committees and the Council emphasized in its decision issuing the TIAs that, while the Council had initially taken action to address the antifreeze questions pending further technical committee consideration, the technical issues concerning the content of NFPA codes and standards are generally for the responsible consensus-based technical committees to determine.

In issuing the TIAs, the Council stressed, in the following terms, that the sprinkler committees’ consideration of issues related to antifreeze was not an end:

In voting to issue these TIAs, the Council stresses that the sprinkler committees’ consideration of issues related to antifreeze is not at an end. The sprinkler standards are in the Annual 2012 revision cycle, and that the content of the new TIAs will be considered as Proposals during the process. The Fire Protection Research Foundation report discussed areas where future research might be needed, as, for example, in the area of commercial applications. It is anticipated that further research will be conducted and information developed that will aid the sprinkler committees in their continuing consideration of issues raised by the use of antifreeze in sprinkler systems.

To aid the work of the sprinkler committees, and for its own information, the Council requested the sprinkler committees, representatives of the relevant sprinkler industries, the Fire Protection Research Foundation and others with relevant information to provide reports to the Council at its August 2011 meeting "identifying research needs, planned or ongoing research, and any other activities or developments related to the use of antifreeze in sprinkler systems."

In response to the Council's request, the Council has received a single report from the Chair of the Technical Correlating Committee (TCC) on Sprinklers on potential research paths that may need to be taken as it pertains to antifreeze usage in sprinkler systems. The Council also heard an oral presentation from Executive Director of the Fire Protection Research Foundation on her efforts to explore potential research paths with potential funders. Disappointingly, the Council received no submissions from other interested parties. Nevertheless, it was never the Council’s intention to itself evaluate or analyze the information that it was seeking. Rather it was attempting to assist the
interested parties in maintaining their focus on and commitment to the ongoing task of providing the responsible NFPA technical committees with research and data to support effective standards development. While no action of the Council is required at this time, the Council expects the interested parties will continue investigation and research aimed at ensuring the safety of freeze protection in sprinkler systems and the incorporation of such new information as may be developed into subsequent editions of the sprinkler standards.

As suggested above, it is not the Council’s role to identify all of the gaps in research that may exist and it has not undertaken to evaluate or analyze all the information presented or to construct any research plan. While some of the research being discussed may be aimed at showing that the antifreeze limits are more stringent than necessary, attention should also be maintained on identifying any additional research needed to ensure the adequacy of all the current antifreeze limits. In this regard, and without suggesting that other avenues of research may also be advisable, the Council notes that the TCC Chair’s report and from the previously submitted research reports prepared for the Fire Protection Research Foundation point to at least one gap that needs to be filled. Specifically, it appears that the data that has been generated in the recent research on residential sprinklers has been extrapolated to standard spray sprinklers (i.e., commercial sprinklers). Standard spray sprinklers have different characteristics than residential sprinklers and research appears to be necessary to verify that the extrapolation of the data obtained on residential sprinklers is either valid for standard spray sprinklers or needs adjustment.

The Council is requesting that interested parties report back to the Council on or about March, 2012. Council meeting on plans and progress toward filling the gap identified above as well as on other research activities that are being considered, planned or undertaken.

Council Member Roland Huggins recused himself from the vote on this issue.

c: D. Berry, M. Brodoff, A. Cronin, M. Klaus, P. Foley, J. Goyette, E. Carroll
TCC on Automatic Sprinkler Systems (AUT-AAC)
TC on Residential Sprinkler Systems (AUT-RSS)
TC on Sprinkler System Installation Criteria (AUT-SSI)
TC on Inspection, Testing, and Maintenance of Water-Based Systems (INM-AAA)
NFPA Standards Council
Interested parties (individuals providing comments)
SUMMARY ACTION: The Standards Council voted to deny the appeal and issue TIA Nos. 1015, 1012 and 1013 on NFPA 13, NFPA 13D and NFPA 13R, respectively. In addition, the Council directed further activities as set forth in the decision.

In August of 2010, the Standards Council voted to issue three Tentative Interim Amendments (TIAs), the effect of which, pending further technical committee consideration, was to prohibit the use of antifreeze within the dwelling unit portions of sprinkler systems. In doing so, the Council took the unusual step of issuing TIAs without the full support of the responsible sprinkler committees. This was because the Council was presented with an unusual and compelling situation in which the status quo in the existing sprinkler documents was no longer tenable, and in which the circumstances required emergency action. (See Standards Council Decision #10-10 [August 5, 2010]). In its decision, the Council stressed that its action was strictly an interim measure that would remain in place "unless and until the responsible technical committees, after due consideration and any correlation by the [Technical Correlating Committee], reach consensus on a different approach." The Council, moreover, stressed that "it is not undertaking to make any final technical determination about the correct course of action that may eventually emerge. The technical issues concerning the content of NFPA codes and standards are generally for the responsible consensus-based technical committees to determine, and the same should be true in this case." In turning the matter back to the sprinkler committees, the Council noted that the TIAs all involved standards that address the design and installation of new sprinkler systems. It asked the technical committees to examine the important question of what should be done to address antifreeze in existing residential sprinkler systems. Finally, the Council noted that the TIAs did not address antifreeze in nonresidential commercial applications and suggested the need for further research and consideration of the treatment of nonresidential commercial applications as well. (See Standards Council Decision #10-10).

The sprinkler committees have now completed the review and consideration of the antifreeze issues as anticipated in Standards Council Decision #10-10. The technical committees have developed and reached consensus on three new TIAs related to the use of antifreeze in sprinkler systems that proposed to supersede the TIAs previously issued on an interim basis by the Council.
The new TIAs, which were presented to the Council at its meeting of February 28 – March 1, 2011 are: TIA Nos. 1015, 1012 and 1013 on the 2010 editions, respectively, of NFPA 13, Standard for the Installation of Sprinkler Systems, NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two- Family Dwellings and Manufactured Homes, and NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height. Also considered by the Council at the meeting was an appeal relating to the TIAs from Dana Haagensen, Massachusetts Department of Fire Services. The appeal requested that the Council not issue the new TIAs and that the three existing TIAs issued in Standards Council Decision D#10-10, and which would be superseded by the new TIAs, remain in place. The existing TIAs, for new installations, prohibit the use of antifreeze solutions within all NFPA 13D applications and within the dwelling unit portions of NFPA 13 and NFPA 13R sprinkler systems.

As suggested above, the new TIAs replace the complete prohibition on the use of antifreeze in the dwelling unit portions of new sprinkler systems. Described in general terms, TIA Nos. 1015, 1012 and 1013, taken together: limit the antifreeze solutions used in sprinkler systems to manufacturer premixed antifreeze solutions only; limit the use of antifreeze in sprinkler systems to specified volume concentrations based on one of the types of permitted solutions; provide additional provisions based on the type of sprinkler for NFPA 13 sprinkler systems; and provide additional requirements for NFPA 13D systems including provisions for annual testing and provisions based on whether the NFPA 13D system is new or existing. The TIAs do not address existing systems designed to NFPA 13 or 13R, however, another TIA on NFPA 25, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, that is being issued concurrently with these TIAs and that has not been the subject of an appeal, does address antifreeze concentrations for these systems. (See Minute Item 11-3-6, Standards Council Meeting of February 28-March 1, 2011; see also Minute Item 11-3-7, for another TIA on NFPA 25, which did not pass ballot and has not been appealed.) The individual TIAs must, of course, be consulted for the precise terms of the provisions they contain.

The three new TIAs were balloted through the responsible Technical Committees (TC) – the Technical Committee on Sprinkler System Installation Criteria for NFPA 13, and the Technical Committee on Residential Sprinklers for NFPA 13D and NFPA 13R – as well as the Technical Correlating Committee on Automatic Sprinkler Systems (the TCC). Balloting was completed in accordance with the NFPA Regulations Governing Committee Projects, to determine if it had the necessary three-fourths majority support on technical merit and emergency nature in favor of issuance. All three TIAs passed the ballots of the TCs and the TCC on both technical merit and emergency nature. One public comment was received.

The appeal requests that the Council overturn the action recommended by the NFPA codes and standards development process and not issue the TIAs. On appeal, the Standards Council accords great respect and deference to the codes and standards development process. In conducting its review, the Council will overturn the result recommended through that process, only where a clear and substantial basis for doing so is demonstrated. The Council has reviewed the entire record concerning this matter and
has considered all the arguments raised in this appeal. In the view of the Council, this appeal does not present any clear and substantial basis on which to overturn the result recommended by the NFPA codes and standards development process. Accordingly, the Council has voted to deny the appeal and issue TIA Nos. 1015, 1012 and 1013.

As indicated above, the Council's previous action in limiting the use of antifreeze in sprinkler systems was intended as an interim measure to allow the sprinkler committees the time and opportunity to review the available information and research and make the final consensus determination about what should or should not be contained in the sprinkler standards concerning the antifreeze issues. The sprinkler committees have now processed the issues and reached a consensus, meeting in each case the demanding three-quarter majority vote. The committees have reviewed and considered the available information, including the research presented in the Fire Protection Research Foundation report, "Antifreeze Solutions in Home Fire Sprinkler Systems, Phase II Research Final Report" issued in 2010. Moreover, and importantly, the TIAs address the use of antifreeze in nonresidential commercial applications and in existing installations, subjects that were not able to be addressed in the previous TIAs. The committees have arrived at reasonable conclusions based on the available information and the many considerations that must be weighed in arriving at consensus judgments. Since absent compelling circumstances were not presented here, the Council must defer to the consensus judgments of the committees.

In voting to issue these TIAs, the Council stresses that the sprinkler committees’ consideration of issues related to antifreeze is not at an end. The sprinkler standards are in the Annual 2012 revision cycle, and that the content of the new TIAs will be considered as Proposals during the process. The Fire Protection Research Foundation report discussed areas where future research might be needed, as, for example, in the area of commercial applications. It is anticipated that further research will be conducted and information developed that will aid the sprinkler committees in their continuing consideration of issues raised by the use of antifreeze in sprinkler systems. In the meantime, the Council is requesting, both in aid of the committees’ work and for the Council’s information, that the sprinkler committees, representatives of the relevant sprinkler industries, the Fire Protection Research Foundation, and any other parties with relevant information provide reports to the Council at its next meeting identifying research needs, planned or ongoing research, and any other activities or developments related to the use of antifreeze in sprinkler systems.

Council Member Roland Huggins recused himself during the deliberation and vote on the issue.
Pursuant to Section 5 of the NFPA Regulations Governing Committee Projects, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 13, Standard for the Installation of Sprinkler Systems, 2010 edition. The TIA was processed by the Technical Committee on Sprinkler System Installation Criteria and the Technical Correlating Committee on Automatic Sprinkler Systems, and was issued by the Standards Council on March 1, 2011, with an effective date of March 21, 2010.

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

1. Add a new definition as 3.4.1.1 to read as follows:

3.4.1.1 Premixed Antifreeze Solution. A mixture of an antifreeze material with water that is prepared by the manufacturer with a quality control procedure in place that ensures that the antifreeze solution remains homogeneous.

2. Remove the new section 7.6.1 that was added by issuance of TIA No. 10-1 (Log #1000) and renumber sections.

3. Revise 7.6.1.5 to read as follows:

7.6.1.5 A placard shall be placed on the antifreeze system main valve that indicates the manufacture type and brand of the antifreeze solution, the concentration by volume of the antifreeze solution used, and the volume of the antifreeze solution used in the system.

4. Revise 7.6.2.1 to read as follows:

7.6.2.1* Antifreeze solutions shall be limited to premixed antifreeze solutions of glycerin (chemically pure or United States Pharmacopoeia 96.5%) at a maximum concentration of 48% by volume, or propylene glycol at a maximum concentration of 38% by volume.

5. Add a new 7.6.2.1.1 to read:

7.6.2.1.1 Premixed antifreeze solutions of propylene glycol exceeding 40% concentration by volume shall be permitted for use with ESFR sprinklers where the ESFR sprinklers are listed for such use in a specific application.

6. Add new 7.6.2.1.2 to read as follows:

7.6.2.1.2 Premixed antifreeze solutions other than those described in 7.6.2.1 that are listed for use in sprinkler systems shall be permitted to be used.

7. Add a new 7.6.2.1.3 to read as follows:
All premixed antifreeze solutions shall be provided with a certificate from the manufacturer indicating the type of antifreeze, concentration by volume, and freezing point.

8. Delete current Table 7.6.2.2 and replace it with the following table in the annex renumbered as Table A.7.6.2.1

A.7.6.2.1 See Table A.7.6.2.1.

### Table A.7.6.2.1 Properties of Glycerin and Propylene Glycol

<table>
<thead>
<tr>
<th>Material</th>
<th>Solution (by volume)</th>
<th>Specific Gravity at 77°F (25°C)</th>
<th>Freezing Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin (C.P. or U.S.P. grade)</td>
<td>0%</td>
<td>1.000</td>
<td>32, 0</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.014</td>
<td>31, -0.5</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>1.029</td>
<td>28, -2.2</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>1.043</td>
<td>25, -3.9</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>1.059</td>
<td>20, -6.7</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>1.071</td>
<td>16, -8.9</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>1.087</td>
<td>10, -12</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>1.100</td>
<td>4, -15.5</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>1.114</td>
<td>-2, -19</td>
</tr>
<tr>
<td></td>
<td>45</td>
<td>1.130</td>
<td>-11, -24</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>1.141</td>
<td>-19, -28</td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>0</td>
<td>1.000</td>
<td>32, 0</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>1.004</td>
<td>26, -3</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>1.008</td>
<td>25, -4</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>1.012</td>
<td>22, -6</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>1.016</td>
<td>19, -7</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>1.020</td>
<td>15, -10</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>1.024</td>
<td>11, -12</td>
</tr>
<tr>
<td></td>
<td>35</td>
<td>1.028</td>
<td>2, -17</td>
</tr>
<tr>
<td></td>
<td>40</td>
<td>1.032</td>
<td>-6, -21</td>
</tr>
</tbody>
</table>

C.P.: Chemically Pure; U.S.P.: United States Pharmacopoeia 96.5%.

8. Delete 7.6.2.3 and Table 7.6.2.3.

9. Revise 7.6.2.4 to read as follows:

7.6.2.4 A premix antifreeze solution with a freezing point below the expected minimum temperature for the locality shall be provided.

10. Delete existing 7.6.2.5 as well as the Figures 7.6.2.5(a), 7.6.2.5(b), and 7.6.2.5(c) and Annex A.7.6.2.5.

11. Delete 7.6.2.6.

12. Add an asterisk to Section 7.6 and a new Annex A.7.6 to read as follows:

A.7.6 In cold climates and areas where the potential for freezing of pipes is a concern, options other than antifreeze are available. Such options include installing the pipe in warm spaces, tenting insulation over the piping (as illustrated in NFPA 13D), listed heat tracing, and the use of dry pipe systems and preaction systems.

13. In A.7.6.2, delete the second paragraph.
A.7.6.2 Listed CPVC sprinkler pipe and fittings should be protected from freezing with glycerine only. The use of diethylene, ethylene, or propylene glycols is specifically prohibited. Laboratory testing shows that glycol-based antifreeze solutions present a chemical environment detrimental to CPVC.

14. Delete existing A.7.6.2.4 and Figure A.7.6.2.4.

Issue Date: March 1, 2011

Effective Date: March 21, 2011

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/codelist)

Copyright © 2011 All Rights Reserved
NATIONAL FIRE PROTECTION ASSOCIATION
Pursuant to Section 5 of the NFPA Regulations Governing Committee Projects, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, 2010 edition. The TIA was processed by the Technical Committee on Residential Sprinkler Systems and the Technical Correlating Committee on Automatic Sprinkler Systems, and was issued by the Standards Council on March 1, 2011, with an effective date of March 21, 2011.

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

1. Undo all of the changes made by TIA No. 10-1 (Log #994) to sections 3.3.9.1, 4.1.4, 5.2.7, 8.3.2 and 8.3.3 returning NFPA 13D to the text of the published 2010 edition with the following changes:

2. Add a new definition as 3.3.9.1.1 and related annex note to read as follows:

**3.3.9.1.1** Premixed Antifreeze Solution. A mixture of an antifreeze material with water that is prepared and factory-mixed by the manufacturer with a quality control procedure in place that ensures that the antifreeze solution remains homogeneous.

**A.3.3.9.1.1** Where a tank is used as the water supply for the sprinkler system, the tank is not permitted to be filled with antifreeze.

3. Revise 4.1.4 and related annex note to read as follows:

**4.1.4** Antifreeze Systems.

**A.4.1.4** Sampling from the top and bottom of the system helps to determine if the solution has settled. Antifreeze solutions are heavier than water. If the antifreeze compound is separating from the water due to poor mixing, it will exhibit a higher concentration in the lower portion of the system than in the upper portions of the system. If the concentration is acceptable near the top, but too low near the water connection, it may mean that the system is becoming diluted near the water supply. If the concentration is either too high or too low in both the samples, it may mean that the wrong concentration was added to the system.

On an annual basis, test samples should be drawn from test valve B as shown in Figure 8.3.3.2.1(1), especially if the water portion of the system has been drained for maintenance or repairs. A small hydrometer can be used so that a small sample is sufficient. Where water appears at valve B, or where the sample indicates that the solution has become weakened, the entire system should be emptied and refilled with acceptable solution as previously described.

Where systems are drained in order to be refilled, it is not typically necessary to drain drops that are less than 36 inches in length. Most systems with drops have insufficient volume to cause a problem, even if slightly higher concentration solutions collect in the drops. For long drops with significant volume, consideration should be given to draining drops if there is evidence that unacceptably high concentrations of antifreeze have collected in these long drops.
When emptying and refilling antifreeze solutions, every attempt should be made to recycle the old solution with the antifreeze manufacturer rather than discarding it.

4.1.4.1 Annual Antifreeze Solution Test and Replacement Procedure.

4.1.4.1.1 Samples of antifreeze solution shall be collected by qualified individuals in accordance with 4.1.4.1.1.1 or 4.1.4.1.1.2 on an annual basis.

4.1.4.1.1.1 The system shall be drained to verify that (a) the solution is in compliance with 8.3.3, and (b) the solution provides the necessary freeze protection. Solution samples shall be taken near the beginning and near the end of the draining process.

4.1.4.1.1.2* Solution samples shall be taken at the highest practical elevation and the lowest practical elevation of the system.

A.4.1.4.1.1.2 If not already present, test connections (valves) for collection of solution samples should be installed at the highest and lowest practical locations of the system or portion of the system containing antifreeze solution.

4.1.4.1.2 The two samples collected in accordance with the procedures specified in 4.1.4.1.1.1 or 4.1.4.1.1.2 shall be tested to verify that the specific gravity of both samples is similar and that the solution is in compliance with 8.3.3. The specific gravity of each solution shall be checked using a hydrometer with a suitable scale or a refractometer having a scale calibrated for the antifreeze solution.

4.1.4.1.3* If concentrations of the two samples collected in accordance with the procedures above are similar and in compliance with 8.3.3, then (a) the solution drained in accordance with 4.1.4.1.1.1 can be used to refill the system, or (b) the existing undrained solution tested in accordance with 4.1.4.1.1.2 shall be permitted to continue to be used. If the two samples are not similar and not in compliance with 8.3.3, then a solution in compliance with 8.3.3 shall be used to refill the system.

A.4.1.4.1.3 In the past, for some existing systems subject to extremely low temperatures, antifreeze solutions with concentrations greater than what is now permitted by NFPA 13D were used. Such high concentrations of antifreeze are no longer permitted. In situations where extremely low temperatures are anticipated, refilling the fire sprinkler system with a concentration of antifreeze solution currently permitted by the standard might not provide sufficient freeze protection without additional measures. Such measures might include converting the antifreeze system to another type of sprinkler system.

4.1.4.1.4 A tag shall be attached to the riser indicating the date the antifreeze solution was tested. The tag shall also indicate the type and concentration of antifreeze solution (by volume) with which the system is filled, the date the antifreeze was replaced (if applicable), the name of the contractor that tested and/or replaced the antifreeze solution, the contractor’s license number, a statement indicating if the entire system was drained and replaced with antifreeze, and a warning to test the concentration of the antifreeze solutions at yearly intervals per NFPA 13D.

4. Add an asterisk to 8.3.3 and add a new A.8.3.3 to read as follows:

8.3.3* Antifreeze Systems.

A.8.3.3 Where protection of pipes from freezing is a concern, options other than antifreeze are available. Such alternatives include running the piping in warm spaces, tenting insulation over pipe, dry-pipe systems, and preaction systems.

5. Revise 8.3.3.2.1 to read as follows:

8.3.3.2.1* Unless permitted by 8.3.3.2.1.1, antifreeze solutions shall be limited to premixed antifreeze solutions of glycerine (chemically pure or United States Pharmacopoeia 96.5%) at a maximum concentration of 48% by volume, propylene glycol at a maximum concentration of 38% by volume, or other solutions listed specifically for use in fire protection systems.

6. Add a new 8.3.3.2.1.1 to read as follows:

8.3.3.2.1.1. For existing systems, antifreeze solutions shall be limited to premixed antifreeze solutions of glycerine (chemically pure or United States Pharmacopoeia 96.5%) at a maximum concentration of 50% by volume, propylene glycol at a maximum concentration of 40% by volume, or other solutions listed specifically for use in fire protection systems.

7. Delete 8.3.3.2.2 and 8.3.3.2.3 and related Annex material A.8.3.3.2.3.

8. Move Table 8.3.3.2.3 to the annex and renumber as Table A.8.3.3.2.1 while deleting the rows in the table dealing with glycerine and 40% water, glycerine and 30% water, propylene glycol and 50% water and propylene glycol and 40% water. Add an annex note so that the annex and Table would appear as follows:

A.8.3.3.2.1 See Table A.8.3.3.2.1.
### Table A.8.3.3.2.1 Properties of Glycerine and Propylene Glycol

<table>
<thead>
<tr>
<th>Material</th>
<th>Solution (by volume)</th>
<th>Specific Gravity at 60°F (15.6°C)</th>
<th>Freezing Point °F</th>
<th>°C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerine (C.P. or U.S.P. grade)</td>
<td>50% water</td>
<td>1.145</td>
<td>-20.9</td>
<td>-29.4</td>
</tr>
<tr>
<td>Hydrometer scale 1.000 to 1.200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Propylene glycol</td>
<td>60% water</td>
<td>1.034</td>
<td>-6</td>
<td>-21.1</td>
</tr>
<tr>
<td>Hydrometer scale 1.000 to 1.200</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>C.P.: Chemically Pure; U.S.P.: United States Pharmacopoeia 96.5%.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. **Renumber 8.3.3.2.3.1 to 8.3.3.2.2.**

**8.3.3.2.2** The concentration of antifreeze solutions shall be limited to the minimum necessary for the anticipated minimum temperature.

10. **Delete 8.3.3.2.4, 8.3.3.2.5 and Table 8.3.3.2.5.**

11. **Renumber 8.3.3.2.6 as 8.3.3.2.3 and renumber A.8.3.3.2.6 as A.8.3.3.2.3. Also renumber Figure A.8.3.3.2.6 as Figure A.8.3.3.2.3.**

**8.3.3.2.3** An antifreeze solution with a freezing point below the expected minimum temperature for the locality shall be installed.

**A.8.3.3.2.3** Beyond certain limits, an increased proportion of antifreeze does not lower the freezing point of the solution (see Figure A.8.3.3.2.3). Glycerine, diethylene glycol, ethylene glycol, and propylene glycol never should be used without mixing with water in the proper proportions, because these materials tend to thicken near 32°F (0°C).

12. **Renumber 8.3.3.2.7 as 8.3.3.2.4 and revise to read as follows:**

**8.3.3.2.4** The specific gravity of the antifreeze shall be checked by a hydrometer with a scale having 0.002 subdivisions in accordance with Figure 8.3.3.2.4(a) and 8.3.3.2.4(b).

13. **Renumber Figure 8.3.3.2.3(a) as Figure 8.3.3.2.4(a) and delete the 50% curve.**

14. **Renumber Figure 8.3.3.2.3(b) as Figure 8.3.3.2.4(b) and delete the 60% and 70% curves.**

**Issue Date:** March 1, 2011

**Effective Date:** March 21, 2011

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/codelist)
Tentative Interim Amendment

NFPA 13R
Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height

2010 Edition

Reference: 4.7 and 5.4.3
TIA 10-2
(SC 11-3-5/TIA Log #1013)

Pursuant to Section 5 of the NFPA Regulations Governing Committee Projects, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, 2010 edition. The TIA was processed by the Technical Committee on Residential Sprinkler Systems and the Technical Correlating Committee on Automatic Sprinkler Systems, and was issued by the Standards Council on March 1, 2011, with an effective date of March 21, 2011.

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

1. Delete Section 4.7, that was language added by the issuance of TIA No. 10-1 (Log #995) in August of 2010.

2. Delete new 5.4.3, that was language added by the issuance of TIA No. 10-1 (Log #995) in August of 2010.

3. Revise 5.4.4 to 5.4.3, that was language added by the issuance of TIA No. 10-1 (Log #995) in August of 2010 to read as follows:

5.4.3 Where antifreeze systems, dry pipe systems, and preaction systems are installed, they shall be installed in accordance with NFPA 13.

Issue Date: March 1, 2011
Effective Date: March 21, 2011

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/codelist)

Copyright © 2011 All Rights Reserved
NATIONAL FIRE PROTECTION ASSOCIATION
SUMMARY ACTION: The Standards Council voted to issue TIAs 1000, 995 and 994 on NFPA 13, NFPA 13R and NFPA 13D, respectively, which, for new installations, prohibit the use of antifreeze solutions within all NFPA 13D applications and within the dwelling unit portions of NFPA 13 and NFPA 13R sprinkler systems. In addition, the Council directed that the responsible technical committees conduct further activities as set forth in the decision.

At its meeting of August 3-5, 2010, the Standards Council considered six proposed Tentative Interim Amendments (TIAs), together with related appeals, regarding antifreeze in new residential fire sprinkler installations. Two TIAs were submitted on each of the following documents: NFPA 13, Standard for the Installation of Sprinkler Systems, NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two- Family Dwellings and Manufactured Homes, and NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height. Of the TIAs, one group of three (TIAs 1000, 995, and 994) sought collectively to prohibit the use of antifreeze solutions within all NFPA 13D applications and within the dwelling unit portions of NFPA 13 and NFPA 13R systems (the “No Antifreeze” TIAs). The other group of three (TIAs 996, 997, and 998) sought collectively to prohibit the use of antifreeze solutions in excess of 50% by volume within all NFPA 13D applications and within the dwelling unit portions of NFPA 13 and NFPA 13R systems (the “50% Antifreeze” TIAs). These latter TIAs permitted only the use of factory premixed antifreeze solutions.

The six proposed TIAs were balloted through the responsible Technical Committees – the Technical Committee on Sprinkler System Installation Criteria for NFPA 13, and the Technical Committee on Residential Sprinklers for NFPA 13D and NFPA 13R – as well as the Technical Correlating Committee on Automatic Sprinkler Systems (the TCC). Balloting was completed in accordance with the NFPA Regulations Governing Committee Projects, but, as detailed further in this decision, the ballot results are of limited significance because of new technical data and information that has recently become available. The TIAs, ballot results, and several related appeals have nevertheless been forwarded to the Council for consideration. In this unusual and compelling situation, in which the status quo in the existing sprinkler documents is no longer tenable, and in which circumstances require emergency action, the Council has voted to issue three TIAs, the effect of which, pending further technical committee consideration, will be to prohibit the use of antifreeze within the dwelling unit portions of sprinkler systems.
BACKGROUND

Antifreeze solutions have long been used in sprinkler systems to protect piping in unheated areas subject to freezing temperatures. Since at least 1940, NFPA standards have included guidance on the use of antifreeze solutions in sprinkler systems. The events that led to the development of the proposed TIAs to limit or prohibit the use of antifreeze solutions in residential sprinkler applications began when the NFPA became aware of a fire incident in Truckee, California, which took place in August of 2009. Emerging information concerning this incident raised concern surrounding the combustibility of antifreeze solutions in residential sprinkler systems. The incident reportedly involved a grease fire in a kitchen where a sprinkler system with a reportedly high - possibly in excess of 70% - concentration of antifreeze deployed. The fire resulted in a single fatality and serious injury to another person, and the possibility was raised that the antifreeze solution discharging from the sprinkler intensified the fire and resulting harm.

In response to these reports, several activities were initiated within the NFPA and the NFPA-affiliated Fire Protection Research Foundation (the Research Foundation). These activities and especially the resulting reports of the Research Foundation will be described here only in brief, and the reader is urged to consult the Research Foundation reports available at www.nfpa.org/antifreeze for the presentation of the available research and analysis. With this caveat, it suffices to say, in outline, that the NFPA, in response to reports of the Truckee incident, commissioned the Research Foundation to conduct a literature review and develop a research plan on antifreeze solutions and residential fire sprinkler systems. A report on this project was published by the Research Foundation as "Literature Review and Research Plan Antifreeze Solutions in Home Fire Sprinkler Systems," (prepared for the Fire Protection Research Foundation by Code Consultants, Inc., May 28, 2010) (the First Research Foundation Report). Meetings of the NFPA Technical Correlating Committee on Sprinkler Systems (the TCC) were also convened to review available information. During this period, Underwriters Laboratories (UL) conducted a series of tests in an effort to begin exploring the effect of antifreeze solutions in certain residential sprinkler configurations (the Phase I tests). The Phase I tests were not conducted as part of the Research Foundation activities, but several of the tests were witnessed by researchers working on behalf of the Research Foundation and are summarized in the First Research Foundation Report. The results of these Phase I tests were also presented at a meeting of the TCC. The results of these limited Phase I tests could not provide answers to all questions concerning the safe use of antifreeze solutions in residential sprinkler systems. They did point to serious concerns with the use of higher concentrations of antifreeze and were inconclusive as to the safety of antifreeze in lower concentrations of 50% by volume or less.

With the Phase I tests, the First Research Foundation Report and other available information, two sets of competing TIAs on antifreeze in residential sprinkler systems were developed and submitted by several parties. As summarized more fully above, the three No Antifreeze TIAs, prohibited the use of antifreeze solutions and the 50% Antifreeze TIAs prohibited the use of antifreeze solutions in excess of 50% by volume and required that only factory premixed solutions be used. The TIAs were submitted to the ballot of the responsible technical committees and the TCC. Five of the TIAs failed letter ballot of the technical committees. The No Antifreeze TIAs showed considerable support, including one TIA which failed by only a single vote. One of the TIAs, the 50% Antifreeze TIA on NFPA 13 did pass ballot. Unlike the balloting on the TIAs for NFPA 13D and NFPA 13R, however, the 50% Antifreeze TIA on NFPA 13 was balloted separately from the No Antifreeze option for NFPA 13, and it is not clear what effect the sequencing of the balloting on NFPA 13 may have had on the outcome.

The confusing and inconclusive ballot results may have stemmed from the limited nature of the data then available to the technical committees. The Council, however, need not undertake to
analyze these TIA results in any depth because events have largely superseded them. Specifically the First Research Foundation Report had concluded that "the existing research as well as the recent near-term [Phase I] testing conducted by UL indicate the urgent need for further research into the effectiveness of currently permitted antifreeze solutions." This conclusion led to the development of a Phase II test plan to investigate in greater depth the potential for large-scale ignition of antifreeze solutions discharged from residential sprinklers and the influence of antifreeze solutions on the effectiveness of residential sprinkler systems in controlling a fire condition and maintaining tenable conditions for egress. With great rapidity, the Research Foundation mounted a project to fund and conduct the Phase II testing, with UL and Code Consultants, Inc. under contract to do the testing and to develop a report. However, even under the aggressive testing schedule, the test results did not become available until after the close of balloting on the TIAs. Indeed, the Phase II tests were completed just prior to the commencement of the Standards Council's August meeting and have now been published as "Interim Report: Phase II Research Antifreeze Solutions in Home Fire Sprinkler Systems, (Prepared for the Fire Protection Research Foundation by Code Consultants, Inc., August 11, 2010) (www.nfpa.org/antifreeze) (the Second Research Foundation Report).

At the Standards Council meeting, Steve Wolin, of Code Consultants, Inc., presented the Research Foundation reports, including the results of the Phase I and II tests. A hearing then proceeded to consider appeals and arguments as to what course of action the Council should pursue with respect to the TIAs. Rather than focus on the various arguments presented on the TIAs, the Council for purposes of this decision, focuses on some undisputed conclusions of the Phase II testing, namely that the existing provisions in NFPA 13, NFPA 13R and NFPA 13D, relating to antifreeze are no longer supportable as written. Specifically, current standards recommend the use of the antifreeze solutions, depending on the chemical being used and level of freeze protection being sought, to exceed 50% concentration, by volume, up to, in some cases, as much as 70%. See, e.g., NFPA 13, Table 7.6.2.2. The conclusions of the Research Foundation report, however, were clear this was no longer acceptable. Specifically, the new research from the Phase II testing clearly indicates that antifreeze solutions of propylene glycol exceeding 40% and glycerin exceeding 50% by volume are not appropriate for use in residential sprinkler systems, and the fire size increased (to some extent) for all the antifreeze solutions tested under certain sprinkler discharge and fire test conditions. Moreover, although these concentrations met UL 1626 fire control criteria and exhibited similar performance to that of water alone, consideration must also be given to adding appropriate safety factors for concentrations of these antifreeze solutions in the relevant standards. See Second Research Foundation Report at Executive Summary, pp. 1-2.

Given these conclusions, the Council must now determine how to proceed. At the hearing to consider the TIAs, several alternatives were suggested and advocated to varying degrees, including: take no action and refer the matter back to the responsible technical committees to review the new technical data from the Phase II testing and consider further appropriate action; issue the 50% Antifreeze TIAs; issue the No Antifreeze TIAs; or issue modified TIAs taking into account the test results reported by the Research Foundation.

In normal circumstances, the Council might well have delayed taking any action in order to give time to the responsible technical committees to review and take action based on the technical issues and new data presented by the Research Foundation reports. It is clear, however, from the discussion at the hearing, and from the complicated nature of the technical information that will need to be reviewed that consideration by the technical committees will require some time. Given the serious nature of the safety concerns related to the current concentrations of antifreeze permitted in existing NFPA standards, the Council believes that immediate action needs to be taken.
As to the actions that have been proposed, issuing TIAs that would merely limit antifreeze solutions to 50% by volume is not an adequate step. The Phase II test results showed that a 50% by volume limitation for propylene glycol is not appropriate, and, depending on what safety factors may be needed, may not be appropriate for glycerin either. The 50% Antifreeze TIAs, moreover, would allow 50% solutions of other antifreeze compounds including diethylene glycol and ethylene glycol, which have not been tested and may well require different limits. Given the circumstances, the Council does not believe it would be appropriate for the Council to issue the 50% Antifreeze TIAs.

Nor is it appropriate for the Council itself to craft and issue new TIAs that fully consider and address the technical issues raised by the Research Foundation data and other information now available. Crafting new TIAs is the province of the technical committees. In the interim, however, emergency action needs to be taken. This is not in dispute as the balloting on all the TIAs confirmed the emergency nature of addressing the existing antifreeze provisions concerning residential applications.

Considering the entire record before it, the Council has concluded that the most prudent course of action at this time must be the most conservative approach to assuring safety in new residential sprinkler installations. That course of action is to prohibit the use of antifreeze in new residential sprinkler systems unless and until the responsible technical committees, after due consideration and any correlation by the TCC, reach consensus on a different approach. Accordingly, the Council has voted to issue the three TIAs 1000, 995 and 994 on NFPA 13, NFPA 13R and NFPA 13D, respectively, that prohibit the use of antifreeze solutions in new residential sprinkler applications.

In reaching this decision, the Council wishes to make several points. First, the Council's action follows on previous action already taken by the NFPA. On July 6, 2010, the NFPA, separate from its standards development process, and acting in its role as a safety advocate, issued a Safety Alert responding to developing concerns about the use of antifreeze solutions in residential applications. The Safety Alert urged that, until further information was available, new residential sprinkler systems should be designed and installed so as not to require the use of antifreeze solutions. The TIAs now being issued merely extend this recommendation, pending any further consideration and action by the responsible technical committees.

Second, it should be noted that for 13R and 13D residential systems, sprinklers are not required to be installed in unheated areas. At any rate, the use of antifreeze should be avoidable in most if not all residential installations through alternative design approaches including the use of insulation and other means.

Third, the Council wishes to emphasize that in issuing the TIAs, it is not undertaking to make any final technical determination about the correct course of action that may eventually emerge. The technical issues concerning the content of NFPA codes and standards are generally for the responsible consensus based technical committees to determine, and the same should be true in this case. The Council’s action is an emergency action only, and is not intended to prejudge the merits of any further revisions that the responsible technical committees may propose. As to the technical committees’ further consideration of the technical issues, the record suggests that the Research Foundation reports and other information now available will require careful and considered review. This, of course, may take some time, but it is also possible that the technical committees may be able to act quickly to bring new recommendations to the Council. The Council urges the committees to address this matter with reasonable speed and provide clear technical substantiation for any further actions that are proposed. Should the committees do so...
prior to the Council's next scheduled meeting, the Council will make every effort to expedite its consideration of the matter through a special meeting or letter ballot.

The Council wishes to address two additional important matters beyond the scope of the present TIA's. First, the TIA's that were presented to the Council all involve standards that address the design and installation of new sprinkler systems. The important question of what should be done to address antifreeze in existing residential sprinkler systems is, therefore, not addressed by these TIA's. Fortunately, the NFPA in its July 6, 2010 Safety Alert has addressed existing systems. Specifically, the Safety Alert stresses that fire sprinklers are extremely effective protection devices, significantly reducing deaths, injuries and property loss from fire. It urges that these systems should not be disconnected and it recommends that the following actions be taken:

- If you have, or are responsible for, a residential occupancy with a fire sprinkler system, contact a sprinkler contractor to check and see if there is antifreeze solution in the system.

- If there is antifreeze solution in the system, as an interim measure, drain the system and replace it with water only. Problems associated with freezing of sprinkler pipes can be mitigated by alternative measures such as insulation. NFPA hopes to provide further guidance based on additional testing before the winter freezing months.

These recommendations and any updates that the NFPA may provide as a result of the Phase II testing (see www.nfpa.org/antifreeze for any updates as they may become available) provide important guidance on the handling of antifreeze in existing residential sprinkler systems. The responsible technical committees within the NFPA consensus codes and standards development process, however, should now review where and how relevant NFPA standards might be made to address antifreeze in existing systems. Relevant committees, including the Technical Committee on Sprinkler System Installation Criteria, the Technical Committee on Residential Sprinkler Systems, the Technical Correlating Committee on Automatic Sprinkler Systems, and the Technical Committee on Inspection, Testing, and Maintenance of Water-Based Systems, should consider this question in a coordinated manner and report back to the Council no later than its October 2010 meeting with any proposed actions or recommendations.

Finally, the actions taken in this decision do not address antifreeze in non-residential commercial applications. As the Research Foundation reports suggests, commercial sprinklers and occupancies present quite different characteristics than residential sprinklers and occupancies and, as the First Research Foundation Report suggests, any analysis of antifreeze in sprinkler systems is highly dependent on the specific characteristics of the sprinkler design and setting. The current activities, driven by clear concerns identified in residential sprinkler systems, have been a necessary response to an emerging problem. Further research will likely be necessary to better understand and address the use of antifreeze in various non-residential commercial settings. The role of the relevant committees in considering further standards development activities in this area and in recommending needed research is clear, and the Council is, therefore, requesting that they begin to review and consider the use of antifreeze in non-residential contexts and report back to the Council by its October 2010 meeting with any proposed actions or recommendations.

In conclusion, the Council wishes stress the importance of fire sprinklers in safeguarding lives and property. The home in particular is the place where most fire fatalities occur, and when home sprinklers are present, the risk of dying in a home fire decreases by 83%. It is hoped that the actions of the Standards Council, the valuable contributions of the NFPA and the Research Foundation, (including the project contractors, technical panel and sponsors), and the continuing
activities of the sprinkler related NFPA technical committees will all combine to help ensure the continued effectiveness and wide use of these important safety devices.

Council Member Roland Huggins recused himself during the hearings, deliberations and vote on the issue. Council Members Shane Clary and Ralph Gerdes wished to be recorded as voting negatively.
NFPA 13
Standard for the Installation of Sprinkler Systems
2010 Edition

Reference: 7.6.1
TIA 10-1
(SC 10-8-16/TIA Log #1000)

Pursuant to Section 5 of the NFPA Regulations Governing Committee Projects, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 13, *Standard for the Installation of Sprinkler Systems*, 2010 edition. The TIA was processed by the Technical Committee on Sprinkler System Installation Criteria and the Technical Correlating Committee on Automatic Sprinkler Systems, and was issued by the Standards Council on August 5, 2010, with an effective date of August 25, 2010.

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

1. **Add a new section 7.6.1 as follows:**

   **7.6.1 Dwelling Units.** Antifreeze shall not be permitted to be used within the dwelling unit portions of sprinkler systems.

2. **Renumber the remainder of the section accordingly.**

**Issue Date:** August 5, 2010

**Effective Date:** August 25, 2010

(Note: For further information on NFPA Codes and Standards, please see [www.nfpa.org/codelist](http://www.nfpa.org/codelist))

Copyright © 2010 All Rights Reserved
NATIONAL FIRE PROTECTION ASSOCIATION
Tentative Interim Amendment

NFPA 13D
Standard for the Installation of Sprinkler Systems in
One- and Two-Family Dwellings and Manufactured Homes

2010 Edition

Reference: 3.3.9.1, 4.1.4, 5.2.7, 8.3.3, and A.8.3.3.1
TIA 10-1
(SC 10-8-18/TIA Log #994)

Pursuant to Section 5 of the NFPA Regulations Governing Committee Projects, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 13D, Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes, 2010 edition. The TIA was processed by the Technical Committee on Residential Sprinkler Systems and the Technical Correlating Committee on Automatic Sprinkler Systems, and was issued by the Standards Council on August 5, 2010, with an effective date of August 25, 2010.

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

1. Delete 3.3.9.1 and renumber remainder of subsection 3.3.9.
2. Delete entire subsection 4.1.4, Antifreeze Systems.
3. Revise 5.2.7 to read as follows:
   “Joints for the connection of copper tube for wet type systems shall be soldered joints or be brazed.” (delete the words “and antifreeze systems”).
4. Delete Item (2) of subsection 8.3.2 and renumber (3) as (2).
5. Revise section 8.3.3.1 to read:
   8.3.3.1 Antifreeze shall not be permitted in sprinkler systems.
6. Delete A.8.3.3.1.
7. Delete all subsections and accompanying Annex A paragraphs commencing with 8.3.3.2 and ending with 8.3.3.5.

Issue Date: August 5, 2010
Effective Date: August 25, 2010

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/codelist)
Tentative Interim Amendment

NFPA 13R
Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height

2010 Edition

Reference: 4.7 and 5.4.3
TIA 10-1
(SC 10-8-19/TIA Log #995)

Pursuant to Section 5 of the NFPA Regulations Governing Committee Projects, the National Fire Protection Association has issued the following Tentative Interim Amendment to NFPA 13R, Standard for the Installation of Sprinkler Systems in Residential Occupancies up to and Including Four Stories in Height, 2010 edition. The TIA was processed by the Technical Committee on Residential Sprinkler Systems and the Technical Correlating Committee on Automatic Sprinkler Systems, and was issued by the Standards Council on August 5, 2010, with an effective date of August 25, 2010.

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

1. Add new sections as follows:

4.7 Antifreeze Systems. Antifreeze shall not be permitted within the dwelling unit portions of sprinkler systems.

5.4.3 Antifreeze shall not be permitted within the dwelling unit portions of sprinkler systems.

2. Renumber 5.4.3 as 5.4.4.

Issue Date: August 5, 2010
Effective Date: August 25, 2010

(Note: For further information on NFPA Codes and Standards, please see www.nfpa.org/codelist)
The SMO-AAA Committee is currently responsible for NFPA 92, *Smoke Control Systems* and NFPA 204, *Smoke and Heat Venting*. NFPA 92 is currently in the A14 (3yr) revision cycle and NFPA 204 is in the F15 (4yr) revision cycle. The committee would like to request moving both documents into the same cycle. This will allow the committee to coordinate code requirements between the two documents and reduce the number of required meetings. The committee is also aware of the large number of documents in the A14 cycle, and this change will help alleviate some of the demand on the NFPA production staff. The committee requests that both documents be moved to the F2014 (3 year) revision cycle. The committee voted to approve this request during the September 20th pre-ROP conference call.

<table>
<thead>
<tr>
<th>Document</th>
<th>Current Cycle</th>
<th>Requested Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>NFPA 92, Smoke Control Systems</td>
<td>A2014 (3 year)</td>
<td>F2014 (3 year)</td>
</tr>
<tr>
<td>NFPA 204, Smoke and Heat Venting</td>
<td>F2015 (4 year)</td>
<td>F2014 (3 year)</td>
</tr>
</tbody>
</table>
TO: Standards Council  
CC: Linda Fuller  
FROM: Tracy Golinveaux  
DATE: September 20, 2011  
SUBJECT: Fire Test Document Cycle Change

The Fire Test Committee has undergone a few recent changes in its document cycles. All 23 Fire Test documents are in Fall Cycles. The majority of the documents are within 3 code cycles, however, with different revision cycles, the documents will not stay grouped together. The committee would like to reduce the number of meetings it is required to have by revising the code cycles for some of its documents as follows:

- NFPA 252: Change from 4 year to 5 year cycle
- NFPA 275: Change from F2014 to F2016 and change to 5 year cycle
- NFPA 289: Change from 4 to 5 year cycle
- NFPA 701: Change from 5 to 4 year cycle
- NFPA 253: Change from F2015 to F2014 and change to 4 year cycle
- NFPA 286: Change from F2015 to F2014 and change to 4 year cycle

This will consolidate our documents into 3 cycles which all have the same revisions cycles:
- All F2016s will have 5 year cycles
- All F2017s will have 5 year cycles
- All F2018s will have 4 year cycles

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>251</td>
<td>Fire Endurance of Building Construction and Materials</td>
<td>Withdrawn</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Withdrawn F2010</td>
</tr>
<tr>
<td>271</td>
<td>Heat and Visible Smoke Release Rates for Materials and Products Using an Oxygen Consumption Calorimeter</td>
<td>Withdrawn</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Withdrawn F2011</td>
</tr>
<tr>
<td>255</td>
<td>Surface Burning Characteristics of Building Materials (Tunnel Test)</td>
<td>Withdrawn</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Withdrawn F2009</td>
</tr>
<tr>
<td>256</td>
<td>Roof Coverings</td>
<td>Withdrawn</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Withdrawn A2008</td>
</tr>
<tr>
<td>258</td>
<td>Smoke Generation of Solid Materials</td>
<td>Withdrawn</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Withdrawn A2006</td>
</tr>
<tr>
<td>272</td>
<td>Heat and Visible Smoke Release Rates for Upholstered Furniture Components or Composites and Mattresses Using an Oxygen Consumption Calorimeter</td>
<td>Withdrawn</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Withdrawn A2007</td>
</tr>
</tbody>
</table>
TECHNICAL COMMITTEE ON
STATIC ELECTRICITY

MEMORANDUM

TO: Linda Fuller
FROM: R. P. Benedetti
DATE: September 23, 2011
SUBJECT: Request to Change Document Revision Cycle — NFPA 77

Linda:

The Technical Committee on Static Electricity requests a change to their scheduled document revision cycle for NFPA 77, Recommended Practice on Static Electricity, from the Fall 2012 cycle to the Annual 2013 cycle, without reopening Call for Proposals.

The Technical Committee has held several web conferences over the past nine months and a ROP meeting in August, with the objective of completing its work on amendments to NFPA 77, Recommended Practice on Static Electricity, including major additions to the section on flexible intermediate bulk containers that would correlate with ISO standards on the same subject. Because several details of the ISO requirements have not been settled, the Technical Committee was unable to complete the subject text in a manner that provides the necessary guidance to the user of NFPA 77. Rather than move forward with incomplete information, the Technical Committee wishes to have additional time to secure the missing information and incorporate it into the text of NFPA 77. The Technical Committee considers this important, as flexible intermediate bulk containers are a major means of transporting powdered and granular commodities in international commerce and it is important that the standards dealing with bonding and grounding

If you have any questions, please call me at extension 7433.

rpb/
cc CNil
STA/CORR
STA/NM
Stds. Cncl. File
October 4, 2011

Subject: NFPA 2, Hydrogen Technologies – Request to Slip Cycle

Dear NFPA Standards Council,

As the Chair of Hydrogen Technology Committee responsible for NFPA 2, Hydrogen Technologies, I am respectfully requesting, on behalf of the Hydrogen Technology committee, a full cycle slip for NFPA 2 from the current Fall 2013 cycle, to the Fall 2014 cycle.

The reasons for requesting a slip in cycle are as follows:

1. There is not a pressing need for the next edition of NFPA 2 to be issued in 2014 (per the Fall 2013 cycle). A one year slip would be acceptable.

2. NFPA 2 gets much of its technical content from NFPA 55. Because NFPA 55 is entering its ROC in October 2011, it is not expected that the final material will be available until early 2012. This leaves insufficient time to properly incorporate the material into NFPA 2 via proper proposals.

3. The acceleration of the proposal due date from May 2012 to January 2012 has left the TC uncomfortable with the time available to complete the current ongoing tasks related to continuous improvement of NFPA 2. The Committee is concerned that the quality of proposals generated by the current task groups would be negatively impacted by the schedule acceleration.

If you need any additional information, please call.

Sincerely,

Martin T. Gresho
President
FP2FIRE, Inc.
Item 11-10-18
As required by the operating procedures adopted by the HRBSAC, this memo serves as the 2011 Annual Report to the NFPA Standards Council.

The High Rise Building Safety Advisory Committee held a meeting via conference call on May 16, 2011. The primary purpose of this planning meeting was to identify and develop action items and tasks to be completed and further addressed at the scheduled in person meeting to be held on October 26 and 27, 2011 in Portland, Oregon. During HRBSAC’s meeting in June 2010, the committee decided the committee would meet twice per year. A planning conference call would be held at the beginning of each year to establish action items for the committee. An in person meeting would be held each year in the summer/fall to complete those action items and additional work of the committee. This format has been followed with the completion of the planning conference call and the scheduled meeting for October.

At its upcoming meeting in October, the committee will address new and emerging issues as well as any lingering issues regarding high rise buildings to be submitted to NFPA 1, NFPA 101 and NFPA 5000 for the upcoming revision cycle. The committee will generate public input on these issues to be submitted to the appropriate Technical Committees. In addition, the committee will review the Emergency Action Planning Guide and discuss the best options for publishing and distributing the final EAP (Emergency Action Planning Guide) document. Options discussed thus far have included a downloadable document on NFPA’s website, a published NFPA guide, or a collaborative work with other NFPA groups completing work on a similar topic.

The current committee roster for HRBSAC is provided below. NFPA decided to allow HRBSAC members to designate an Alternate member in September of 2006 and continues to offer that to members. Alternates will be able to participate and attend at the expense of NFPA when the principal member is not available.

<table>
<thead>
<tr>
<th>NAME</th>
<th>COMPANY/ORGANIZATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>James R. Quiter – Chair</td>
<td>Arup</td>
</tr>
<tr>
<td>Geoff Craighead</td>
<td>Universal Protection Service</td>
</tr>
<tr>
<td>Charles Jennings</td>
<td>The Skyscraper Safety Campaign (alternate)</td>
</tr>
<tr>
<td>Jon D. Magnusson</td>
<td>Magnusson Klemencic Associates (Representing NCSEA)</td>
</tr>
</tbody>
</table>
HRBSAC has pursued the following over the past year:

i) NFPA 101 and NFPA 5000 public input -

In accordance with the scope of the committee, the committee will continued to be a part of the code making process by developing work products relating to high rise building safety. NFPA 1, NFPA 101, and NFPA 5000 will commence their Public Input meetings for the 2015 editions beginning in May of 2012 and then again in August of 2012. At their upcoming October 2011 meeting, HRBSAC will develop a series of public input to be submitted to the Building Code/Life Safety Code and Fire Code Technical Committees.

ii) Emergency Action Planning Guide

HRB-SAC is currently working on producing a final copy of the Emergency Action Planning Guide. The document provides minimum criteria for developing an all-hazard (fire and non-fire) emergency action plan for use by personnel responding to emergencies. The committee developed a plan with strict deadlines that would allow for the completion and eventual publication of this document. A final “draft”, complete with comments and input from the committee, will be discussed at the October 2011 meeting. The next steps are to decide on how the document will be made available to the public.

iii) Events of Interest to HRB-SAC

At the upcoming meeting the Committee will review a draft of the FPRF project on elevator messaging strategies. While the Committee is not directly participating in this project, their expertise in high rise building safety is valuable to the FPRF. The committee has been encouraged to submit comments to this project and will provide feedback to the FPRF after reviewing the draft. Other events of interest to be discussed by HRB-SAC include a new project on examining the value of using elevators as tools for attacking fires in tall buildings which will be done between the Department of Fire Protection Engineering (FPE) at Worcester Polytechnic Institute (WPI), the Center for Public Safety Excellence (CPE), the International Association of Fire Fighters (IAFF), the National Institute of Standards and Technology (NIST), and the Urban Institute (UI).


Overall HRBSAC continues to be dedicated to and involved in the many issues surrounding high rise building safety. Over the past year, HRBSAC has provided key input to NFPA staff and TC’s for consideration in the revision of NFPA documents as well as peripheral projects that can benefit NFPA. The diverse views, backgrounds and emerging issues in building construction and life safety discussed by
the committee are critical as NFPA moves forward with addressing changes and meaningful safety improvements that encompass the high rise environment. We look forward to the newly renewed energy of the committee and their future work in high rise building safety.

C: R.Solomon
   A.Cronin
Item 11-10-22
## Fall 2014 Revision Cycle (New Process)

<table>
<thead>
<tr>
<th>Process Stage</th>
<th>Process Step</th>
<th>Dates for TC</th>
<th>Wks</th>
<th>Dates for CC</th>
<th>Wks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Input</td>
<td>Public Input Closing Date</td>
<td>1/4/2013</td>
<td>23</td>
<td>1/4/2013</td>
<td>10</td>
</tr>
<tr>
<td>Stage (First Draft)</td>
<td>Final date for TC First Draft Meeting</td>
<td>6/14/2013</td>
<td>7</td>
<td>3/15/2013</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Posting of First Draft and TC Ballot</td>
<td>8/2/2013</td>
<td>3</td>
<td>4/26/2013</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of TC First Draft ballot</td>
<td>8/23/2013</td>
<td>1</td>
<td>5/17/2013</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of TC First Draft ballot - recirc</td>
<td>8/30/2013</td>
<td>1</td>
<td>5/24/2013</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Posting of First Draft for CC Meeting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for CC First Draft Meeting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posting of First Draft and CC Ballot</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of CC First Draft ballot</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of CC First Draft ballot - recirc</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Post Final First Draft for Public Comment</strong></td>
<td>9/6/2013</td>
<td>10</td>
<td>9/6/2013</td>
<td>10</td>
</tr>
<tr>
<td>Comment Stage</td>
<td>Public Comment closing date</td>
<td>11/15/2013</td>
<td>1</td>
<td>11/15/2013</td>
<td>1</td>
</tr>
<tr>
<td>Stage (Second Draft)</td>
<td>Final Date to Publish Notice of Consent Documents</td>
<td>11/22/2013</td>
<td>2</td>
<td>11/22/2013</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Appeal Closing Date for Consent Documents (15 Days)</td>
<td>12/7/2013</td>
<td>21</td>
<td>12/7/2013</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Final date for TC Second Draft Meeting</td>
<td>5/2/2014</td>
<td>6</td>
<td>1/24/2014</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of TC Second Draft Ballot</td>
<td>7/7/2014</td>
<td>1</td>
<td>3/28/2014</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Final date for receipt of TC Second Draft ballot - recirc</td>
<td>7/14/2014</td>
<td>1</td>
<td>4/4/2014</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Posting of Second Draft for CC Mtg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for CC Second Draft Meeting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posting of Second Draft for CC Ballot</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of CC Second Draft ballot</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of CC Second Draft ballot - recirc</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Post Final Second Draft for NITMAM Review</strong></td>
<td>7/18/2014</td>
<td>5</td>
<td>7/18/2014</td>
<td>5</td>
</tr>
<tr>
<td>Tech Session</td>
<td>Notice of Intent to Make a Motion (NITMAM) Closing Date</td>
<td>8/22/2014</td>
<td>8</td>
<td>8/22/2014</td>
<td>8</td>
</tr>
<tr>
<td>Preparation (Issuance)</td>
<td>Posting of Certified Amending Motions and Consent Documents</td>
<td>10/17/2014</td>
<td>2</td>
<td>10/17/2014</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Appeal Closing Date for Consent Documents (15 Days)</td>
<td>11/1/2014</td>
<td>3</td>
<td>11/1/2014</td>
<td>3</td>
</tr>
<tr>
<td>Tech Session</td>
<td>Association Meeting for Documents with CAMs</td>
<td>6/8-11/15</td>
<td></td>
<td>6/8-11/15</td>
<td></td>
</tr>
<tr>
<td>Issuance</td>
<td>Appeal Closing Date for Documents with CAMs (20 Days)</td>
<td>7/1/2015</td>
<td></td>
<td>7/1/2015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SC Issuance Dates for Documents with CAMs</td>
<td>8/3-6/15</td>
<td></td>
<td>8/3-6/15</td>
<td></td>
</tr>
</tbody>
</table>
## Annual 2015 Revision Cycle (New Process)

<table>
<thead>
<tr>
<th>Process Stage</th>
<th>Process Step</th>
<th>Dates for TC</th>
<th>Wks</th>
<th>Dates for CC</th>
<th>Wks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Public Input Stage (First Draft)</strong></td>
<td>Public Input Closing Date - Electronic</td>
<td>7/8/2013</td>
<td>23</td>
<td>7/8/2013</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Final date for TC First Draft Meeting</td>
<td>12/13/2013</td>
<td>7</td>
<td>9/13/2013</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Posting of First Draft and TC Ballot</td>
<td>1/31/2014</td>
<td>3</td>
<td>10/25/2013</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of TC First Draft ballot</td>
<td>7/21/2014</td>
<td>1</td>
<td>11/15/2013</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of TC First Draft ballot - recirc</td>
<td>2/28/2014</td>
<td>1</td>
<td>11/22/2013</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Posting of First Draft for CC Meeting</td>
<td>11/29/2013</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for CC First Draft Meeting</td>
<td>1/10/2014</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posting of First Draft and CC Ballot</td>
<td>1/31/2014</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of CC First Draft ballot</td>
<td>2/21/2014</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of CC First Draft ballot - recirc</td>
<td>2/28/2014</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Post Final First Draft for Public Comment</strong></td>
<td>3/7/2014</td>
<td>10</td>
<td>3/7/2014</td>
<td>10</td>
</tr>
<tr>
<td><strong>Comment Stage (Second Draft)</strong></td>
<td>Public Comment closing date - Electronic</td>
<td>5/16/2014</td>
<td>1</td>
<td>5/16/2014</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Final Date to Publish Notice of Consent Documents</td>
<td>5/23/2014</td>
<td>2</td>
<td>5/23/2014</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Appeal Closing Date for Consent Documents (15 Days)</td>
<td>6/6/2014</td>
<td>21</td>
<td>6/6/2014</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Final date for TC Second Draft Meeting</td>
<td>10/31/2014</td>
<td>6</td>
<td>7/25/2014</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Posting of Second Draft and TC Ballot</td>
<td>12/12/2014</td>
<td>3</td>
<td>9/5/2014</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of TC Second Draft Ballot</td>
<td>1/2/2015</td>
<td>1</td>
<td>9/26/2014</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Final date for receipt of TC Second Draft ballot - recirc</td>
<td>1/9/2015</td>
<td>1</td>
<td>10/3/2014</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Posting of Second Draft for CC Mtg</td>
<td>10/10/2014</td>
<td>6</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for CC Second Draft Meeting</td>
<td>11/21/2014</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Posting of Second Draft and CC Ballot</td>
<td>12/12/2014</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of CC Second Draft ballot</td>
<td>1/2/2015</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Final date for Receipt of CC Second Draft ballot - recirc</td>
<td>1/9/2015</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Post Final Second Draft for NITMAM Review</strong></td>
<td>1/16/2015</td>
<td>5</td>
<td>1/16/2015</td>
<td>5</td>
</tr>
<tr>
<td><strong>Tech Session Preparation (&amp; Issuance)</strong></td>
<td>Notice of Intent to Make a Motion (NITMAM) Closing Date</td>
<td>2/20/2015</td>
<td>8</td>
<td>2/20/2015</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Appeal Closing Date for Consent Documents (15 Days)</td>
<td>5/2/2015</td>
<td>3</td>
<td>5/2/2015</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>SC Issuance Date for Consent Documents (25 Days)</td>
<td>5/12/2015</td>
<td>3</td>
<td>5/12/2015</td>
<td>3</td>
</tr>
<tr>
<td><strong>Tech Session</strong></td>
<td>Association Meeting for Documents with CAMs</td>
<td>6/8-11/15</td>
<td></td>
<td>6/8-11/15</td>
<td></td>
</tr>
<tr>
<td><strong>Appeals and Issuance</strong></td>
<td>Appeal Closing Date for Documents with CAMs (20 Days)</td>
<td>7/1/2015</td>
<td></td>
<td>7/1/2015</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SC Issuance Dates for Documents with CAMs</td>
<td>8/3-6/15</td>
<td></td>
<td>8/3-6/15</td>
<td></td>
</tr>
</tbody>
</table>

---

Standards Council Agenda October 17-18, 2011  Page 331 of 331