2009 Fall Revision Cycle

Report on Comments

A compilation of NFPA® Technical Committee Reports on Comments for the 2009 Fall Revision Cycle.

Notice of Intent to Make a Motion (NITMAM) deadline: October 23, 2009

NOTE: The proposed NFPA documents addressed in the Report on Proposals (ROP) and in this follow-up Report on Comments (ROC) will only be presented for action at the NFPA June 2010 Association Technical Meeting to be held June 7–10, 2010, at Mandalay Bay Convention Center in Las Vegas, NV, when proper Amending Motions have been submitted to the NFPA by the deadline of October 23, 2009. Documents that receive no motions will not be presented at the meeting and instead will be forwarded directly to the Standards Council for action on issuance. For more information on the rules and for up-to-date information on schedules and deadlines for processing NFPA documents, check the NFPA website (www.nfpa.org) or contact NFPA Standards Administration.

National Fire Protection Association®
1 BATTERYMARCH PARK, QUINCY, MA 02169-7471

ISSN 1079-5332

Information on NFPA Codes and Standards Development

I. Applicable Regulations. The primary rules governing the processing of NFPA documents (codes, standards, recommended practices, and guides) are the NFPA *Regulations Governing Committee Projects (Regs)*. Other applicable rules include NFPA *Bylaws*, NFPA *Technical Meeting Convention Rules*, NFPA *Guide for the Conduct of Participants in the NFPA Standards Development Process*, and the NFPA *Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council*. Most of these rules and regulations are contained in the *NFPA Directory*. For copies of the *Directory*, contact Codes and Standards Administration at NFPA Headquarters; all these documents are also available on the NFPA website at "www.nfpa.org."

The following is general information on the NFPA process. All participants, however, should refer to the actual rules and regulations for a full understanding of this process and for the criteria that govern participation.

II. Technical Committee Report. The Technical Committee Report is defined as "the Report of the Technical Committee and Technical Correlating Committee (if any) on a document. A Technical Committee Report consists of the Report on Proposals (ROP), as modified by the Report on Comments (ROC), published by the Association."

III. Step 1: Report on Proposals (ROP). The ROP is defined as "a report to the Association on the actions taken by Technical Committees and/or Technical Correlating Committees, accompanied by a ballot statement and one or more proposals on text for a new document or to amend an existing document." Any objection to an action in the ROP must be raised through the filing of an appropriate Comment for consideration in the ROC or the objection will be considered resolved.

IV. Step 2: Report on Comments (ROC). The ROC is defined as "a report to the Association on the actions taken by Technical Committees and/or Technical Correlating Committees accompanied by a ballot statement and one or more comments resulting from public review of the Report on Proposals (ROP)." The ROP and the ROC together constitute the Technical Committee Report. Any outstanding objection following the ROC must be raised through an appropriate Amending Motion at the Association Technical Meeting or the objection will be considered resolved.

V. Step 3a: Action at Association Technical Meeting. Following the publication of the ROC, there is a period during which those wishing to make proper Amending Motions on the Technical Committee Reports must signal their intention by submitting a Notice of Intent to Make a Motion. Documents that receive notice of proper Amending Motions (Certified Amending Motions) will be presented for action at the annual June Association Technical Meeting. At the meeting, the NFPA membership can consider and act on these Certified Amending Motions as well as Follow-up Amending Motions, that is, motions that become necessary as a result of a previous successful Amending Motion. (See 4.6.2 through 4.6.9 of *Regs* for a summary of the available Amending Motions and who may make them.) Any outstanding objection following action at an Association Technical Meeting (and any further Technical Committee consideration following successful Amending Motions, see *Regs* at 4.7) must be raised through an appeal to the Standards Council or it will be considered to be resolved.

VI. Step 3b: Documents Forwarded Directly to the Council. Where no Notice of Intent to Make a Motion (NITMAM) is received and certified in accordance with the Technical Meeting Convention Rules, the document is forwarded directly to the Standards Council for action on issuance. Objections are deemed to be resolved for these documents.

VII. Step 4a: Council Appeals. Anyone can appeal to the Standards Council concerning procedural or substantive matters related to the development, content, or issuance of any document of the Association or on matters within the purview of the authority of the Council, as established by the *Bylaws* and as determined by the Board of Directors. Such appeals must be in written form and filed with the Secretary of the Standards Council (see 1.6 of *Regs*). Time constraints for filing an appeal must be in accordance with 1.6.2 of the *Regs*. Objections are deemed to be resolved if not pursued at this level.

VIII. Step 4b: Document Issuance. The Standards Council is the issuer of all documents (see Article 8 of *Bylaws*). The Council acts on the issuance of a document presented for action at an Association Technical Meeting within 75 days from the date of the recommendation from the Association Technical Meeting, unless this period is extended by the Council (see 4.8 of *Regs*). For documents forwarded directly to the Standards Council, the Council acts on the issuance of the document at its next scheduled meeting, or at such other meeting as the Council may determine (see 4.5.6 and 4.8 of *Regs*).

IX. Petitions to the Board of Directors. The Standards Council has been delegated the responsibility for the administration of the codes and standards development process and the issuance of documents. However, where extraordinary circumstances requiring the intervention of the Board of Directors exist, the Board of Directors may take any action necessary to fulfill its obligations to preserve the integrity of the codes and standards development process and to protect the interests of the Association. The rules for petitioning the Board of Directors can be found in the *Regulations Governing Petitions to the Board of Directors from Decisions of the Standards Council* and in 1.7 of the *Regs*.

X. For More Information. The program for the Association Technical Meeting (as well as the NFPA website as information becomes available) should be consulted for the date on which each report scheduled for consideration at the meeting will be presented. For copies of the ROP and ROC as well as more information on NFPA rules and for up-to-date information on schedules and deadlines for processing NFPA documents, check the NFPA website (www.nfpa.org) or contact NFPA Codes & Standards Administration at 617-984-7246.

2009 Fall Revision Cycle ROC Contents

by NFPA Numerical Designation

Note: Documents appear in numerical order.

2009 Fall Cycle ROC
Committees Reporting

Documents Without Comments

The documents listed below appeared in the 2009 Fall Revision Cycle *Report on Proposals* but did not receive comments. Therefore, no reports of these documents appear in this *Report on Comments*.

255	W	*Standard Method of Test of Surface Burning Characteristics of Building Materials*
410	P	*Standard on Aircraft Maintenance*
422	P	*Guide for Aircraft Accident/Incident Response Assessment*
423	P	*Standard for Construction and Protection of Aircraft Engine Test Facilities*
498	R	*Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives*
520	P	*Standard on Subterranean Spaces*
600	R	*Standard on Industrial Fire Brigades*
601	R	*Standard for Security Services in Fire Loss Prevention*
900	P	*Building Energy Code*
1201	C	*Standard for Providing Emergency Services to the Public* (will be redesignated as NFPA 1201, *Standard for Providing Fire and Emergency Services to the Public*)
1250	P	*Recommended Practice in Emergency Service Organization Risk Management* (will be redesignated as NFPA 1250, *Recommended Practice in Fire and Emergency Services Organization Risk Management)*
1410	P	*Standard on Training for Initial Emergency Scene Operations*
1620	C	*Recommended Practice for Pre-Incident Planning* (will be redesignated as NFPA 1620, *Standard for Pre-Incident Planning*)
1931	P	*Standard for Manufacturer's Design of Fire Department Ground Ladders*
1932	P	*Standard on Use, Maintenance, and Service Testing of In-Service Fire Department Ground Ladders*
1936	P	*Standard on Powered Rescue Tools*

The following documents changed reporting cycles as indicated below:

NFPA 204
The Technical Committee Report on NFPA 204, *Standard for Smoke and Heat Venting*, is not included in this *Report on Comments* for action at this meeting. The Committee has requested more time to develop a position on the design issues involving sprinklers in buildings equipped with smoke and heat vents. The document will instead report in the *Report on Comments* for the A2010 ROC cycle.

NFPA 1977
The Technical Committee Report on NFPA 1977, *Standard on Protective Clothing and Equipment for Wildland Fire Fighting*, is not included in this *Report on Comments* for action at this meeting. The Committee has requested more time because of new material submitted during the F2009 ROC. The document will instead report in the *Report on Proposals* for the F2010 ROP cycle, but will not reopen the proposal closing date.

FORM FOR FILING NOTICE OF INTENT TO MAKE A MOTION (NITMAM) AT AN ASSOCIATION TECHNICAL MEETING 2009 FALL REVISION CYCLE

FINAL DATE FOR RECEIPT OF NITMAM: 5:00 pm EDST, October 23, 2009

If you have questions about filling out or filing the NITMAM, please contact the Codes and Standards Administration at 617-984-7249

For further information on the Codes- and Standards-Making Process see the NFPA website (www.nfpa.org)

FOR OFFICE USE ONLY

Log #:_____

Date Rec'd:_____

Date 8/10/2005 **Name** John B. Smith **Tel. No.** 617-555-1212

Company or Affiliation John B. Smith Consulting **Email Address**

Street Address 9 Seattle Street **City** Seattle **State** WA **Zip** 02255

1. **(a) NFPA Document (include Number and Title)** National Fire Alarm Code/NFPA 72 1999ed
   (b) Proposal or Comment Number 72-5
   (c) Section/Paragraph 1.5.8.1

2. **Motion to be made. Please check one (See also 4.6 of the Regulations Governing Committee Projects):**

(a) Proposal

X (1) Accept. ____ (2) Accept an Identifiable Part.*

____ (3) Accept as modified by the TC. ____ (4) Accept an Identifiable Part as modified by TC.*

(b) Comment

____ (1) Accept. ____(2) Accept an Identifiable Part. * ____(3) Accept as modified by the TC.

____ (4) Accept an Identifiable Part as modified by TC.* ____(5) Reject ____(6) Reject an Identifiable Part.*

(c) Return Technical Committee Report for Further Study

____ (1) Return entire Report. ____ (2) Return a portion of a Report in the form of a proposal and related comment(s).

____(3) Return a portion of a Report in the form of identifiable part(s) of a proposal and related comments(s). (Identify the specific portion of the proposal and the related comments below)*

*** Clearly identify the Identifiable Part(s) indicated above (use separate sheet if required).**

_____

_____

_____

3. I am entitled to make this motion in accordance with 4.6.8 of the Regulations Governing Committee Projects, as follows [check (a), (b), or (c)]:

(a) X This motion may be made by the original submitter or their designated representative, and I am the [if you check (a) indicate one of the following]:

X I am the original submitter of the proposal or comment, or

___I am the submitter's designated representative (attach written authorization signed by the original submitter)

(b)____This motion may be made by a Technical Committee Member and I am a Member of the responsible Technical Committee.

(c)____This motion may be made by anyone.

(Form continued on next page)

NITMAM form (continued)

4. Comments or Clarification (optional): This NITMAM will be reviewed by a Motions Committee. In addition to determining whether your Amending Motion is proper, the Committee may take other actions as described in 2.3 of the Technical Meeting Convention Rules as follows:

> **Restating and Grouping of Motions. Upon request or on its own initiative, and in consultation with the mover(s), the Motions Committee may: (a) restate an Amending Motion to facilitate the making of a proper motion or to clarify the intent of the mover; and (b) group Amending Motions which are dependent on one another into a single Amending Motion. Dependent motions are motions that the mover(s) wish to be considered by the assembly and voted on as single up or down package. In addition to the foregoing, the Motions Committee may take such other actions or make such other recommendations as will facilitate the fair and efficient consideration of motions within the available time.**

The NFPA Staff may contact you to clarify your motion or to consult on the permitted actions in 2.3. If you have any comments, suggestions or requests of the Motions Committee as it reviews your NITMAM and considers actions permitted in 2.3, please provide them below. (Use additional sheet if necessary):

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_____

Name (please print): **John B. Smith**

Signature (required): _____

(Note: This NITMAM will be reviewed, and if proper, your Amending Motion will be certified in accordance with the Technical Meeting Convention Rules and posted on the NFPA website by October 23, 2009. Documents that have Certified Amending Motions will be considered at the June 2010 Annual Meeting Technical Committee Report Session. In order to have your Certified Amending Motion considered at that meeting you must appear, sign in, and make the motion as prescribed in the Convention Rules).

PLEASE USE A SEPARATE NITMAM FORM FOR EACH AMENDING MOTION YOU WISH TO MAKE

Mail to: Secretary, Standards Council, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471
NFPA Fax: (617) 770-3500

FORM FOR FILING NOTICE OF INTENT TO MAKE A MOTION (NITMAM)
AT AN ASSOCIATION TECHNICAL MEETING
2009 FALL REVISION CYCLE
FINAL DATE FOR RECEIPT OF NITMAM: 5:00 pm EDST, October 23, 2009

If you have questions about filling out or filing the NITMAM, please contact the Codes and Standards Administration at 617-984-7249

For further information on the Codes- and Standards-Making Process, see the NFPA website (www.nfpa.org)

FOR OFFICE USE ONLY

Log #:_____

Date Rec'd:_____

Date_____ **Name**_____ **Tel. No.**_____

Company or Affiliation _____ **Email Address**_____

Street Address_____ **City**_____ **State**_____ **Zip**_____

1. (a) NFPA Document (include Number and Title)_____

(b) Proposal or Comment Number_____

(c) Section/Paragraph _____

2. Motion to be made. Please check one: (See also 4.6 of the Regulations Governing Committee Projects)

(a) Proposal

_____(1) Accept. _____ (2) Accept an Identifiable Part.*

_____ (3) Accept as modified by the TC. _____ (4) Accept an Identifiable Part as modified by TC.*

(b) Comment

_____ (1) Accept. ____(2) Accept an Identifiable Part.* ____(3) Accept as modified by the TC.

_____ (4) Accept an Identifiable Part as modified by TC.* ____(5) Reject ____(6) Reject an Identifiable Part.*

(c) Return Technical Committee Report for Further Study

_____(1) Return entire Report. _____ (2) Return a portion of a Report in the form of a proposal and related comment(s).

_____(3) Return a portion of a Report in the form of identifiable part(s) of a proposal and related comment(s). (Identify the specific portion of the proposal and the related comments below)*

*** Clearly identify the Identifiable Part(s) indicated above (use separate sheet if required).**

_____

_____

_____

3. I am entitled to make this motion in accordance with 4.6.8 of the Regulations Governing Committee Projects, as follows: [(check (a), (b), or (c)].

(a)____ This motion may be made by the original submitter or their designated representative, and I am the [(if you check (a) indicate one of the following)]:

___I am the original submitter of the proposal or comment, or

___I am the submitter's designated representative (attach written authorization signed by the original submitter)

(b)____This motion may be made by a Technical Committee Member and I am a Member of the responsible Technical Committee.

(c)____This motion may be made by anyone.

(Form continued on next page)

NITMAM form (continued)

4. Comments or Clarification (optional): This NITMAM will be reviewed by a Motions Committee. In addition to determining whether your Amending Motion is proper, the Committee may take other actions as described in 2.3 of the Technical Meeting Convention Rules as follows:

> **Restating and Grouping of Motions. Upon request or on its own initiative, and in consultation with the mover(s), the Motions Committee may: (a) restate an Amending Motion to facilitate the making of a proper motion or to clarify the intent of the mover; and (b) group Amending Motions which are dependent on one another into a single Amending Motion. Dependent motions are motions that the mover(s) wish to be considered by the assembly and voted on as single up or down package. In addition to the foregoing, the Motions Committee may take such other actions or make such other recommendations as will facilitate the fair and efficient consideration of motions within the available time.**

The NFPA Staff may contact you to clarify your motion or to consult on the permitted actions in 2.3. If you have any comments, suggestions, or requests of the Motions Committee as it reviews your NITMAM and considers actions permitted in 2.3, please provide them below. (Use additional sheet if necessary):

_____

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Name (please print):_____

Signature (required):_____

(Note: This NITMAM will be reviewed, and if proper, your Amending Motion will be certified in accordance with the Technical Meeting Convention Rules and posted on the NFPA website by October 23, 2009. Documents that have Certified Amending Motions will be considered at the June 2010 Annual Meeting Technical Committee Report Session. In order to have your Certified Amending Motion considered at that meeting, you must appear, sign in, and make the motion as prescribed in the Convention Rules).

PLEASE USE A SEPARATE NITMAM FORM FOR EACH AMENDING MOTION YOU WISH TO MAKE.

Mail to: Secretary, Standards Council, National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471
NFPA Fax: (617) 770-3500

Sequence of Events Leading to Issuance of an NFPA Committee Document

Step 1 Call for Proposals

▼ Proposed new document or new edition of an existing document is entered into one of two yearly revision cycles, and a Call for Proposals is published.

Step 2 Report on Proposals (ROP)

▼ Committee meets to act on Proposals, to develop its own Proposals, and to prepare its Report.

▼ Committee votes by written ballot on Proposals. If two-thirds approve, Report goes forward. Lacking two-thirds approval, Report returns to Committee.

▼ Report on Proposals (ROP) is published for public review and comment.

Step 3 Report on Comments (ROC)

▼ Committee meets to act on Public Comments to develop its own Comments, and to prepare its report.

▼ Committee votes by written ballot on Comments. If two-thirds approve, Report goes forward. Lacking two-thirds approval, Report returns to Committee.

▼ Report on Comments (ROC) is published for public review.

Step 4 Association Technical Meeting

▼ *"Notices of intent to make a motion"* are filed, are reviewed, and valid motions are certified for presentation at the Association Technical Meeting. ("Consent Documents" that have no certified motions bypass the Association Technical Meeting and proceed to the Standards Council for issuance.)

▼ NFPA membership meets each June at the Association Technical Meeting and acts on Technical Committee Reports (ROP and ROC) for documents with "certified amending motions."

▼ Committee(s) vote on any amendments to Report approved at NFPA Annual Membership Meeting.

Step 5 Standards Council Issuance

▼ Notification of intent to file an appeal to the Standards Council on Association action must be filed within 20 days of the NFPA Annual Membership Meeting.

▼ Standards Council decides, based on all evidence, whether or not to issue document or to take other action, including hearing any appeals.

The Association Technical Meeting

The process of public input and review does not end with the publication of the ROP and ROC. Following the completion of the Proposal and Comment periods, there is yet a further opportunity for debate and discussion through the Association Technical Meeting that takes place at the NFPA Annual Meeting.

The Association Technical Meeting provides an opportunity for the final Technical Committee Report (i.e., the ROP and ROC) on each proposed new or revised code or standard to be presented to the NFPA membership for the debate and consideration of motions to amend the Report. The specific rules for the types of motions that can be made and who can make them are set forth in NFPA's rules, which should always be consulted by those wishing to bring an issue before the membership at an Association Technical Meeting. The following presents some of the main features of how a Report is handled.

The Filing of a Notice of Intent to Make a Motion. Before making an allowable motion at an Association Technical Meeting, the intended maker of the motion must file, in advance of the session, and within the published deadline, a Notice of Intent to Make a Motion. A Motions Committee appointed by the Standards Council then reviews all notices and certifies all amending motions that are proper. The Motions Committee can also, in consultation with the makers of the motions, clarify the intent of the motions and, in certain circumstances, combine motions that are dependent on each other together so that they can be made in one single motion. A Motions Committee report is then made available in advance of the meeting listing all certified motions. Only these Certified Amending Motions, together with certain allowable Follow-Up Motions (that is, motions that have become necessary as a result of previous successful amending motions) will be allowed at the Association Technical Meeting.

Consent Documents. Often there are codes and standards up for consideration by the membership that will be noncontroversial and no proper Notices of Intent to Make a Motion will be filed. These "Consent Documents" will bypass the Association Technical Meeting and head straight to the Standards Council for issuance. The remaining documents are then forwarded to the Association Technical Meeting for consideration of the NFPA membership.

What Amending Motions Are Allowed. The Technical Committee Reports contain many Proposals and Comments that the Technical Committee has rejected or revised in whole or in part. Actions of the Technical Committee published in the ROP may also eventually be rejected or revised by the Technical Committee during the development of its ROC. The motions allowed by NFPA rules provide the opportunity to propose amendments to the text of a proposed code or standard based on these published Proposals, Comments, and Committee actions. Thus, the list of allowable motions include motions to accept Proposals and Comments in whole or in part as submitted or as modified by a Technical Committee action. Motions are also available to reject an accepted Comment in whole or part. In addition, Motions can be made to return an entire Technical Committee Report or a portion of the Report to the Technical Committee for further study.

The NFPA Annual Meeting, also known as the NFPA Conference & Expo, takes place in June of each year. A second Fall membership meeting was discontinued in 2004, so the NFPA Technical Committee Report Session now runs once each year at the Annual Meeting in June.

Who Can Make Amending Motions. NFPA rules also define those authorized to make amending motions. In many cases, the maker of the motion is limited by NFPA rules to the original submitter of the Proposal or Comment or his or her duly authorized representative. In other cases, such as a Motion to Reject an accepted Comment, or to Return a Technical Committee Report or a portion of a Technical Committee Report for Further Study, anyone can make these motions. For a complete explanation, the NFPA Regs should be consulted.

Action on Motions at the Association Technical Meeting. In order to actually make a Certified Amending Motion at the Association Technical Meeting, the maker of the motion must sign in at least an hour before the session begins. In this way a final list of motions can be set in advance of the session. At the session, each proposed document up for consideration is presented by a motion to adopt the Technical Committee Report on the document. Following each such motion, the presiding officer in charge of the session opens the floor to motions on the document from the final list of Certified Amending Motions followed by any permissible Follow-Up Motions. Debate and voting on each motion proceeds in accordance with NFPA rules. NFPA membership is not required in order to make or speak to a motion, but voting is limited to NFPA members who have joined at least 180 days prior to the Association Technical Meeting and have registered for the meeting. At the close of debate on each motion, voting takes place, and the motion requires a majority vote to carry. In order to amend a Technical Committee Report, successful amending motions must be confirmed by the responsible Technical Committee, which conducts a written ballot on all successful amending motions following the meeting and prior to the document being forwarded to the Standards Council for issuance.

Standards Council Issuance

One of the primary responsibilities of the NFPA Standards Council, as the overseer of the NFPA codes and standards development process, is to act as the official issuer of all NFPA codes and standards. When it convenes to issue NFPA documents, it also hears any appeals related to the document. Appeals are an important part of assuring that all NFPA rules have been followed and that due process and fairness have been upheld throughout the codes and standards development process. The Council considers appeals both in writing and through the conduct of hearings at which all interested parties can participate. It decides appeals based on the entire record of the process as well as all submissions on the appeal. After deciding all appeals related to a document before it, the Council, if appropriate, proceeds to issue the document as an official NFPA code or standard. Subject only to limited review by the NFPA Board of Directors, the decision of the Standards Council is final, and the new NFPA code or standard becomes effective twenty days after Standards Council issuance.

Key to Comment Headings

The first line of every proposal includes the following information:

Document No.	Proposal No.	Log No.	Paragraph Reference	Committee Action
101	6	38	3.4	Accept

Example: 101-6 Log #38 **Final Action: Accept (3.4)**

TYPES OF ACTION

P Partial Revision **C** Complete Revision **N** New Document **R** Reconfirmation **W** Withdrawal

The following classifications apply to Committee members and represent their principal interest in the activity of the Committee.

1. M Manufacturer: A representative of a maker or marketer of a product, assembly, or system, or portion thereof, that is affected by the standard.

2. U User: A representative of an entity that is subject to the provisions of the standard or that voluntarily uses the standard.

3. IM Installer/Maintainer: A representative of an entity that is in the business of installing or maintaining a product, assembly, or system affected by the standard.

4. L Labor: A labor representative or employee concerned with safety in the workplace.

5. RT Applied Research/Testing Laboratory: A representative of an independent testing laboratory or independent applied research organization that promulgates and/or enforces standards.

6. E Enforcing Authority: A representative of an agency or an organization that promulgates and/or enforces standards.

7. I Insurance: A representative of an insurance company, broker, agent, bureau, or inspection agency.

8. C Consumer: A person who is or represents the ultimate purchaser of a product, system, or service affected by the standard, but who is not included in (2).

9. SE Special Expert: A person not representing (1) through (8) and who has special expertise in the scope of the standard or portion thereof.

NOTE 1: “Standard” connotes code, standard, recommended practice, or guide.

NOTE 2: A representative includes an employee.

NOTE 3: While these classifications will be used by the Standards Council to achieve a balance for Technical Committees, the Standards Council may determine that new classifications of member or unique interests need representation in order to foster the best possible Committee deliberations on any project. In this connection, the Standards Council may make such appointments as it deems appropriate in the public interest, such as the classification of “Utilities” in the National Electrical Code Committee.

NOTE 4: Representatives of subsidiaries of any group are generally considered to have the same classification as the parent organization.

Report of the Committee on

Water Additives for Fire Control and Vapor Mitigation

Armand V. Brandao, *Chair*
FM Approvals, MA [I]

Michael T. Greiner, *Secretary*
Hazard Control Technologies, Inc., GA [M]

Paul E. Caron, Paul E. Caron Associates, MA [SE]
Dominic J. Colletti, Hale Products, Inc., PA [M]
Rep. Fire Apparatus Manufacturers Association
James M. Figueira, Environmental Chemical Solutions, CA [M]
Charles W. George, IFSC Consultants, MT [SE]
Mitchell Hubert, Tyco International/Ansul Inc., WI [M]
Rep. Fire Suppression Systems Association
Cecilia W. Johnson, USDA Forest Service, MT [RT]
Blake M. Shugarman, Underwriters Laboratories Inc., IL [RT]
Robert E. Tinsley, Jr., Pyrocool Technologies, Inc., VA [M]
Howard L. Vandersall, Lawdon Fire Services, Inc., CA [SE]
Rep. TC on Forest and Fural Fire Protection

Alternates

Bob R. Carter, Hazard Control Technologies Canada, Canada [M]
(Alt. to Michael T. Greiner)
George Unger, Underwriters' Laboratories of Canada, Canada [RT]
(Alt. to Blake M. Shugarman)
Bennie Vincent, FM Global, MA [I]
(Alt. to Armand V. Brandao)

Staff Liaison: **Timothy A. Hawthorne**

Committee Scope: This Committee shall have primary responsibility for documents on the manufacture, testing, application, and use of water additives for the control and/or suppression of fire and flammable vapor mitigation including water additives used to prevent or reduce the spread of fire and the use of water additives in fixed, semi-fixed, mobile, and portable fire suppression systems.

This list represents the membership at the time the Committee was balloted on the text of this edition. Since that time, changes in the membership may have occurred. A key to classifications is found at the front of this book.

This portion of the Technical Committee Report of the Committee on **Water Additives for Fire Control and Vapor Mitigation** is presented for adoption.

This Report on Comments was prepared by the **Technical Committee on Water Additives for Fire Control and Vapor Mitigation,** and documents its action on the comments received on its Report on Proposals on NFPA 18, **Standard on Wetting Agents,** 2006 edition, as published in the Report on Proposals for the 2009 Fall Revision Cycle.

This Report on Comments has been submitted to letter ballot of the **Technical Committee on Water Additives for Fire Control and Vapor Mitigation,** which consists of 11 voting members. The results of the balloting, after circulation of any negative votes, can be found in the report.

18-1 Log #3 **Final Action: Accept in Principle**
(2.2)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-4
Recommendation: Add a new document to 2.2. NFPA 1150, Standard on Foam Chemicals for Fires in Class A Fuels, 2009 (?)
Substantiation: Provides an NFPA document that has acceptable language with regard to requirements which will be addressed in the appropriate logs to follow.
Committee Meeting Action: Accept in Principle
Committee Statement: See Committee Action on Comment 18-22 (Log #9).
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-2 Log #4 **Final Action: Accept**
(2.3)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-5
Recommendation: Add an additional ASTM Publication to the existing list. ASTM E 729, Standard Guide for Conducting Acute Toxicity Tests on Test Materials with Fishes, Macroinvertebrates, and Amphibians, 1996(2000).
Substantiation: This adds supporting documentation required for the addition of a fish toxicity test which will be covered in a later comment.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-3 Log #2 **Final Action: Accept in Principle**
(2.3.4)

Submitter: J. R. Nerat, Kidde/Badger Fire Protection
Comment on Proposal No: 18-7
Recommendation: Add text to read as follows:
2.3.4 UL Publications Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096
Add...UL/ANSI-8 Standard for Portable Foam Fire Extinguishers
Substantiation: The addition of this standard will help clarify the requirement that only listed portable fire extinguishers specifically designed, tested, approved and labeled for use with wet chemical agents and additives are permitted to be recharged and use them. Reference: NFPA 10 paragraphs: 4.1.1, 4.1.3, 7.4.1.4.1, 7.4.1.4.2,7.4.2.2.1, 7.4.2.3.2, 7.4.3.10.1, 7.4.3.11.3.1 and 8.4.2(5)(9).
Committee Meeting Action: Accept in Principle
Revise Section 5.3.4.1.2 to read as follows:
5.3.4.1.2* The test shall be conducted utilizing a 9.5 L (2.5 gal) 2A rated water extinguisher, listed in accordance with UL 626, Water Fire Extinguishers.
Add new annex material as follows:
A.5.3.4.1.2 A listed 2A rated water fire extinguisher for the purposes of testing a wetting agent is utilized as a testing apparatus only, and not intended to imply that the wetting agent is listed for use in any or all 2A rated water fire extinguishers. A wetting agent solution intended for use in a portable fire extinguisher should be listed in accordance with ANSI/UL 8 Water-Based Agent Fire Extinguishers.
Committee Statement: Reference to a UL document cannot be made to Chapter 2 unless it is referenced within the body of the standard. Rewording this section and providing annex material provides clarification and achieves the intent of referencing the UL standard in Chapter 2. (Also applies to Proposal 18-45 Log #20)
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-4 Log #5 **Final Action: Accept**
(4.5.2)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-15
Recommendation: Revise and add new text to read as follows:
4.5.2 The mammalian and fish toxicity and biodegradability performance ~~limits~~ determined in 4.5.1 shall meet the requirements shown below. ~~be approved by the authority having jurisdiction.~~
4.5.2.1 The mammalian toxicity of the wetting agent and wetting agent solution shall meet the requirements shown in table 4.5.2.1. Current Table 5.2.7.2. in NFPA 18 (2006)
4.5.2.2. The fish toxicity of the wetting agent shall not be less than 10 mg/L when tested in accordance with 4.5.2.2.1.
4.5.2.2.1. Rainbow trout (*Oncorhynchus mykiss*) at 60 ± 7 days post hatch, shall be exposed to the wetting agent in accordance with OPPTS 850.1075 and ASTM E729.
4.5.2.2.2. Status conditions in ASTM soft water as described in ASTM E729 at 54 ± 2°F (12 ± 1°C) shall be maintained throughout the 96-hour test period.
4.5.2.3 The wetting agent shall be biodegradable or readily biodegradable as determined by OPPTS 835, Section M.
Substantiation: Mammalian toxicity, fish toxicity, and biodegradability tests can help determine the human and environmental impact of a product or treatment on the environment. A treatment that works to extinguish fires, but has a serious impact on either the people or the environment is a poor choice. The AHJ needs the information to make that choice and needs it in a way that comparison is as straightforward as possible. In many cases the AHJ does not have the expertise needed to determine what is hazardous. This information provided in a consistent manner on a technical data sheet can be compared to available guidance to make a reasoned judgement. The EPA and OSHA have provided some level of guidance in their requirements for labeling, MSDS content, and environmental criteria and guidelines. For a technical committee with expertise in a subject to leave the AHJ uninformed is a misuse of that expertise and our assignment of revising the document. We need to make it better, more useful to the AHJ. There should be a lot more to a standard than a fire test.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 6 Negative: 1
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.
Explanation of Negative:
SHUGARMAN, B.: The health effects, ecological effects, and biodegradability of wetting agent concentrate(s) and/or wetting agent solution(s) are to be evaluated to and comply with any specified requirements of the US EPA Office of Prevention, Pesticides and Toxic Substances Guidelines, or the equivalent. The Technical Committee on Water Additives for Fire Control and Vapor Mitigation is not charged with determining acceptable health effects limits, ecological effects limits, or biodegradability criteria.

18-5 Log #15 **Final Action: Accept in Principle**
(Chapter 5)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-16
Recommendation: Chapter 5 and others as it pertains. Chapter headings and test heading should be revised to include the word “concentrate” and/or “solution” as is appropriate. The requirement and test descriptions should use the word “concentrate” and/or “solution” as appropriate.
Substantiation: There is too much committee work time spent on editing wording that should already be clear. I agree, that the definition of wetting agent says “concentrate”. Many users do not go to definitions if they think they know the meaning of a word; therefore a single repeat at the beginning of a chapter or test method is not unreasonable. Adding the words concentrate and/or solution throughout the document does not add clarity, it add words, and the continued discussion wastes time that could be better spent on content.
Committee Meeting Action: Accept in Principle
Committee Statement: See Committee Comments 18-6, 18-7, 18-9, 18-10, 18-11, 18-12, 18-15, 18-18, 18-13, 18-16, 18-20, 18-21, 18-24, 18-26, 18-25, and 18-23.
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-6 Log #CC1 **Final Action: Accept**
(Chapter 5)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-16
Recommendation: Reword title of Chapter 5 as follows:
Chapter 5 Requirements and Test Methods for Wetting Agent Concentrates and Solutions.
Substantiation: Removes unnecessary repeat of words wetting agent.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-7 Log #CC2 **Final Action: Accept**
(5.1.1)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-17
Recommendation: Revise text to read as follows:
5.1.1 Wetting agent concentrate(s) and solution(s) prepared at the concentration(s) specified for use by the manufacturer shall be subjected to the tests in this chapter.
Substantiation: Removes unnecessary repeating of wetting agent.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-8 Log #6 **Final Action: Accept in Principle**
(5.1.2)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-17
Recommendation: Revise text to read as follows:
5.1.2 The tests detailed...in accordance with ~~ISO/IEC 17025~~, 40 CFR 160, 40 CFR 792, or equivalent.
Substantiation: 40 CFR 160 and 40 CFR 792 are complete Good Laboratory Practice Standards. ICO 17025 is a calibration standard. This should be a part of a Good Laboratory Practice, but is only one part. To list this document first implies an equivalence which is not valid. If the standard is going to list sub topics of a GLP, then many of them should be mentioned.
Committee Meeting Action: Accept in Principle
Revise text to read as follows:
5.1.2 The tests detailed in this chapter shall be conducted by an approved independent laboratory using laboratory practices in accordance with 40 CFR 160, 40 CFR 792, and calibration competency in accordance with ISO/IEC 17025,or equivalent as applicable, and the results shall be recorded and made available by the manufacturer on a technical data sheet.
Committee Statement: ISO/IEC 17025 is a calibration standard which is part of good laboratory practices.
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-9 Log #CC3 **Final Action: Accept**
(5.1.2)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-19
Recommendation: Reject Proposal 18-19.
Substantiation: This information is already addressed appropriately under Proposal 18-18 and Comment 18-6. Comment 18-6 is correct.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-10 Log #CC4 **Final Action: Accept**
(5.2.1)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-22
Recommendation: Revise Section 5.2.1 to read as follows:
5.2.1 Concentrate Pour Point. The pour point of the concentrate shall be determined in accordance with ASTM D 97.
Substantiation: Removes wetting agent for clarity and removes redundancy within the section.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-11 Log #CC5 **Final Action: Accept**
(5.2.2)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-24
Recommendation: Revise 5.2.2 to read as follows:
5.2.2 Concentrate Miscibility.
Substantiation: Removes wetting agent from section title.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-12 Log #CC6 **Final Action: Accept**
(5.2.4)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-27
Recommendation: Revise text to read as follows:
5.2.4 Impact of Low Temperature Storage of Concentrate on Surface Tension.
Substantiation: Removes wetting agent from title
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-13 Log #CC11 **Final Action: Accept**
(5.2.4)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-27
Recommendation: Revise text to read as follows:
5.2.4 Impact of Low Temperature Storage of Concentrate on Surface Tension.
5.2.4.1 Surface tension of solution prepared from 100 ml concentrate samples stored at -18°C ± 2.7°C (0°F ± 5°F) for 16 hours and then conditioned to 18°C ± 2.7°C (65°F ± 5°F) shall not vary more than 5 dynes/cm from the initial measurement determined in accordance with 5.3.1.
5.2.4.2 The solution shall be prepared at the minimum and maximum concentration specified for use by the manufacturer.
5.2.4.3 The surface tension shall be determined in accordance with ASTM D 1331.
Substantiation: Removes unnecessary repeat of words wetting agent.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-14 Log #7 **Final Action: Accept in Principle**
(5.2.5)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-28
Recommendation: Revise text to read as follows:
5.2.5 Wetting Agent Concentrate pH. When tested in accordance with ASTM D1293-99(2005), ~~T~~the pH of the concentrate shall be between 6 and 9 at 18 °C ± 2/7 °D (65°F ± 5°F) ~~in accordance with ASTM D1293 99(2005).~~
Substantiation: The accepted wording implies that the ASTM standard includes the limits of 6 to 9 pH set by the committee. Revising the sentence makes it clear that the test is to be conducted in accordance with the ASTM standard.
Committee Meeting Action: Accept in Principle
Revise text to read as follows:
5.2.5 Wetting Agent Concentrate pH. When tested in accordance with ASTM D1293-99(2005), the pH of the concentrate shall be between 6 and 9 at 18 °C ± 2.7 °C (65°F ± 5°F).
Committee Statement: Corrected grammatical error in submitted comment.
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-15 Log #CC8 **Final Action: Accept**
(5.2.7)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-32
Recommendation: Revise text to read as follows:
5.2.7 Concentrate and Solution Toxicity.
5.2.7.1* Concentrate and solution prepared at the maximum concentration specified for use by the manufacturer shall be tested in accordance with the following EPA OPPTS tests or their equivalent:
(1) 870.1100 Acute Oral Toxicity
(2) 870.1200 Acute Dermal Toxicity
(3) 870.2400 Acute Eye Irritation
(4) 870.2500 Acute Dermal Irritation
A.5.2.7.1 There are other organizations, such as the Organization for Economic Cooperation and Development (OECD), having similar tests that can be substituted with the approval of the authority having jurisdiction.
A.5.2.7.2 The concentrate and solution prepared at the maximum concentration specified for use by the manufacturer shall not exceed the toxicity limits established in Table 5.2.7.2 when tested in accordance with 5.2.7.1.
Substantiation: Removes unnecessary repeat of words wetting agent.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 6 Negative: 1
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.
Explanation of Negative:
SHUGARMAN, B.: The health effects of wetting agent concentrate(s) and/or wetting agent solution(s) are to be evaluated to and comply with any specified requirements of the US EPA Office of Prevention, Pesticides and Toxic Substances Guidelines, or the equivalent. The Technical Committee on Water Additives for Fire Control and Vapor Mitigation is not charged with determining acceptable health effects limits.

18-16 Log #CC12 **Final Action: Accept**
(5.2.7.1.2)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-33
Recommendation: Apply rewording of Committee Comment 18- (Log #CC10) to Proposal 18-33. New section 5.2.7.1.2 is not taken from existing standard, but from Proposal 18-32. Remove wetting agent from Section 5.2.7.2 as shown:
Substantiation: Removes unnecessary repeat of words wetting agent.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 6 Negative: 1
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.
Explanation of Negative:
SHUGARMAN, B.: The ecological effects of wetting agent concentrate(s) and/or wetting agent solution(s) are to be evaluated to and comply with any specified requirements of the US EPA Office of Prevention, Pesticides and Toxic Substances Guidelines, or the equivalent. The Technical Committee on Water Additives for Fire Control and Vapor Mitigation is not charged with determining acceptable ecological effects limits..

18-17 Log #1 **Final Action: Reject**
(5.2.7.2)

Submitter: Michael T. Greiner, Hazard Control Technologies, Inc.
Comment on Proposal No: 18-33
Recommendation: Revise text to read as follows:
5.2.7.2 Wetting Agent Concentrate Aquatic Toxicity. The LC50 of the wetting agent concentrate shall be ~~greater than 10 mg/L when~~ tested in accordance with all the following:
Substantiation: The reference to 10 mg/L) ppm for LC50 is an arbitrary value that is not relevant to UL EPA benchmarks, and bears no resemblance to the actual concentrations of proportioned wetting agents in practical use. It is a holdover from NFPA 298, which at that time was the specific requirement of a single end-user, the US Forestry Service. This mandate is unjustifiable in practice, overstates the NFPA's influence on the AHJ, and introduces restraint of trade concerns.
Committee Meeting Action: Reject
Committee Statement: The committee feels that the removal of a performance limit is an abdication for the responsibility to provide meaningful direction to the AHJ and users of this document.
Number Eligible to Vote: 11
Ballot Results: Affirmative: 6 Negative: 1
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.
Explanation of Negative:
SHUGARMAN, B.: The ecological effects of wetting agent concentrate(s) and/or wetting agent solution(s) are to be evaluated to and comply with any specified requirements of the US EPA Office of Prevention, Pesticides and Toxic Substances Guidelines, or the equivalent. The Technical Committee on Water Additives for Fire Control and Vapor Mitigation is not charged with determining acceptable ecological effects limits.

18-18 Log #CC10 **Final Action: Accept**
(5.2.7.2)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-32
Recommendation: Renumber section 5.2.7.2 to 5.2.7.1.2 and remove wetting agent from both locations in the section. Also renumber Table 5.2.7.2 to 5.2.7.1 and retitle as follows:
Table 5.2.7.1 Toxicity Limits for Concentrates and Solutions
On the left column of this table, the upper column heading Wetting Agent needs to read Concentrates, and the lower heading Wetting Agent Solutions, needs to read Solutions.
Substantiation: Removes unnecessary repeat of words wetting agent.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 6 Negative: 1
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.
Explanation of Negative:
SHUGARMAN, B.: The health effects of wetting agent concentrate(s) and/or wetting agent solution(s) are to be evaluated to and comply with any specified requirements of the US EPA Office of Prevention, Pesticides and Toxic Substances Guidelines, or the equivalent. The Technical Committee on Water Additives for Fire Control and Vapor Mitigation is not charged with determining acceptable health effects limits.

18-19 Log #8 **Final Action: Accept in Principle**
(5.2.7.3)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-35
Recommendation: Revise text to read as follows:
5.2.7.3 Wetting Agent Concentrate Biodegradability. The biodegradability of the wetting agent concentrate shall be evaluated in accordance with this Section and the results recorded on the manufacturer's data sheet. A rating of "readily biodegradable" or "biodegradable," as recommended in OPPTS 835,3110, shall be acceptable.
Substantiation: None given.
Committee Meeting Action: Accept in Principle
Revise text to read as follows:
5.2.7.3* Wetting Agent Concentrate Biodegradability. The biodegradability of the wetting agent concentrate shall be evaluated in accordance with this Section and the results recorded on the manufacturer's data sheet.
A.5.2.7.3 A rating of "readily biodegradable" or "biodegradable," as recommended in OPPTS 835.3110, should be acceptable. A product is defined in accordance with OPPTS as readily biodegradable when it is greater than or equal to 60 percent biodegraded within 28 days and biodegradable when it is greater than or equal to 60 percent biodegraded within 29-42 days.
Committee Statement: Guidance is provided to the user or AHJ without adding a mandatory requirement.
Number Eligible to Vote: 11
Ballot Results: Affirmative: 6 Negative: 1
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.
Explanation of Negative:
SHUGARMAN, B.: The biodegradability of wetting agent concentrate(s) and/or wetting agent solution(s) is to be evaluated to and comply with any specified requirements of the US EPA Office of Prevention, Pesticides and Toxic Substances Guidelines, or the equivalent. The Technical Committee on Water Additives for Fire Control and Vapor Mitigation is not charged with determining acceptable biodegradability criteria.

18-20 Log #CC13 **Final Action: Accept**
(5.2.7.3)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-35
Recommendation: Remove wetting agent as follows:
5.2.7.3* Concentrate Biodegradability. The biodegradability of the concentrate shall be evaluated in accordance with this Section and the results recorded on the manufacturer's data sheet.
5.2.7.3.1 The evaluation shall be in accordance with U.S. EPA Office of Prevention, Pesticides and Toxic Substances, Fate, Transport, and Transformation Test Guidelines, OPPTS 835.3110, Ready Biodegradability, Section M, CO_2 Evolution (Modified Sturm) Test, or equivalent.
Substantiation: Removes unnecessary repeat of words "wetting agent".
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 6 Negative: 1
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.
Explanation of Negative:
SHUGARMAN, B.: The biodegradability of wetting agent concentrate(s) and/or wetting agent solution(s) is to be evaluated to and comply with any specified requirements of the US EPA Office of Prevention, Pesticides and Toxic Substances Guidelines, or the equivalent. The Technical Committee on Water Additives for Fire Control and Vapor Mitigation is not charged with determining acceptable biodegradability criteria.

18-21 Log #CC14 **Final Action: Accept**
(5.2.8)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-37
Recommendation: Reword sections 5.2.8 and 5.2.8.2 as follows, reinstate text from 5.2.8 that was not included in the proposal, and annex material for 5.3.3 was incorporated into annex material for 5.2.8:
5.2.8* Concentrate and Solution Corrosion. Testing of the corrosive effects of concentrates and solutions shall be conducted in accordance with either NACE Standard Test Method TM0169, or ASTM G 1 and ASTM G 31, and in accordance with 5.2.8.2 through 5.2.8.7.
A.5.2.8 For continuous storage, manufacturer's guidance should be sought for materials of construction or coatings other than those tested. Concentrates, although they can have limited corrosiveness, exhibit a tendency to accelerate corrosion due to the cleaning and penetrating action and will penetrate and loosen unbonded coatings. Generally, solutions also have a cleaning action and will remove grease, oil, mill scale, protective coatings, and so forth, from metal surfaces that normally protect them from the corrosive attack of water.
5.2.8.1 Results. The results of the testing shall be included in the manufacturer's technical data sheet.

5.2.8.2* Samples. The concentrate and its solutions shall be tested for corrosion with samples of 4130 mild steel, 2024-T3 aluminum, and UNS C27000 yellow brass (65 percent copper, 35 percent zinc).

A.5.2.8.2 Testing on additional alloys may be necessary in order to meet the needs of the end user. Concentrates and solutions should be tested for compatibility with the materials with which they will be used in accordance with Chapter 5.

5.2.8.2.1 The concentrate and its solutions shall be tested at the maximum and minimum use concentrations specified by the manufacturer.

Substantiation: Removes unnecessary repeat of words wetting agent.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 6 Negative: 1
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.
Explanation of Negative:

JOHNSON, C.: This comment is a negative of the work in 18-22 which I believe to be the better choice. Comment 18-21 leaves corrosion limits to the discretion and knowledge of the AHJ.

18-22 Log #9 **Final Action: Accept in Principle**
(5.2.8.2)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-36
Recommendation: Revise text to read as follows:

5.2.8.2 Results. Results of the average of replicate tests shall be less than or equal to the values found in table 5.2.8.2. The results of the testing shall be included in the manufacturer's technical data sheet.

The table is missing from the existing text.

Table 5.2.8.2 can be extracted from NFPA 1150-(2009). This version contains appropriate updates.

Substantiation: To expect every AHJ to be knowledgeable on the very wide variety of topics covered in these standards is unrealistic, especially those from small jurisdictions. The committee, with the help of commenters, has a much wider range of expertise. It is incumbent on the committee to use that expertise to assist the AHJ where ever possible. Providing reasonable limits to tests is one way to assist. To not provide this assistance is to waste the knowledge of the committee members and leave the AHJ at the mercy of sometimes, unscrupulous sales people who are more interested in sales than safety or success in firefighting.
Committee Meeting Action: Accept in Principle
Revise text to read as follows and modify the table with changes developed by NFPA 1150 TC:

5.2.8.1 Results. Results of the average of replicate tests shall be less than or equal to the values found in table 5.2.8.1. The results of the testing shall be included in the manufacturer's technical data sheet.

The table is missing from the existing text.

Table 5.2.8.1 can be extracted from NFPA 1150-(2004) Table 4.2.3.1. with the following changes:

Table 5.2.8.1 Maximum Allowable Corrosion Rates

Under Column "Application" change words "Foam Concentrates and Foam Solutions" to "Wetting Agent Concentrates" and "Wetting Agent Solutions." Columns labeled 2024-T3 Aluminum, Total Immersion the values for the solutions shall be 2.0. (eight values total).

Under AZ31B Magnesium, change the values that currently read 2.0 to read 4.0 (there are two instances of this)

Committee Statement: The table was extracted from NFPA 1150, Standard on Foam Chemicals for Fires in Class A Fuels, 2004 edition with modifications developed by the NFPA 1150 Technical Committee through the revision cycle for that document.
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-23 Log #CC18 **Final Action: Accept**
(5.3)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-40
Recommendation: Delete text as follows:
~~5.3 Wetting Agent Solutions.~~
Substantiation: Committee Comment 18-26 (Log #CC16) deleted Section 5.3, but did not address the title.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-24 Log #CC15 **Final Action: Accept**
(5.3.1)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-41
Recommendation: Renumber and reword this section from 5.3.1 to 5.2.9 and reword as follows:

5.2.9 Surface Tension of Solutions. The surface tension of solutions prepared at the minimum and maximum concentration specified for use by the manufacturer shall be determined in accordance with ASTM D 1331.

5.2.9.1 The surface tension of solution prepared from concentrate as received from the manufacturer and conditioned to 18°C ± 2.7°C (65°F ± 5°F) shall be less than or equal to 33 dynes/cm.

Substantiation: Relocating this section to Section 5.2 coincides with the title of Section 5.2.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-25 Log #CC17 **Final Action: Accept**
(5.3.2)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-42
Recommendation: Reword and renumber the following to 5.2.10 as shown:

5.2.10 Solution Separation.

5.2.10.1 Solution, at the minimum and maximum concentration specified for use by the manufacturer, shall not stratify or otherwise separate when stored undisturbed for 30 days in closed, sealable, 100 ml transparent containers at temperatures of 0°C ± 2°C (32°F ± 3°F), 19.5°C ± 4.5°C (67°F ± 8°F), and 49°C ± 2°C (120°F ± 3°F).

5.2.10.2 Visible separation characterized by the formation of two or more distinct layers, stratification, or precipitation occurring during the course of the test shall be considered separated.

Substantiation: Removes unnecessary repeat of words "wetting agent" and clearly defines pass/fail criteria of test.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-26 Log #CC16 **Final Action: Accept**
(5.3.3)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-44
Recommendation: Delete Section 5.3.3 and renumber accordingly.
Substantiation: Committee Comment 18-21 (CC#14) relocated this material into Section 5.2.8.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-27 Log #10 **Final Action: Accept in Principle in Part**
(5.3.4 and 5.3.5)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-45
Recommendation: These fire tests are complex and need to be written with clear step by step directions.

Separate the fire tests from the non-fire tests for ease of use.
Chapter 5 – Non-Fire Tests
Chapter 6 – Class A Fire Tests
Chapter 7 – Class B Fire Tests
Renumber remaining chapters accordingly.

Substantiation: These test directions are very unclear. I don't have the expertise to suggest specific rewrites, but I am sufficiently familiar with writing test directions to know that these could be greatly improved and much more useful to the reader (or a potential tester) if they were carefully rewritten with the user in mind.

The organization could also be improved to make the document more user friendly.

Committee Meeting Action: Accept in Principle in Part

Pull sections 5.3.4, and 5.3.5 out of Chapter 5 and create new Chapter 6 and Chapter 7 as follows, renumber remaining chapters accordingly.

Chapter 6 Class A Fire Extinguishment Tests.

6.1 General

6.1.1 Successful performance is required for all of the following Class A fire tests.

6.2 Wood Crib Fire Test.

6.2.1 Wetting agent solution at the minimum concentration specified by the manufacturer shall be evaluated to, and comply with, the requirements of UL 711 for Class A fires utilizing a 3A wood crib.

6.2.2 The test shall be conducted utilizing a 9.5 L (2.5 gal) listed 2A rated water extinguisher.

6.3 Deep-Seated Fire Test.

6.3.1 Wetting agent solutions shall extinguish deep-seated cotton fires and exhibit less runoff than water when tested in accordance with 6.3.2 and 6.3.3.

6.3.2 Tests shall be conducted three times with plain water and three times with the wetting agent solution prepared at the manufacturer's recommended concentrations.

6.3.3 The tests shall be conducted using a cylindrical basket of perforated sheet steel, 114 mm (4½ in.) in diameter and 178 mm (7 in.) high, and ginned cotton weighing 100 g (3.5 oz) shall be used and the test conducted as follows:

(1) Stuff 50 g (1.75 oz) of cotton into the bottom half of the basket.

(2) Heat a steel rod 35 mm (1 in.) in diameter and 33 mm (1 in.) long to 593°C (1100°F).

(3) Place the rod on the cotton in the basket.

(4) Immediately insert 50 g (1.75 oz) of cotton into the basket on top of the rod.

(5) Pour 250 cc of test liquid (water or wetting agent solution) onto the cotton and catch the runoff in a pan placed below the basket.

(6) Measure and record the volume of runoff.

6.4 Wood Fiber Board Penetration.

6.4.1 Wetting agent solutions shall extinguish wood fiber board fires and exhibit less runoff and weight loss than water when tested in accordance with 6.4.2 and 6.4.3.

6.4.2 Tests shall be conducted three times with plain water and three times with the wetting agent solution prepared at the manufacturer's recommended concentrations.

6.4.3 Penetration tests shall be conducted as follows:

(1) Weigh fiber insulation board squares measuring 305 mm × 305 mm × 13 mm (12 in. × 12 in. × ½ in.) and place on a wire grid.

(2) Expose each insulating board sample to an alcohol flame from a burning pan that is placed immediately below the sample board.

(3) Expose the flame to the board for 1¾ minutes (105 seconds).

(4) Remove the fuel pan and place a clean, dry pan under the board to collect the water or agent runoff.

(5) Spray 250 mL (8.5 oz) of test liquid (water or wetting agent solution) on the upper surface of the insulation board using a small sprinkler bottle.

(6) Place pans underneath the board to catch any runoff that occurs.

(7) Measure and record the volume of runoff.

(8) Dry and weigh the boards and calculate the weight loss.

Chapter 7 Class B Fire Extinguishment Tests.

7.1* Products listed for use on Class B fires shall pass the fire tests specified in this Chapter.

A.7.1 Although wetting agent solutions and Class B foams are required to pass Class B fire performance tests to obtain a listing, the tests are different. Some of the most important differences are as follows:

(1) The tested application rate for wetting agent solutions is 8.1 L/min m^2(0.2 gpm/ft^2) under NFPA 18. The tested application rate Class B foam solutions is 1.6 L/min m2 to 2.4 L/min m2 (0.04 gpm/ft^2 to 0.06 gpm/ft^2) under NFPA 11.

(2) There are no burnback or sealability requirements for wetting agent solutions.

(3) There is no published application rate in NFPA 18.

There is limited, if any, experience with the extinguishment of fires in extreme depth such as tank or dike fires.

7.2 Wetting agent solutions at the concentrations specified by the manufacturer shall be evaluated to and comply with the requirements of UL 711 for Class B fires.

7.3 Tests for Class B fires shall be conducted as follows:

(1) A 4.65 m2 (50 ft2) 20 B pan fitted as described in UL 711 with a backboard that is the width of the pan and 0.9 m (3 ft) high shall be used.

(2) A 51 mm (2 in.) layer of heptane fuel shall be floated on a 102 mm (4 in.) depth of water.

(3) The fuel in the pan shall be ignited and allowed to free burn for 60 seconds.

(4) A 37.9 L/min (10 gpm) nozzle shall be used to apply the wetting agent solution to the fire using one, or a combination, of the following methods:

(a) The nozzle shall be fixed in position at an angle above the horizontal in order to direct the discharge across the pan on to the backboard for the entire duration of the test.

(b) The nozzle shall be permitted to be moved as necessary for control and extinguishment.

(5) In no case shall the nozzle extend over any part of the test pan.

(6) The fire shall be extinguished within 5 minutes of the start of application of the wetting agent solution.

7.4 Extinguishment shall be achieved in two consecutive tests.

Committee Statement: Rewriting the individual test procedures would require more time and effort that is available at this ROC meeting, but placing the requirements for Class A and Class B fire tests into separate and specific chapters provides clarity to the users of this document.

Number Eligible to Vote: 11

Ballot Results: Affirmative: 7

Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-28 Log #11 **Final Action: Accept in Principle**

(5.3.4.1.1)

Submitter: Cecilia W. Johnson, USDA Forest Service

Comment on Proposal No: 18-45

Recommendation: Revise text to read as follows:

5.3.4.1.1 The ability of wetting agent solutions to extinguish wood crib fires shall be determined with solution prepared at the minimum concentration specified for use by the manufacturer.

5.3.4.1.2. ~~according~~ The tests will be conducted according to the procedures detailed in this section and UL 711/ULC S508 for Class A fires utilizing a 3-A wood crib.

5.3.4.1.~~2~~3. Existing.

Substantiation: The current proposal contains 1 very complex sentence. I believe that the clarity and intent are improved by splitting the sentence.

Committee Meeting Action: Accept in Principle

Reword Section 5.3.4.1.2 as follows:

5.3.4.1 Wood Crib Fire Test.

5.3.4.1.1 The ability of wetting agent solution to extinguish wood crib fires shall be determined with solution prepared at the minimum concentration specified for use by the manufacturer.

5.3.4.1.2 Tests shall be conducted according to the procedures detailed in this section and UL 711/ULC S508 for Class A fires utilizing a 3-A wood crib.

5.3.4.1.3 The solution shall be applied with a nominal 9.5 L (2.5 gal) listed 2-A rated water extinguisher.

Committee Statement: Removed the word "will" and changed to "shall" to comply with NFPA MOS.

Number Eligible to Vote: 11

Ballot Results: Affirmative: 7

Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-29 Log #CC19 **Final Action: Accept**

(5.3.4.2)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,

Comment on Proposal No: 18-46

Recommendation: Modify Section 5.3.4.2 and renumber as follows:

6.3 Deep-Seated Fire Test.

6.3.1 The ability of wetting agent solutions to extinguish deep-seated cotton fires and exhibit less runoff than water shall be determined with solution prepared at the minimum concentration specified for use by the manufacturer according to the procedures detailed in this section.

6.3.2 Tests shall be conducted three times with water as the test liquid, and three times with the solution as the test liquid. The runoff results of replicate tests shall be averaged.

6.3.3 The tests shall be conducted as follows using ginned cotton and test liquid:

(1) To contain the ginned cotton, a perforated cylinder shall be fabricated from Style 1/2 16F or 1/2 13F expanded and flattened steel sheet complying with the dimensions of ASTM F1267. The perforated cylinder shall be 178 mm ± 3 mm (7 in. ± 1/8 in.) high with the length of the mesh parallel with the height of the cylinder and 114 mm ± 3 mm (4-1/2 ± 1/8 in.) in diameter with a maximum out-of-roundness of 13 mm (1/2 in.).

(2) To accommodate the perforated cylinder, a grid having a height of 152 mm ± 3 mm (6 in. ± 1/8 in.) and measuring at least 350 mm × 350 mm (13-3/4 in. × 13-3/4 in.) shall be fabricated from Style 3/4 9F expanded and flattened steel sheet complying with the dimensions of ASTM F1267. Grid supports having a cross sectional dimension not greater than 40 mm (1 in.) shall be located at each of the corners of the grid and perpendicular to the grid.

(3) The perforated cylinder shall be placed on top of the grid with one end of the perforated cylinder in contact with the grid. A clean, dry, collection pan shall be placed under the grid and below the perforated cylinder for collection of runoff from the test liquid application.

(4) The bottom half of the perforated cylinder shall be filled with 50 g +/- 0.5 g (1.75 oz +/- 0.02 oz) of ginned cotton.

(5) 250 mL (8.5 oz) of the test liquid shall be placed in a small container.

(6) A steel rod 35 mm ± 0.5 mm (1.38 in. ± 0.02 in.) in diameter and 33 mm ± 0.5 mm (1.30 in. ± 0.02 in.) long shall be heated to 593°C ± 5°C (1100°F± 10°F).

(7) When the steel rod has been sufficiently heated, it shall be placed on the ginned cotton in the approximate center of the perforated cylinder.

(8) Immediately following placement of the steel rod, an additional 50 g +/- 0.5 g (1.75 oz +/- 0.02 oz) of ginned cotton shall be placed on top of the steel rod in the perforated cylinder and the test liquid poured onto the ginned cotton. Success or failure to extinguish shall be noted and recorded.

(9) Within 15 minutes following application of the test liquid, the volume of runoff in the collection pan shall be measured and recorded.
(10) The average runoff with water as the test liquid shall be compared to the average runoff with solution as the test liquid.
Substantiation: Reworded section to remove term plain Water, as it was ambiguous. also provided editorial clean up to provide clarity.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-30 Log #CC20 **Final Action: Accept**
(5.3.4.3)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-47
Recommendation: Reword section 5.3.4.3 as follows:
5.3.4.3* Wood Fiber Board Fire Test.
A.5.3.4.3 Wood fiber board for the purpose of performing this test should not have any type of vapor barrier and should not contain any fire retardant additives.
5.3.4.3.1 The ability of wetting agent solutions to extinguish wood fiber board fires and exhibit less runoff and weight loss than water shall be determined according to the procedures detailed in this section using solution prepared at the minimum concentration specified for use by the manufacturer.
5.3.4.3.2 Tests shall be conducted three times with water as the test liquid and three times with the solution as the test liquid. All tests shall be conducted on the same day with board squares prepared from the same board. The runoff and weight loss results of replicate tests shall be averaged.
5.3.4.3.3 The tests shall be conducted as follows:
(1) The board having a thickness of 13 mm ± 10% shall be cut into six squares measuring 305 mm ± 3 mm × 305 ± 3 mm (12 in. ± 1/8 in. × 12 in. ± 1/8 in.). The weight of each square shall be recorded.
(2) A steel pan having a height of 102 mm ± 3 mm (4 in. ± 1/8 in.) and measuring 305 mm ± 3 mm × 305 ± 3 mm (12 in. ± 1/8 in. × 12 in. ± 1/8 in.) shall be placed on a level surface and filled with a sufficient amount of test fuel, commercial grade denatured alcohol, to sustain the required flame exposure duration.
(3) A grid having a height of 152 mm ± 3 mm (6 in. ± 1/8 in.) and measuring at least 350 mm × 350 mm (13-3/4 in. × 13 3/4 in.) shall be fabricated from Style 3/4 9F expanded and flattened steel sheet complying with the dimensions of ASTM F1267, shall be used to support the boards. Grid supports having a cross sectional dimension not greater than 40 mm (1 in.) shall be located at each of the corners of the grid and perpendicular to the grid.
(4) The grid shall be placed above the steel pan with the bottom of the grid supports on the same surface as the bottom of the steel test fuel pan.
(5) 250 mL (8.5 oz) of the test liquid shall be placed in a small sprinkler bottle.
(6) Each board square shall be individually placed horizontally on the grid centrally over the steel pan, the denatured alcohol ignited, a timer started, and the board square exposed to the flames.
(7) At 105 seconds of flame exposure, the steel pan shall be removed and replaced with a clean, dry, collection pan for runoff from the test liquid application.
(8)Immediately following positioning of the collection pan, the test liquid in the sprinkler bottle shall be sprayed on the surface of the board square that has not been exposed to flames and, if applicable, the extinguishment time recorded.
(9) Within 15 minutes following application of the test liquid, the volume of runoff in the collection pan shall be measured and recorded.
(10) Each board square shall then be dried, weighed, the weight recorded, and the weight loss calculated.
(11) Following completion of the test series, the average runoff and average weight loss with water as the test liquid shall be compared to the average runoff and average weight loss with wetting agent solution as the test liquid.
Substantiation: Proposed revisions provide clarity regarding the test procedure
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-31 Log #CC21 **Final Action: Accept**
(5.3.5)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-48
Recommendation: Revise Section 5.3.5 as shown:
5.3.5* Class B Fire Extinguishment Tests.
A.5.3.5 Although wetting agent solutions and Class B foams are required to pass Class B fire performance tests to obtain a listing, the tests are different. Some of the most important differences are as follows:
(1) The tested application rate for wetting agent solutions is 8.1 L/min • m^2 (0.2 gpm/ft^2) under NFPA 18. The tested application rate for Class B foam solutions is 1.6 L/min • m^2 to 2.4 L/min • m^2 (0.04 gpm/ft^2 to 0.06 gpm/ft^2) under NFPA 11.
(2) There are no burnback or sealability requirements for wetting agent solutions.
(3) There is no published application rate in NFPA 18. There is limited, if any, experience with the extinguishment of fires in extreme depth such as tank or dike fires.
5.3.5.1 Wetting agent solution at the minimum concentration specified for use by the manufacturer shall be evaluated to and comply with the requirements of UL 711/ULC S508 for Class B fires.
5.3.5.2 Tests for Class B fires shall be conducted as follows:
(1) A 4.65 m2 (50 ft^2) 20 B pan fitted as described in UL 711/ULC S508 with a steel backboard that is approximately the width of the pan and approximately 0.9 m (3 ft) high shall be used.
(2) A 51 mm (2 in.) layer of heptane fuel shall be floated on a 102 mm (4 in.) depth of water.
(3) The fuel in the pan shall be ignited and allowed to free burn for 60 seconds.
(4) A 37.9 L/min (10 gpm) nozzle shall be used to apply the wetting agent solution to the fire using one, or a combination, of the following methods:
(a) The nozzle shall be fixed in position at an angle above the horizontal in order to direct the discharge across the pan on to the backboard for the entire duration of the test.
(b) The nozzle shall be permitted to be moved as necessary for control and extinguishment.
(5) In no case shall the nozzle extend over any part of the test pan.
(6) The fire shall be extinguished within 5 minutes of the start of application of the wetting agent solution.
5.3.5.3 Extinguishment shall be achieved in two consecutive tests.
Substantiation: Editorial change included removing a preposition, and providing clarity and consistency with other changes to the standard.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-32 Log #14 **Final Action: Accept**
(Chapter 6)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-49
Recommendation: Revise text to read as follows:
Chapter 6 Wetting Agent Supply.
6.2 Fire Department Wetting Agent Supply Requirements.
Substantiation: The one word title "supply" does not provide sufficient information about the topic of the chapter.
Adding the words Wetting Agent clarify the intent.
In 6.2 the title needs to narrow the types of supply requirements addressed in this standard. After all it could mean, pumps, hoses, etc.
Committee Meeting Action: Accept
Committee Statement: This also applies to Proposal 18-50
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-33 Log #12 **Final Action: Reject**
(7.3)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-56
Recommendation: Revise 7.3 to include item 4:
(4) Application rate for each listed application.
Substantiation: There were proposals to keep and to remove this section. It is important that the application rates as evaluated and listed be readily available to the potential purchaser and user to avoid misunderstanding or misstatement from over zealous sales persons.
Committee Meeting Action: Reject
Committee Statement: Requirement is adequately addressed in Item #3 of 7.3.
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-34 Log #CC22 **Final Action: Accept**
(A.4.3)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-59
Recommendation: Revise text to read as follows:
4.3* Compatibility of Wetting Agent Concentrate and Solutions
A.4.3 Different wetting agent concentrates and their solutions may be incompatible. Such incompatibilities may result in any or all of, but not be limited to the following conditions:
• Loss of fire fighting performance
• Coagulation and/or jelling of the concentrate or solution which may alter flow.

- Improper proportioning rates.
- Increased corrosion or other structural damage.
- Inability to maintain a stable solution

Provided that the blending and application of wetting agent solutions and water additive solutions are conducted using separate delivery equipment (to avoid the potential conditions noted above), it may be beneficial to apply more than one type of wetting agent and/or water additive solution (including conventional foam solutions as governed by NFPA 11 and NFPA 1150) to take advantage of different product features and benefits.

It may be beneficial to use two or more different technologies to suppress a fire. For example apply a wetting agent solution on a 3-dimensional fuel fire to achieve suppression and then apply a conventional Class B foam blanket to provide an extra margin of safety and additional exposure protection for the resulting pooled fuel collected underneath the 3-dimensional object. Every care should be taken to avoid applying divergent technologies together,directed at the same delivery point or target to avoid one product interfering with another, rendering one or both less effective.

Substantiation: Removed water agents and replaced with wetting agents for consistency and clarification.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-35 Log #13 **Final Action: Accept**
(A.7.1.1)

Submitter: Cecilia W. Johnson, USDA Forest Service
Comment on Proposal No: 18-61
Recommendation: Revise text to read as follows:

A.7.1.1. ~~Water additive~~ Wetting agent containers...".

Substantiation: This is a wetting agent standard. Using the term water additive in this context is likely to cause confusion.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.

18-36 Log #CC23 **Final Action: Accept**
(A.7.1.1)

Submitter: Technical Committee on Water Additives for Fire Control and Vapor Mitigation,
Comment on Proposal No: 18-54
Recommendation: Insert section A.7.1.1 as follows:

A.7.1.1 Wetting agent containers should conform to the United Nations Performance Based Packaging Standards as codified under U.S. Department of Transportation Regulations, 49 CFR 178, Subpart M.

Substantiation: Removes annex material accepted under proposal 18-54 since the committee cannot find a referenced to 49 CFR 178.600.4. and replaces with the wording for annex A.7.1.1 that was accepted under proposal 18-61, with the correct referenced document.
Committee Meeting Action: Accept
Number Eligible to Vote: 11
Ballot Results: Affirmative: 7
Ballot Not Returned: 4 Caron, P., Greiner, M., Hubert, M., Tinsley, Jr., R.