Gentlemen:

Attached you will find the Minutes of today’s NFPA 385 First Draft Meeting web conference.

This material will also be posted on the NFPA 385 Document Information (DocInfo) web page and can be downloaded from there.

Please review these Minutes for any errors or omissions.

rpb/

cc TRA Meeting File
   TRA/NM
I. Attendance

T. M. Hetrick, Exponent, Inc.
D. W. Hollinger, Drexel University, CHAIR
S. P. Iovinelli, Franklin Park IL Fire Department
J. R. Kittrell, KSE, Inc.
J. R. Nerat, UTC/Badger Fire Protection

R. P. Benedetti, National Fire Protection Association, STAFF LIAISON

GUESTS:  J. Freiler, Truck Trailer Manufacturers Association
           P. Mucci, National Fire Protection Association
           B. O’Connor, National Fire Protection Association
           K. Shea, National Fire Protection Association

Technical Committee Members Unable to Participate:

M. A. Beavers, FORCON International
S. R. Connor, Team-1 Academy Inc.
S. P. Rinaldi, Kuna ID Rural Fire District
J. Sims, Truck Trailer Manufacturers Association
J. Waldschmidt, City of Kenosha WI Fire Department
M. P. Wilson, American Insurance Services Group

II. Minutes

1. The meeting was called to order at 11:00 AM.

2. Participants introduced themselves.
   There were no updates necessary to the Technical Committee Roster.

3. The Minutes of the last meeting, held by web conference August 20, 2010 were unanimously
   approved as submitted. (Moved and seconded by Messrs. Iovinelli and Kittrell.)

4. The Technical Committee Chair thanked Technical Committee members for their time and effort on
   NFPA 385.

   The Technical Committee Chair also brought to the committee’s attention a proposed new NFPA
   project addressing “competencies for responders to incidents involving trains hauling high hazard
   flammable liquid cargoes” (see Attachment № M1) and urged members to submit comment thereon.

5. The Staff Liaison reported on the following:

   • Technical Committee Scope. No action deemed necessary.
- **Technical Committee Membership:**
  - Reported that Mr. Conley had retired from National Tank Truck Carriers, Inc. and that a replacement would be nominated for the vacancy.
  - Reported that Mr. Sims would be succeeded by Mr. Freiler principal representative for the Truck Trailer Manufacturers Association.

- **Fall 2016 Document Revision Schedule.**
  Reviewed deadlines for processing the 2017 edition of NFPA 385.

6. The Technical Committee discussed two items of old business deferred from the last meeting.

   **Tanker-to-Tanker Transfer.** The Technical Committee determined that the subject procedure was too detailed to be considered as a body of provisions for NFPA 385.

   **High Flash Point Cargoes at High Ambient Temperatures.** The Technical Committee determined that no action needed to be taken on this advisory service inquiry.

7. The Technical Committee reviewed and acted on the Public Inputs to NFPA 385. The preliminary First Draft report is attached. See Attachment № M2.

8. There was no correspondence requiring the Technical Committee’s attention.

9. There was no other “Old Business” requiring the Technical Committee’s attention.

10. Under “New Business”, the Technical Committee discussed the confusion inherent in trying to interpret NFPA 704 versus OSHA’s use of the UN Globally Harmonized System for labeling.

11. The Technical Committee deferred scheduling the next meeting until after the close of the public comment period.

12. The meeting adjourned at 12:10 PM.
At its April 2015 meeting, the Council reviewed the request of Chris Powers of Transport Canada that NFPA establish a project on competencies for responders to incidents of flammable liquids in transport-high hazard flammable trains (HHFT). After review of all the material before it, the Council voted to solicit public comments of need for the project, information on resources on the subject matter and other organizations actively involved with the subject. The Council also directs the Technical Committee on Hazardous Materials Response Personnel review the new project request and submit comments to the Council.

The following justification for the new project has been submitted to the Council:

**a. Explain the Scope of the new project/document:**

Proposed Standard on Competencies for Responders to Incidents of Flammable Liquids in Transport-High-Hazard Flammable Trains (HHFT) *

The document should specify the factors to be considered and competencies required when responding to railway incidents (derailments) involving multiple tank cars of flammable liquids (HHFT) including crude oil, ethanol and other Class 3 products.

This standard could include: - knowledge of physical and chemical properties of the product(s), type, condition and behavior of tank cars, railway safety for first responders, stability of the incident, risk factors - fire spread, explosion, toxic gases, resources needed and available from both government and private sector, intervention or non - intervention strategies, environmental factors and impacts, downstream potential for fire spread/containment from flowing product, damming or diking possibilities, evacuation considerations, foam types, volumes required, large capacity foam equipment operation, application techniques, containment and security of unburned product. A section on pre-planning and exercises with first responders, railroads, shippers and other resources (CANUTEC, CHEMTREC, etc.) should also be included.

Because of the scale and complexity of these incidents there is a need to develop a single reference standard that includes all these factors and more and then defines the knowledge, skills and training required by technical advisors from industry, public first responders (including incident command staff and firefighters), federal government specialists (Remedial Measures Specialists) etc. to be qualified to safely mitigate these large scale incidents involving flammable liquids in transport.

**NOTE: PHMSA is proposing to add a new definition to 49 CFR 171.8 defining ‘high-hazard flammable train’ (HHFT) as "a single train carrying 20 or more railcars of a Class 3 flammable liquid"**.

**b. Provide an explanation and any evidence of the need for the new project/document:**

On July 6, 2013 a 73-car Montréal, Maine and Atlantic train carrying Bakken crude oil from North Dakota rolled away from where it had been parked and derailed in downtown Lac Mégantic. The equipment that derailed included 63 of the 72 tank cars. The Lac Mégantic fire service responded to this incident and asked for and received mutual aid assistance from numerous fire departments in Quebec and the State of Maine. Hundreds of firefighters were eventually deployed for many days and most were volunteer firefighters. The large volume of fire and the heat generated created tremendous safety hazards for these firefighters. Firefighting foam was brought from Valero refinery in Lévis, Quebec, and was used to control remaining fire and suppress vapors from unburned crude oil. The Chaudiére River was contaminated by hundreds of thousands of liters of oil as was the sewer system and soil in the vicinity of the derailment. Over 5,000,000 liters of crude oil spilled and either burned, ran into the lake and river or contaminated the ground in the vicinity.

This incident resulted in the death of forty seven (47) individuals and destruction of the downtown core of the town. The financial costs will run into the hundreds of millions of dollars.

Following the Lac Mégantic incident, additional incidents involving derailments of High-Hazard Flammable Trains (HHFT) occurred including:

- November 8, 2013 - Pickens County, AL
- December 30, 2013 - near Casselton, ND
- January 7, 2014 - near Plaster Rock, NB
- April 30, 2014 - Lynchburg, VA

From the Transportation Safety Board of Canada the following comments:

In recent years, the transportation of crude oil by rail has increased dramatically in North America such that the amount of crude oil liquid hydrocarbons over long distances and through urban areas, the risks to the public and the environment along the train’s route have increased significantly.
c. Identify intended users of the new project/document:

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:

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:

f. Identify other related documents and projects on the subject both within NFPA and external to NFPA:
• NFPA 11, Standard for Low-, Medium- and High-Expansion Foam
• NFPA 472, Competencies for Responders to Hazardous Materials/Weapons of Mass Destruction Incidents
• NFPA 1001, Firefighter Professional Qualifications
• NFPA 1081, Industrial Fire Brigade Member Professional Qualifications
• 2012 Emergency Response Guidebook - Transport Canada, U. S. DOT, Mexico, Secretariat of Transportation and Communication.
• Transport Canada - Transportation of Dangerous Goods Act 1992 and TDG Regulations - Part 7 - Emergency Response Assistance Plans (ERAP)
• Transportation Safety Board of Canada - Rail Safety Recommendations, January 23, 2014, to Hon. Lisa Raitt, Minister of Transport, Transport Canada and Ms. Cynthia L. Quartan, Administrator, Pipeline and Hazardous Materials Safety Administration, (U.S.)
• NTSB Safety Recommendation R-14-005 - TO THE PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION: Revise the spill response planning thresholds contained in Title 49 Code of Federal Regulations Part 130 to require comprehensive response plans to effectively provide for the carriers’ ability to respond to worst-case discharges resulting from accidents involving unit trains or blocks of tank cars transporting oil and petroleum products.
• Transport Canada, Protective Direction 33 - ERAP requirements for specified Class 3 Flammable Liquids (now a regulation under Canada Gazette Vol. 148, No. 27-December 31,2014 SOR/2014-306 December 12, 2014
• TRANSPORTATION OF DANGEROUS GOODS ACT, 1992 - Regulations Amending the Transportation of Dangerous Goods Regulations (Lithium Metal Batteries, ERAPs and Updates to Schedules)
• "Flammable Liquids (TDG) Emergency Response Chart (A Disciplined Approach) and Guide" Canadian Fuels Association and Chemistry Industry Association of Canada
• Ethanol Emergency Response Coalition - Renewal Fuels Association - training programs and other resources. htt p://www.ethanolresponse.com
• Many other documents, news reports and media coverage of this issue are available from the NFPA Charles S. Morgan Technical Library

g. Identify the technical expertise and interest necessary to develop the project/document, and if the committee membership currently contains this expertise and interest:
The Transport Canada, Emergency Response Task Force membership includes individuals with the technical expertise or they have access to that expertise within their sector/organization. Additional participation from other organizations could be facilitated as required.

h. Provide an estimate on the amount of time needed to develop the new project/document:
Using existing information/standards/expertise from the petroleum/ethanol/chemical industries, railroads, fire service and environmental sectors working on a dedicated task force it is estimated that 8-10 months could result in a draft document being completed.

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:
• Current NFPA Standards including 11, 472, 1001, 1081 have various sections related to the information/data required.
• Transport Canada, PHMSA, TSB Canada, NTSB and others are currently collecting data, conducting testing of crude oils, and investigating various aspects of these incidents.
• Data on transportation of crude oil, ethanol and other flammable liquids by rail will assist in establishing communities at risk
• Location of resources (foam, equipment, railway resources, etc.) are being identified and will be mapped using GIS
• Petroleum industry has data and information on both crude oil types and refined product including Safety Data Sheets
• Renewable Fuels Association has data and information for developing ethanol response procedures
• American Association of Railroads, Railway Association of Canada have both data and training materials (e.g. Rail 101) and are working on developing additional training for HHFT incidents
• Canadian Association of Fire Chiefs has members working with educational institutions on identifying curriculum for a three level program of awareness, operations and technician level firefighter training.
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.

2.3.1  ANSI Publications.
American National Standards Institute, Inc., 25 West 43rd Street, 4th Floor, New York, NY 10036.

2.3.2  ASME Publications.
American Society of Mechanical Engineers ASME International, Three Park Avenue, New York, NY 10016-5990.

2.3.3  ASTM Publications.
ASTM International, 100 Barr Harbor Drive, Box C700, West Conshohocken, PA 19428-2959.

2.3.4  U.S. Government Publications.

2.3.5  Other Publications.

2.4  References for Extracts in Mandatory Sections.

Submitter Information Verification

Submitter Full Name: ROBERT BENEDETTI
Organization: NATIONAL FIRE PROTECTION ASSOC
Street Address: National Fire Protection Association Report
http://submittals.nfpa.org/TerraViewWeb/ContentFetcher?commentPara...
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<td>Thu Jun 11 11:35:22 EDT 2015</td>
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**Committee Statement**

Committee Statement: The Technical Committee agrees with all of the proposed updates to the citations for referenced documents.

**Response Message:**

Public Input No. 1-NFPA 385-2014 [Chapter 2]
Public Input No. 1-NFPA 385-2014 [Chapter 2]

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.
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2.3.2  ASME Publications.
American Society of Mechanical Engineers ASME International, Three Park Avenue, New York, NY 10016-5990.


2.3.3  ASTM Publications.
ASTM International, 100 Barr Harbor Drive, Box C700, West Conshohocken, PA 19428-2959.


2.3.4  U.S. Government Publications.


2.3.5  Other Publications.

2.4  References for Extracts in Mandatory Sections.


Statement of Problem and Substantiation for Public Input

Referenced current editions.

Related Public Inputs for This Document

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<td>Public Input No. 2-NFPA 385-2014 [Chapter C]</td>
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Submitter Information Verification

Submitter Full Name: Aaron Adamczyk
Organization: [ Not Specified ]
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jun 16 19:43:06 EDT 2014

Committee Statement

Resolution: FR-1-NFPA 385-2015
Statement: The Technical Committee agrees with all of the proposed updates to the citations for referenced documents.
Public Input No. 3-NFPA 385-2014 [Section No. 9.3.1 [Excluding any Sub-Sections]]

Each tank vehicle shall be provided with one portable fire extinguisher that has a minimum rating of 4-A:40-B,C or with more than one portable fire extinguisher, each having a rating of 2-A:20-B,C. Large-capacity dry chemical extinguishers of 10 lb (4.54 kg) or greater and a discharge rate of 1 lb/sec (0.45 kg/sec) or more.

Statement of Problem and Substantiation for Public Input

According to NFPA 10, a three-dimensional Class B fire involves Class B materials in motion, such as pouring, running, or dripping flammable liquids, and generally includes vertical as well as one or more horizontal surfaces. Fires of this nature are considered to be a special hazard. The system used to rate fire extinguishers on Class B fires (flammable liquids in depth) is not directly applicable to this type of hazard. NFPA 10, section 5.5.1.1 requires large-capacity dry chemical extinguishers of 10 lb (4.54 kg) or greater and a discharge rate of 1 lb/sec (0.45 kg/sec) or more for the protection of these hazards.

Submitter Information Verification

Submitter Full Name: Jennifer Boyle
Organization: Fire Equipment Manufacturers Association (FEMA)
Affiliation: 
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Wed Dec 10 09:51:51 EST 2014

Committee Statement

Resolution: Public Input No. 3 is rejected for the following reasons: 1. The existing numerical Class A and B ratings are necessary to maintain minimum desired fire protection objectives for fighting various forms of Class A and B fires associated with tank vehicles beyond 3-dimensional situations. The existing and long-standing rating requirements establish other key hardware performance characteristics, such as: 4A = Minimum class “A” common combustible coverage requirement for “Extra” hazard levels 40B = Minimum class “B” coverage requirement for “Extra” level of hazard spill areas (over 5 gal) 40B = Represents 40 sq. ft. spill surface area capability for novice operator (3.1 gal @ 1/8" depth = 5’x8’ area) 40B = Rating establishes minimum required fire extinguisher discharge duration time of 13 seconds 2. The proposal significantly lowers Class A extinguishing capability for addressing potential deep seated fires, such as one involving the tires, from 4A to 1A. It also lowers Class B extinguishing capability from 40B to 10B, which only requires an 8-second total discharge duration and only anticipates a 10 sq. ft. spill (equivalent to less than 1 gallon spilled). 3. NFPA 10 does not recognize a single 1A:10B rated dry chemical extinguisher for meeting the minimum coverage noted above. For these reasons, the Technical Committee retains the existing fire extinguisher criteria, along with the required 1 pound per second agent discharge rate as being necessary to meet the desired level of performance. Public Input No. 3 would reduce this desired level of performance and the extinguishers ability to deal with anticipated Class A and Class B fire situations that the 4A:40B rating establishes for the hardware.
Public Input No. 4-NFPA 385-2014 [Section No. 9.3.1.1]

9.3.1.1
Dry chemical fire extinguishers having an agent discharge rate of 1 lb/sec (0.45 kg/sec) or more shall be used.
Each tank vehicle shall have two listed fire extinguishers, each complying with 9.3.1 (as revised), with one extinguisher mounted on each side of the vehicle.

Statement of Problem and Substantiation for Public Input

If a fire occurs on one side of a vehicle, it may not be possible or safe to retrieve an extinguisher from the opposite side of the vehicle. Therefore, extinguishers should be installed on both sides of the vehicle. A companion PI was submitted to change 9.3.1 to mandate large-capacity dry chemical extinguishers of 10 lb (4.54 kg) or greater and a discharge rate of 1 lb/sec (0.45 kg/sec) or more.

Submitter Information Verification

Submitter Full Name: Jennifer Boyle
Organization: Mark Conroy, Brooks Fire Equipment
Affiliation: Fire Equipment Manufacturers Association (FEMA)
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Wed Dec 10 09:57:57 EST 2014

Committee Statement

Resolution: Public Input No. 4 is rejected for the same reasons as is Public Input No. 3, since the two are interrelated.
9.3.2 - Ratings shall be in accordance with NFPA 10, Standard for Portable Fire Extinguishers.
Delete entire section.

Statement of Problem and Substantiation for Public Input

The system used to rate fire extinguishers on Class B fires (flammable liquids in depth) is not directly applicable to this type of hazard.

Submitter Information Verification

Submitter Full Name: Jennifer Boyle
Organization:
Affiliation: Fire Equipment Manufacturers Association (FEMA)
Street Address:  
City:  
State: 
Zip:  
Submittal Date: Wed Dec 10 10:01:27 EST 2014

Committee Statement

Resolution: Public Input No. 5 is rejected for the same reasons as is Public Input No. 3, since the two are interrelated.
9.3.4
Extinguishers shall be maintained, inspected and serviced in accordance with NFPA 10, Standard for Portable Fire Extinguishers.

Submitter Information Verification

Submitter Full Name: ROBERT BENEDETTI
Organization: NATIONAL FIRE PROTECTION ASSOC
Street Address:
City:
State:
Zip:
Submittal Date: Thu Jun 11 13:54:17 EDT 2015

Committee Statement

Committee Statement: First Revision No. 3 addresses Public Input No. 6. While the Technical Committee agrees with the intent of Public Input No. 6, the revised language being proposed in this First Revision is more consistent with the provisions of NFPA 10. As defined in 3.3.25 of NFPA 10, "servicing" includes maintenance, recharging, and hydrostatic testing of extinguishers

Response Message:
Public Input No. 6-NFPA 385-2014 [Section No. 9.3.4]
9.3.4 Extinguishers shall be maintained, inspected, maintained, and hydrostatically tested in accordance with NFPA 10, *Standard for Portable Fire Extinguishers*.

**Statement of Problem and Substantiation for Public Input**

Monthly inspections and periodic hydrostatic tests should be conducted on all extinguishers to help ensure safety.

**Submitter Information Verification**

- **Submitter Full Name:** Jennifer Boyle
- **Organization:** Mark Conroy, Brooks Fire Equipment
- **Affiliation:** Fire Equipment Manufacturers Association (FEMA)
- **Street Address:**
- **City:**
- **State:**
- **Zip:**
- **Submittal Date:** Wed Dec 10 10:02:31 EST 2014

**Committee Statement**

- **Resolution:** The amendment to 9.3.4 proposed by First Revision No. 3 addresses Public Input No. 6.
- **Statement:** First Revision No. 3 addresses Public Input No. 6. While the Technical Committee agrees with the intent of Public Input No. 6, the revised language being proposed in this First Revision is more consistent with the provisions of NFPA 10. As defined in 3.3.25 of NFPA 10, "servicing" includes maintenance, recharging, and hydrostatic testing of extinguishers.
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.1.2  Other Publications.

C.1.2.1  API Publications.
American Petroleum Institute, 1220 L Street, NW, Washington, DC 20005.

C.1.2.2  ASTM Publications.
ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

C.1.2.3  U.S. Government Publications.

C.2  Informational References. (Reserved)
C.3  References for Extracts in Informational Sections.

Submitter Information Verification

Submitter Full Name: ROBERT BENEDETTI
Organization: NATIONAL FIRE PROTECTION ASSOC
Street Address:
City:
State:
Committee Statement

Committee Statement: The Technical Committee agrees with all of the proposed updates to the citations for referenced documents.

Response Message:
Public Input No. 2-NFPA 385-2014 [Chapter C]
Annex C  Informational References

C.1  Referenced Publications.

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C.1.2  Other Publications.
C.1.2.1  API Publications.
American Petroleum Institute, 1220 L Street, NW, Washington, DC 20005.


C.1.2.2  ASTM Publications.
ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.


C.1.2.3  U.S. Government Publications.


C.2  Informational References. (Reserved)
C.3  References for Extracts in Informational Sections.

Statement of Problem and Substantiation for Public Input

Referenced current editions.

Related Public Inputs for This Document

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Submitter Information Verification
Submitter Full Name: Aaron Adamczyk
Organization: [ Not Specified ]
Street Address:
City:
State:
Zip:
Submittal Date: Mon Jun 16 20:56:31 EDT 2014

Committee Statement

Resolution: FR-2-NFPA 385-2015
Statement: The Technical Committee agrees with all of the proposed updates to the citations for referenced documents.