MEMORANDUM

DATE: May 24, 2016

TO: Principal and Alternate Members of the Technical Committee on Medical Equipment (HEA-MED)

FROM: Chelsea Tuttle, Staff Liaison

SUBJECT: AGENDA PACKAGE– NFPA 99 Second Draft Meeting (A2017)

Enclosed is the agenda for the NFPA 99 Second Draft meeting of the Technical Committee on Medical Equipment, which will be held on Monday, June 20, 2016 at the Crowne Plaza Dallas Downtown, in Dallas, TX. Please review the attached Public Comments in advance, and if you have alternate suggestions, please come prepared with proposed language and respective substantiation.

If you have any questions prior to the meeting, please do not hesitate to contact me at:

   Office: (617) 984-7376
   Email: ctuttle@nfpa.org

For administrative questions, please contact Elena Carroll at (617) 984-7952.

I look forward to working with everyone.
Technical Committee on Medical Equipment  
(HEA-MED)  
NFPA 99 Second Draft Meeting (Annual 2017)  
Monday, June 20, 2016  
Crowne Plaza Dallas Downtown  
1015 Elm Street, Dallas, TX 75202

AGENDA

Monday, June 20, 2016

1. Call to Order – 8:00 am (6/20)

2. Introductions and Attendance

3. Chairman Comments

4. Approval of Previous Meeting Minutes

5. Staff Liaison Presentation on NFPA Revision Process and A2017 Cycle

6. Preparation of the Second Draft
   - Review Public Comments
   - Create Second Revisions

7. New Business

8. Adjournment

Please submit requests for additional agenda items to the chair and staff liaison at least seven days prior to the meeting.
Technical Committee on Medical Equipment  
(*HEA-MED*)

**NFPA 99 Second Draft Meeting (Annual 2017)**
Monday, June 20, 2016
Crowne Plaza Dallas Downtown
1015 Elm Street, Dallas, TX 75202

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### Key Dates for the Annual 2017 Revision Cycle

<table>
<thead>
<tr>
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<th>Date</th>
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<tbody>
<tr>
<td>Public Input Closing Date</td>
<td>July 6, 2015</td>
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<tr>
<td>Final Date for First Draft Meeting</td>
<td>September 14, 2015</td>
</tr>
<tr>
<td>Final First Draft Posted</td>
<td>March 7, 2016</td>
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<tr>
<td>Public Comment Closing Date</td>
<td>May 16, 2016</td>
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<tr>
<td><strong>Final Date for Second Draft Meeting</strong></td>
<td><strong>July 25, 2016</strong></td>
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<tr>
<td>Posting of Ballot by</td>
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<tr>
<td><strong>Ballots due by</strong></td>
<td><strong>September 26, 2016</strong></td>
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<tr>
<td>Correlating Committee Second Draft Meeting by</td>
<td>November 21, 2016</td>
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<tr>
<td><strong>Final Second Draft Posted</strong></td>
<td><strong>January 16, 2017</strong></td>
</tr>
<tr>
<td>Closing Date for Notice of Intent to Make a Motion (NITMAM)</td>
<td>February 20, 2017</td>
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<tr>
<td><em>Issuance of Consent Document (No NITMAMs)</em></td>
<td>May 12, 2017</td>
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<tr>
<td><strong>NFPA Annual Meeting (Boston)</strong></td>
<td><strong>June 4-7, 2017</strong></td>
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<tr>
<td><em>Issuance of Document with NITMAM</em></td>
<td>August 10, 2017</td>
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Technical Committee deadlines are in **bold**.
Technical Committee Roster
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Phone</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Donald D. King</td>
<td>Chair, HEA-MED</td>
<td>SE</td>
<td>1663 Stanmore Drive, Pleasant Hill, CA 94523</td>
</tr>
<tr>
<td>Barry E. Brown</td>
<td>Principal, HEA-MED</td>
<td>IM</td>
<td>Airgas, Inc., 3426 Starwood Trail, Lilburn, GA 30047-2445, Alternate: Corky Bishop</td>
</tr>
<tr>
<td>Lisa Carr</td>
<td>Principal, HEA-MED</td>
<td>U</td>
<td>Christiana Care Health Services, 5 Ivy Court, Wilmington, DE 19808</td>
</tr>
<tr>
<td>Charles Connor</td>
<td>Principal, HEA-MED</td>
<td>U</td>
<td>Detroit Medical Center, 3663 Woodward Avenue, 2-719, Detroit, MI 48201</td>
</tr>
<tr>
<td>David A. Dagenais</td>
<td>Principal, HEA-MED</td>
<td>U</td>
<td>Wentworth-Douglass Hospital, 789 Central Avenue, Dover, NH 03820, NFPA Health Care Section</td>
</tr>
<tr>
<td>Keith Ferrari</td>
<td>Principal, HEA-MED</td>
<td>M</td>
<td>Praxair, Inc., 2807 Gresham Lake Road, Raleigh, NC 27615, Compressed Gas Association, Alternate: Gary L. Bean</td>
</tr>
<tr>
<td>Gerald R. Goodman</td>
<td>Principal, HEA-MED</td>
<td>SE</td>
<td>Texas Woman’s University, Health Care Administration Program, 6700 Fannin, #7015, Houston, TX 77030</td>
</tr>
<tr>
<td>Pamela Gwynn</td>
<td>Principal, HEA-MED</td>
<td>RT</td>
<td>UL LLC, 12 Laboratory Drive, Research Triangle Park, NC 27709-0163, Alternate: Paul David Evers</td>
</tr>
<tr>
<td>Alan Lipschultz</td>
<td>Principal, HEA-MED</td>
<td>M</td>
<td>HealthCare Technology Consulting LLC, 114230 Strand Drive, #306, North Bethesda, MD 20852, Association for the Advancement of Medical Instrumentation</td>
</tr>
<tr>
<td>John Maurer</td>
<td>Principal, HEA-MED</td>
<td>E</td>
<td>The Joint Commission, 1 Renaissance Boulevard, Oak Terrace, IL 60181</td>
</tr>
<tr>
<td>Ronald C. Reynolds</td>
<td>Principal, HEA-MED</td>
<td>E</td>
<td>Virginia State Fire Marshal’s Office, 1005 Technology Park Drive, Glen Allen, VA 23102</td>
</tr>
<tr>
<td>Ezra R. Safdie</td>
<td>Principal, HEA-MED</td>
<td>U</td>
<td>US Department of Veterans Affairs, Office of Construction &amp; Facilities Management, 425 Eye Street, Washington, DC 20002</td>
</tr>
<tr>
<td>Lawrence S. Sandler</td>
<td>Principal, HEA-MED</td>
<td>SE</td>
<td>25661 Springtide Court, Bonita Springs, FL 34135</td>
</tr>
<tr>
<td>Kevin A. Scarlett</td>
<td>Principal, HEA-MED</td>
<td>E</td>
<td>Washington State Department of Health, 5801 60th Street West, University Place, WA 98467-2831</td>
</tr>
</tbody>
</table>
Address List No Phone

Medical Equipment
Health Care Facilities

Robert M. Sutter  
Principal  
B&R Compliance Associates  
PO Box 20603  
Lehigh Valley, PA 18002  
Alternate: Kenneth Gerard Funk  

Chad E. Beebe  
Voting Alternate  
ASHE - AHA  
PO Box 5756  
Lacey, WA 98509-5756  

Gary L. Bean  
Alternate  
Air Products & Chemicals, Inc.  
1132 Satellite Blvd. NW, Suite 100  
Suwanee, GA 30024-2868  
Compressed Gas Association  
Principal: Keith Ferrari  

Corky Bishop  
Alternate  
Airgas USA LLC  
8136 NW 82nd Street  
Oklahoma City, OK 73132-4109  
Principal: Barry E. Brown  

Paul David Evers  
Alternate  
UL LLC  
P.O. Box 2713  
Valrico, FL 33595  
Principal: Pamela Gwynn  

Kenneth Gerard Funk  
Alternate  
Environmental Technologies Associates (ETA), Inc.  
240 Ashland Trail  
Tyrone, GA 30290  
Principal: Robert M. Sutter  

Chelsea Tuttle  
Staff Liaison  
National Fire Protection Association  
One Batterymarch Park  
Quincy, MA 02169-7471  

05/13/2016  
Chelsea Tuttle  
HEA-MED  

SE 1/25/2007  
HEA-MED  

U 03/05/2012  
HEA-MED  

M 7/23/2008  
HEA-MED  

IM 12/08/2015  
HEA-MED  

RT 04/05/2016  
HEA-MED  

SE 07/29/2013  
HEA-MED  

3/1/2016  
HEA-MED
Technical Committee Distribution
## Distribution by %

**HEA-MED  Medical Equipment**

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<td>E</td>
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<tr>
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<td>CGA</td>
<td>M</td>
<td>Principal</td>
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<tr>
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<td>HealthCare Technology Consulting LLC</td>
<td>AAMI</td>
<td>M</td>
<td>Principal</td>
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<tr>
<td>Pamela Gwynn</td>
<td>UL LLC</td>
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<td>RT</td>
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<td>Principal</td>
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<td>Wentworth-Douglass Hospital</td>
<td>NFPA/HCS</td>
<td>U</td>
<td>Principal</td>
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<tr>
<td>Ezra R. Safdie</td>
<td>US Department of Veterans Affairs</td>
<td>USVA</td>
<td>U</td>
<td>Principal</td>
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<tr>
<td>Chad E. Beebe</td>
<td>ASHE - AHA</td>
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<td>U</td>
<td>Voting Alternate</td>
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<td>5</td>
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**Total Voting Number**: 16
Previous Meeting Minutes
1. **Call to Order.** The meeting was called to order at 8:00 am on Tuesday, August 11, 2015 by Committee Chair, Donald King.

2. **Attendance and Introductions:** Attendance was taken and those present at the meeting introduced themselves and stated who they represent on the committee. Those who were present at the meeting are listed below:

### Technical Committee Members Present

<table>
<thead>
<tr>
<th>Name</th>
<th>Representing</th>
</tr>
</thead>
<tbody>
<tr>
<td>King, Donald – Chair</td>
<td>ASHE</td>
</tr>
<tr>
<td>Connor, Charles – Principal</td>
<td>Detroit Medical Center</td>
</tr>
<tr>
<td>Dagenais, Dave – Principal</td>
<td>NFPA Health Care Section</td>
</tr>
<tr>
<td>Ferrari, Keith – Principal</td>
<td>Compressed Gas Association</td>
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<tr>
<td>Gwynn, Pamela – Principal</td>
<td>Underwriters Laboratories</td>
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<tr>
<td>Lipschultz, Alan – Principal</td>
<td>AAMI</td>
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<tr>
<td>Maurer, John – Principal</td>
<td>The Joint Commission</td>
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<tr>
<td>Safdie, Ezra – Principal</td>
<td>US Department of Veterans Affairs</td>
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<td>Sandler, Lawrence – Principal</td>
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<tr>
<td>Scarlett, Kevin – Principal</td>
<td>Washington State Department of Health</td>
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<td>Sutter, Robert-Principal</td>
<td>B&amp;R Compliance Associates</td>
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<tr>
<td>Beebe, Chad – Alternate</td>
<td>ASHE</td>
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<tr>
<td>Fettes, William – Alternate</td>
<td>Airgas, Inc.</td>
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<td>Chase, Barry – NFPA Staff</td>
<td>NFPA</td>
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</table>
3. **Chairman Comments:** Don King spoke to the agenda for the meeting and provided opening comments.

4. **Minutes Approval:** The minutes of the HEA-MED May 20, 2013 Second Draft Meeting were approved as distributed in the Agenda Package.

5. **Staff Liaison Presentation:** Barry Chase gave a staff presentation for the meeting which included general meeting procedures and a review of the Annual 2017 revision cycle.

6. **Development of First Draft:** The committee reviewed all 27 public input (PI) and resolved them by either providing a committee statement or by creating a first revision (FR) based on the PI. Other First Revisions were also created. See the First Draft and First Draft Report for the official committee actions.

7. **New Business:** A task group was formed to address the requirements for cylinder storage. The members on this task group are Dave Dagenais (chair), Keith Ferrari, Bill Fettes, and Kevin Scarlett

8. **Next Meeting:** TBD in the late June/July 2016 timeframe.

9. **Meeting Adjourned:** The meeting was adjourned at 5:00 pm on August 11, 2015.
Public Comments
The Correlating Committee is directing HEA-MED and HEA-ELS to evaluate references to 60601 and determine if AAMI or the international version should be referenced. Consistency should be maintained throughout the code.

Additional Proposed Changes

<table>
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<th>Description</th>
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<tr>
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Statement of Problem and Substantiation for Public Comment

This Public Comment appeared as CC Note No. 19 in the First Draft Report.

Related Item
Correlating Committee Note No. 19-NFPA 99-2015 [Section No. 10.5.2.2]

Submitter Information Verification

Submitter Full Name: Tc On Hea-Aac
Organization: CC on Health Care Facilities
Street Address: City: State: Zip: Submittal Date: Wed Mar 16 08:38:01 EDT 2016

Copyright Assignment

I, Tc On Hea-Aac, hereby irrevocably grant and assign to the National Fire Protection Association (NFPA) all and full rights in copyright in this Public Comment (including both the Proposed Change and the Statement of Problem and Substantiation). I understand and intend that I acquire no rights, including rights as a joint author, in any publication of the NFPA in which this Public Comment in this or another similar or derivative form is used. I hereby warrant that I am the author of this Public Comment and that I have full power and authority to enter into this copyright assignment. By checking this box I affirm that I am Tc On Hea-Aac, and I agree to be legally bound by the above Copyright Assignment and the terms and conditions contained therein. I understand and intend that, by checking this box, I am creating an electronic signature that will, upon my submission of this form, have the same legal force and effect as a handwritten signature.
### 3.3.141 Relocatable Power Tap (RPT).

Multiple-outlet power cord that can be used to channel electricity from a single outlet. (MED)

#### Statement of Problem and Substantiation for Public Comment

I suggest deleting this definition from Chapter 3. The definition used conflicts with first several words of 10.2.3.6 "Two or more power receptacles supplied by a flexible cord ...." In addition, to my knowledge, the First Revision title of 10.2.3.6 is the only place where the term "Relocatable Power Tap" is used in the document. The purpose of the Chapter 3 definitions

"Multiple Outlet Connection" was the title of 10.2.3.6 in the 2015 edition, and was never defined in Chapter 3 previously. Assuming that the only instance of "Relocatable Power Tap" is the title of 10.2.3.6, the existing wording of 10.2.3.6 adequately defines the term "Relocatable Power Tap." Section 3.1 allows for a term to be defined within another chapter (not Chapter 3).

#### Related Item

First Revision No. 517-NFPA 99-2015 [New Section after 3.3.143]

#### Submitter Information Verification

- **Submitter Full Name:** Alan Lipschultz
- **Organization:** HealthCare Technology Consultant
- **Affiliation:** Association for the Advancement of Medical Instrumentation
- **Street Address:**
- **City:**
- **State:**
- **Zip:**
- **Submittal Date:** Thu Mar 17 20:43:05 EDT 2016
10.1* Applicability.

10.1.1
This chapter shall apply to the performance, maintenance, and testing of electrical equipment in health care facilities, as specified in Section 1.3.

10.1.2
Experimental or research apparatus built to order or under development shall be used under qualified supervision and shall have a degree of safety that is equivalent to that described herein or that has been deemed acceptable by the facility.

10.1.3* Reserved.

Additional Proposed Changes

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Statement of Problem and Substantiation for Public Comment

This Public Comment appeared as CC Note No. 16 in the First Draft Report. The Correlating Committee directs HEA-MED to revise the applicability statement in 10.1. The statement should be similar to either what is done in chapters 5 and 6 or to what Chapter 12 and 13 do. For example:

5.1.1.5 The following sections of this chapter shall apply to the operation, management, and maintenance of Category 1 medical gas and vacuum systems in both new and existing facilities:

1. 5.1.2
2. 5.1.3.1
3. 5.1.3.2
4. 5.1.3.3.4
5. 5.1.3.6.2
6. 5.1.3.8.4.2
7. 5.1.14

OR

12.1* Applicability. This chapter shall apply to new and existing health care facilities.

Related Item
Correlating Committee Note No. 16-NFPA 99-2015 [Section No. 10.1]

Submitter Information Verification

Submitter Full Name: Tc On Hea-Aac
Organization: CC on Health Care Facilities
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Wed Mar 16 08:35:58 EDT 2016
10.2.3.6 Relocatable Power Taps.

Two or more power receptacles supplied by a flexible cord shall be permitted to be used to supply power to plug-connected components of a movable equipment assembly that is pole-, rack-, table-, pedestal-, or cart-mounted, provided that all of the following conditions are met:

1. The receptacles are securely attached to the equipment assembly.
2. The sum of the ampacity of all appliances connected to the outlets does not exceed 75 percent of the ampacity of the flexible cord supplying the outlets.
3. The ampacity of the flexible cord is in accordance with NFPA 70.
4. The electrical and mechanical integrity of the assembly and its securement method are regularly verified and documented.
5. Relocatable power taps shall be listed in accordance with UL 1363A, Outline of Investigation for Special Purpose Relocatable Power Taps.

Statement of Problem and Substantiation for Public Comment

Section 11.1.4.1 of NFPA 1 requires relocatable power taps to be listed. Requiring the relocatable power taps used in healthcare facilities to be listed in accordance with UL 1363A will address the requirements currently in NFPA 99 and address additional safety requirements, such as use of hospital-grade receptacle outlets and plugs, integrity of the enclosures, and testing for grounding and leakage current.

Related Item
First Revision No. 501-NFPA 99-2015 [Section No. 10.2.3.6]

Submitter Information Verification

Submitter Full Name: Kelly Niccololo
Organization: UL LLC
Affiliation: UL LLC
Street Address:
City:
State:
Zip:
Submittal Date: Sun May 15 11:42:50 EDT 2016
10.2.3.6 Relocatable Power Taps.

Two or more power receptacles supplied by a flexible cord shall be permitted to be used to supply power to plug-connected components of a movable equipment assembly that is pole-, rack-, table-, pedestal-, or cart-mounted, provided that all of the following conditions are met:

1. The receptacles are securely attached to the equipment assembly.
2. The sum of the ampacity of all appliances connected to the outlets does not exceed 75 percent of the ampacity of the flexible cord supplying the outlets.
3. The ampacity of the flexible cord is in accordance with NFPA 70.
4. The electrical and mechanical integrity of the assembly and its securement method are regularly verified and documented.

Additional Proposed Changes

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Statement of Problem and Substantiation for Public Comment

NOTE: This Public Comment appeared as CC Note No. 26 in the First Draft Report and is related to Public Input No. 316.

The Correlating Committee directs HEA-MED to address Public Input 316 which was originally addressed to Chapter 6. The issue of RPTs is under the jurisdiction of HEA-MED and not HEA-ELS.

Related Item

Public Input No. 316-NFPA 99-2015 [Section No. 6.3.2.2.7.1]

Submitter Information Verification

Submitter Full Name: Tc On Hea-Aac
Organization: CC on Health Care Facilities
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Mar 15 12:59:53 EDT 2016
10.3.6.3
An acceptable test configuration shall be as illustrated in Figure 10.3.6.3.

Figure 10.3.6.3 Test Circuit for Measuring Leakage Current Between Patient Leads and Ground — Nonisolated.

Additional Proposed Changes

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Statement of Problem and Substantiation for Public Comment

NOTE: This Public Comment appeared as CC Note No. 18 in the First Draft Report on First Revision No. 507.

The Correlating Committee directs HEA-MED to review the ballot comment on FR 507 and determine if Figure 10.3.6.3 is drawn appropriately.

Related Item
First Revision No. 507-NFPA 99-2015 [Section No. 10.3.6]

Submitter Information Verification

Submitter Full Name: To On Hea-Aac
Organization: CC on Health Care Facilities
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Tue Mar 15 13:02:29 EDT 2016
Public Comment No. 30-NFPA 99-2016 [Section No. 11.1]

11.1 Applicability.

11.1.1
This chapter shall apply to the performance, maintenance, and testing of gas equipment in health care facilities, as specified in Section 1.3.

11.1.2 *
This chapter shall apply to the use, at normal atmospheric pressure, of all of the following:

(1) Nonflammable medical gases
(2) Vapors and aerosols
(3) Equipment required for the administration of 11.1.2(1) and 11.1.2(2)

11.1.3
When used in this chapter, the term oxygen shall be intended to mean 100 percent oxygen as well as mixtures of oxygen and air.

11.1.4 *
This chapter shall not apply to special atmospheres, such as those encountered in hyperbaric chambers.

11.1.5 *
Reserved.

Additional Proposed Changes

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Statement of Problem and Substantiation for Public Comment

This Public Comment appeared as CC Note No. 17 in the First Draft Report. The Correlating Committee directs HEA-MED to revise the applicability statement in 11.1. The statement should be similar to either what is done in chapters 5 and 6 or what Chapter 12 and 13 do. For example:

5.1.1.5 The following sections of this chapter shall apply to the operation, management, and maintenance of Category 1 medical gas and vacuum systems in both new and existing facilities:

(1) 5.1.2
(2) 5.1.3.1
(3) 5.1.3.2
(4) 5.1.3.3.4
(5) 5.1.3.6.2
(6) 5.1.3.8.4.2
(7) 5.1.14

OR

12.1* Applicability. This chapter shall apply to new and existing health care facilities.

Related Item

Correlating Committee Note No. 17-NFPA 99-2015 [Section No. 11.1]

Submitter Information Verification

Submitter Full Name: To On Hea-Aac
Organization: CC on Health Care Facilities
Street Address:
City:
State:
Zip:
Submittal Date: Wed Mar 16 08:40:56 EDT 2016
11.3 Cylinder and Container Storage Requirements.

11.3.1 For the purpose of this section, the health care facility’s governing body shall define criteria for determining full cylinders and containers.

11.3.2 Full cylinders and containers shall be stored in accordance with this section.

11.3.3 Full cylinders and containers shall be segregated from all others.

11.3.4* Storage for nonflammable gases equal to or greater than 85 m³ (3000 ft³) at STP shall comply with 5.1.3.3.2 and 5.1.3.3.3.

11.3.5* Storage for nonflammable gases greater than 8.5 m³ (300 ft³), but less than 85 m³ (3000 ft³), at STP shall comply with the requirements in 11.3.5.1 through 11.3.5.8.

11.3.5.1 Storage locations shall be outdoors in an enclosure or within an enclosed interior space of noncombustible or limited-combustible construction, with doors (or gates outdoors) that can be secured against unauthorized entry.

11.3.5.2 Oxidizing gases such as oxygen and nitrous oxide shall not be stored with any flammable gas, liquid, or vapor.

11.3.5.3 Oxidizing gases such as oxygen and nitrous oxide shall be separated from combustibles or flammable materials by one of the following:

   (1) Minimum distance of 6.1 m (20 ft)  
   (2) Minimum distance of 1.5 m (5 ft) if the entire storage location is protected by an automatic sprinkler system designed in accordance with NFPA 13  
   (3) A gas cabinet constructed per NFPA 30 or NFPA 55, if the entire storage location is protected by an automatic sprinkler system designed in accordance with NFPA 13

11.3.5.4 Gas cylinder and cryogenic liquid container storage shall comply with 5.1.3.3.3 and 5.1.3.3.4.

11.3.5.5 Cylinder and container storage locations shall comply with 5.1.3.2.12 with respect to temperature limitations.

11.3.5.6 Cylinder or container restraints shall comply with 11.6.2.3.

11.3.5.7 Smoking, open flames, electric heating elements, and other sources of ignition shall be prohibited within storage locations and within 6.1 m (20 ft) of outside storage locations.

11.3.5.8 Cylinder valve protection caps shall comply with 11.6.2.2(4).

11.3.6 Storage for nonflammable gases with a total volume equal to or less than 8.5 m³ (300 ft³) shall comply with the requirements in 11.3.6.1 and 11.3.6.2.

11.3.6.1 Individual cylinder storage associated with patient care spaces, not to exceed 2100 m² (22,500 ft²) of floor area, shall not be required to be stored in enclosures.

11.3.6.2 Precautions in handling cylinders specified in 11.3.6.1 shall be in accordance with 11.6.2.

11.3.7 When small-size (A, B, D, or E) cylinders are in use, they shall be attached to a cylinder stand or to medical equipment designed to receive and hold compressed gas cylinders.

11.3.8 Individual small-size (A, B, D, or E) cylinders available for immediate use in patient care spaces shall not be considered to be in storage.

11.3.9 Cylinders shall not be chained to portable or movable apparatus such as beds and oxygen tents.

11.3.10 Signs.
11.3.10.1
Storage locations meeting the requirements of 11.3.4 or 11.3.5 shall have precautionary sign, readable from a distance of 1.5 m (5 ft), shall be displayed on each door or gate of the storage room or enclosure.

11.3.10.2
The sign shall include the following wording as a minimum:

CAUTION
OXIDIZING GAS(ES) STORED WITHIN
NO SMOKING

Additional Proposed Changes

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Statement of Problem and Substantiation for Public Comment

This Public Comment appeared as CC Note No. 15 in the First Draft Report. Section 11.3 includes references back to Chapter 5, construction requirements. The Correlating Committee directs HEA-MED to provide the criteria for new and existing in Chapter 11 to avoid future reference coordination issues.

Related Item
Correlating Committee Note No. 15-NFPA 99-2015 [Section No. 11.3]

Submitter Information Verification

Submitter Full Name: Tc On Hea-Aac
Organization: CC on Health Care Facilities
Street Address:
City:
State:
Zip:
Submittal Date: Tue Mar 15 14:32:20 EDT 2016
11.3 Cylinder and Container Storage Requirements.

11.3.1
For the purpose of this section, the health care facility’s governing body shall define criteria for determining full cylinders and containers.

11.3.2
Full cylinders and containers shall be stored in accordance with this section.

11.3.3
Full cylinders and containers shall be segregated from all others.

11.3.4*
Storage for nonflammable gases equal to or greater than 85 m³ (3000 ft³) at STP shall comply with 5.1.3.3.2 and 5.1.3.3.3.

11.3.5*
Storage for nonflammable gases greater than 8.5 m³ (300 ft³), but less than 85 m³ (3000 ft³), at STP shall comply with the requirements in 11.3.5.1 through 11.3.5.8.

11.3.5.1
Storage locations shall be outdoors in an enclosure or within an enclosed interior space of noncombustible or limited-combustible construction, with doors (or gates outdoors) that can be secured against unauthorized entry.

11.3.5.2
Oxidizing gases such as oxygen and nitrous oxide shall not be stored with any flammable gas, liquid, or vapor.

11.3.5.3
Oxidizing gases such as oxygen and nitrous oxide shall be separated from combustibles or flammable materials by one of the following:

(1) Minimum distance of 6.1 m (20 ft)

(2) Minimum distance of 1.5 m (5 ft) if the entire storage location is protected by an automatic sprinkler system designed in accordance with NFPA 13

(3) A gas cabinet constructed per NFPA 30 or NFPA 55, if the entire storage location is protected by an automatic sprinkler system designed in accordance with NFPA 13

11.3.5.4
Gas cylinder and cryogenic liquid container storage shall comply with 5.1.3.3.3 and 5.1.3.3.4.

11.3.5.5
Cylinder and container storage locations shall comply with 5.1.3.2.12 with respect to temperature limitations.

11.3.5.6
Cylinder or container restraints shall comply with 11.6.2.3.

11.3.5.7
Smoking, open flames, electric heating elements, and other sources of ignition shall be prohibited within storage locations and within 6.1 m (20 ft) of outside storage locations.

11.3.5.8
Cylinder valve protection caps shall comply with 11.6.2.2(4).

11.3.6
Storage for nonflammable gases with a total volume equal to or less than 8.5 m³ (300 ft³) shall comply with the requirements in 11.3.6.1 and 11.3.6.2.

11.3.6.1
Individual cylinder storage associated with patient care spaces, not to exceed 2100 m² (22,500 ft²) of floor area, shall not be required to be stored in enclosures.

11.3.6.2
Precautions in handling cylinders specified in 11.3.6.1 shall be in accordance with 11.6.2.

11.3.7
When small-size (A, B, D, or E) cylinders are in use, they shall be attached to a cylinder stand or to medical equipment designed to receive and hold compressed gas cylinders.

11.3.8
Individual small-size (A, B, D, or E) cylinders available for immediate use in patient care spaces shall not be considered to be in storage.

11.3.9
Cylinders shall not be chained to portable or movable apparatus such as beds and oxygen tents.

11.3.10 Signs.
11.3.10.1
Storage locations meeting the requirements of 11.3.4 or 11.3.5 shall have precautionary sign, readable from a distance of 1.5 m (5 ft), shall be displayed on each door or gate of the storage room or enclosure.

11.3.10.2
The sign shall include the following wording as a minimum:

CAUTION
OXIDIZING GAS(ES) STORED WITHIN
NO SMOKING

Additional Proposed Changes

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Statement of Problem and Substantiation for Public Comment

This Public Comment appeared as CC Note No. 20 in the First Draft Report. The Correlating Committee is directing HEA-MED to review section 11.3.6.1 and determine if proposed changes to allowed smoke zone size in NFPA 101 will effect this requirement. The TC should also determine if the intent is to match up to a smoke zone or if it is actually meant to be a certain square footage of floor space. Clarify application for new and existing.

Related Item
Correlating Committee Note No. 20-NFPA 99-2015 [Section No. 11.3]

Submitter Information Verification

Submitter Full Name: Tc On Hea-Aac
Organization: CC on Health Care Facilities
Street Address:          
City: 
State: 
Zip: 
Submittal Date: Tue Mar 15 14:41:51 EDT 2016
Statement of Problem and Substantiation for Public Comment

The stricken paragraph (5.1.3.3.4) refers back to 5.1.3.3.2 again. This will undo the change made in FR 511 where 5.1.3.3.2 was deleted and makes the requirements for 300 to 3000 cu ft just as strict as those for storage over 3000 cu ft.

5.1.3.3.4 also refers to empty cylinders, which FR 511 was trying to avoid.

Related Item
First Revision No. 511-NFPA 99-2015 (Section No. 11.3)

Submitter Information Verification

Submitter Full Name: Corky Bishop
Organization: Airgas USA LLC
Street Address:
City:
State:
Zip:
Submittal Date: Mon Apr 11 10:46:05 EDT 2016
Storage locations meeting the requirements of 11.3.4 or 11.3.5 shall have precautionary signage, readable from a distance of 1.5 m (5 ft), displayed on each door or gate of the storage room or enclosure.

Statement of Problem and Substantiation for Public Comment

Editorial - First draft wording did not make sense.

Related Item
First Revision No. 511-NFPA 99-2015 [Section No. 11.3]

Submitter Information Verification

Submitter Full Name: Alan Lipschultz
Organization: HealthCare Technology Consulting
Affiliation: Association for the Advancement of Medical Instrumentation
Street Address: 
City: 
State: 
Zip: 
Submittal Date: Thu Mar 17 21:08:24 EDT 2016
11.3.10.2
The sign(s) shall include the following wording as a minimum:
CAUTION
OXIDIZING GAS(ES) STORED WITHIN
NO SMOKING

Statement of Problem and Substantiation for Public Comment
The words "The sign" inappropriately limited the section to a singular sign.

Related Item
First Revision No. 511-NFPA 99-2015 [Section No. 11.3]

Submitter Information Verification
Submitter Full Name: Alan Lipschultz
Organization: HealthCare Technology Consultant
Affiliation: AAMI
Street Address:
City:
State:
Zip:
Submittal Date: Thu Mar 17 21:17:39 EDT 2016