MEMORANDUM

DATE: May 9, 2013

TO: Principal and Alternate Members of the Technical Committee on Hyperbaric and Hypobaric Facilities (HEA-HYP)

FROM: Jon Hart, Fire Protection Engineer/NFPA Staff Liaison

SUBJECT: AGENDA PACKAGE—NFPA 99 and 99B Second Draft Meeting (A2014)

Enclosed is the agenda for the NFPA 99 Second Draft meeting of the Technical Committee on Hyperbaric and Hypobaric Facilities, which will be held on Thursday, May 23, 2013, and Friday, May 24, 2013 at the Downtown Marriott at the Convention Center, in New Orleans, LA. Please review the attached 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) 984-7470
Email: jhart@nfpa.org

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

I look forward to working with everyone.
Technical Committee on Hyperbaric and Hypobaric Facilities (HEA-HYP)
NFPA 99 Second Draft Meeting (Annual 2014)
Thursday, May 23, 2013 - Friday, May 24, 2013
Downtown Marriott at the Convention Center
859 Convention Center Blvd., New Orleans, LA 70130

AGENDA

Thursday, May 23, 2013 – Friday, May 24, 2013

1. Call to Order – 8:00 am (3/23)

2. Introductions and Attendance

3. Chairman Comments

4. Approval of Previous Meeting Minutes

5. Staff Liaison Presentation

6. Preparation of the Second Draft (NFPA 99)
   • Review Public Comments
   • Review Correlating Notes
   • Create Second Revisions

7. Preparation of the Second Draft (NFPA 99B)
   • Review Public Comments
   • Create Second Revisions

8. New Business

9. Adjournment

Please submit requests for additional agenda items to the chair and staff liaison at least seven days prior to the meeting.

Please notify the chair and staff liaison as soon as possible if you plan to introduce any second revisions at the meeting.
Technical Committee on Hyperbaric and Hypobaric Facilities (HEA-HYP)

NFPA 99 Second Draft Meeting (Annual 2014)
Thursday, May 23, 2013 - Friday, May 24, 2013
Downtown Marriott at the Convention Center
859 Convention Center Blvd., New Orleans, LA 70130

Key Dates for the Annual 2014 Revision Cycle

<table>
<thead>
<tr>
<th>Event</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Comment Closing Date</td>
<td>May 3, 2013</td>
</tr>
<tr>
<td>Final Date for Second Draft Meeting</td>
<td>July 12, 2013</td>
</tr>
<tr>
<td>Final Date for Ballot Return</td>
<td>September 20, 2013</td>
</tr>
<tr>
<td>Correlating Committee Second Draft Meeting</td>
<td>October 16, 2013</td>
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<tr>
<td>Final Second Draft Posted</td>
<td>January 3, 2014</td>
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<tr>
<td>Closing Date for Notice of Intent to Make a Motion (NITMAM)</td>
<td>February 7, 2014</td>
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<tr>
<td>Issuance of Consent Document (No NITMAMs)</td>
<td>May 9, 2014</td>
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<tr>
<td>NFPA Annual Meeting (Las Vegas)</td>
<td>June 2014</td>
</tr>
<tr>
<td>Issuance of Document with NITMAM</td>
<td>August 12-14, 2014</td>
</tr>
</tbody>
</table>

Technical Committee deadlines are in **bold**.
Staff Liaison Notice

Note from the Staff Liaison

Dear Technical Committee Members:

We are very pleased that you will be participating in the processing of the 2015 Edition of NFPA 99, Health Care Facilities Code. Development of this document would not be possible without the participation of volunteers like you.

Meeting Preparation
Committee members should review the published comments prior to the meeting and to be prepared to act on each item.

Handout materials should be submitted to the chair and staff liaison at least seven days prior to the meeting.

Only one posting of the Public Comments will be made; it will be arranged in section/order and will be pre-numbered. This will be posted to the NFPA 99 Document Information page (www.nfpa.org/99) under the “Next Edition” tab. If you have trouble accessing the website please contact Elena Carroll at ecarroll@nfpa.org.

Mandatory Materials:
- Last edition of the standard
- Meeting agenda
- Public Comments
- Committee Officers' Guide (Chairs)
- Roberts’ Rules of Order (Chairs; An abbreviated version may be found in the Committee Officer’s Guide)

Optional Materials:
- NFPA Annual Directory
- NFPA Manual of Style
Regulations and Guiding Documents

All committee members are expected to behave in accordance with the Guide for the Conduct of Participants in the NFPA Codes and Standards Development Process.

All actions during and following the committee meetings will be governed in accordance with the NFPA Regulations Governing the Development of NFPA Standards. Failure to comply with these could result in challenges to the standards-making process. A successful challenge on procedural grounds could prevent or delay publication of the document.

The style of the document must comply with the Manual of Style for NFPA Technical Committee Documents.
General Procedures for Meetings

- Use of tape recorders or other means capable of producing verbatim transcriptions of any NFPA Committee Meeting is not permitted.

- Attendance at all NFPA Committee Meetings is open. All guests must sign in and identify their affiliation.

- Participation in NFPA Committee Meetings is generally limited to committee members and NFPA staff. Participation by guests is limited to individuals, who have received prior approval from the chair to address the committee on a particular item, or who wish to speak regarding public proposals or comments that they submitted.

- The chairman reserves the right to limit the amount of time available for any presentation.

- No interviews will be allowed in the meeting room at any time, including breaks.

- All attendees are reminded that formal votes of committee members will be secured by letter ballot. Voting at this meeting is used to establish a sense of agreement, but only the results of the formal letter ballot will determine the official action of the committee.

- Note to Special Experts: Particular attention is called to Section 3.3(e) of the NFPA Guide for the Conduct of Participants in the NFPA Codes and Standards Development Process in the NFPA Directory. This section requires committee members to declare any interest they may represent, other than their official designation as shown on the committee roster. This typically occurs when a special expert is retained by and represents another interest category on a particular subject. If such a situation exists on a specific issue or issues, the committee member shall declare those interests to the committee and refrain from voting on any action relating to those issues.

- Smoking is not permitted at NFPA Committee Meetings.
# Address List No Phone

Hyperbaric and Hypobaric Facilities

## Health Care Facilities

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Address Details</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Robert B. Sheffield</strong></td>
<td>Chair</td>
<td>International ATMO, Inc. 414 Navarro, Suite 502 San Antonio, TX 78205</td>
<td></td>
</tr>
<tr>
<td><strong>Peter Atkinson</strong></td>
<td>Principal</td>
<td>Royal Brisbane and Womens Hospital Hyperbaric Medicine Service Ned Hanlon Bldg., Ground Floor RBWH, Butterfield Street Herston, QLD 4029 Australia Hyperbaric Technicians &amp; Nurses Association Inc.</td>
<td></td>
</tr>
<tr>
<td><strong>Chad E. Beebe</strong></td>
<td>Principal</td>
<td>ASHE - AHA PO Box 5756 Lacey, WA 98509-5756 American Society for Healthcare Engineering</td>
<td></td>
</tr>
<tr>
<td><strong>W. Robert Bryant</strong></td>
<td>Principal</td>
<td>Perry Baromedical Corporation 11610 Aspenway Drive Houston, TX 77070</td>
<td></td>
</tr>
<tr>
<td><strong>Keith Ferrari</strong></td>
<td>Principal</td>
<td>Praxair, Inc. 2807 Gresham Lake Road Raleigh, NC 27615</td>
<td></td>
</tr>
<tr>
<td><strong>William C. Gearhart</strong></td>
<td>Principal</td>
<td>University of Maryland Medical Systems Department of Hyperbaric Medicine 22 South Greene Street Baltimore, MD 21201</td>
<td></td>
</tr>
<tr>
<td><strong>John R. Kitchens</strong></td>
<td>Principal</td>
<td>Los Angeles City Fire Department PO Box 178 Somis, CA 93066</td>
<td></td>
</tr>
<tr>
<td><strong>Michael W. Allen</strong></td>
<td>Principal</td>
<td>Life Support Technologies Group Inc. Hyperbaric Medical Technologies, Inc. 504 St. Lawrence Way Furlong, PA 18925</td>
<td></td>
</tr>
<tr>
<td><strong>Richard C. Barry</strong></td>
<td>Principal</td>
<td>Diversified Clinical Services &amp; National Healing 5220 Belfort Road, Suite 200 Jacksonville, FL 32256</td>
<td></td>
</tr>
<tr>
<td><strong>James Bell</strong></td>
<td>Principal</td>
<td>Intermountain Health Care Intermountain Medical Ctr/Hyperbaric Medicine 5121 South Cottonwood Street Murray, UT 84517</td>
<td></td>
</tr>
<tr>
<td><strong>Mario Caruso</strong></td>
<td>Principal</td>
<td>Comprehensive Healthcare Solutions, Inc. 3231 Glenwood Circle Holiday, FL 34691-2545</td>
<td></td>
</tr>
<tr>
<td><strong>Angela M. Fuqua</strong></td>
<td>Principal</td>
<td>Chubb Group Insurance Companies 9106 Pecan Drive Rockwall, TX 75087</td>
<td></td>
</tr>
<tr>
<td><strong>W. T. Gurnée</strong></td>
<td>Principal</td>
<td>OxyHeal Health Group 3224 Hoover Avenue National City, CA 91950 Alternate: Michael P. Powers</td>
<td></td>
</tr>
<tr>
<td><strong>Barry E. Newton</strong></td>
<td>Principal</td>
<td>Wendell Hull &amp; Associates, Inc. 5605 Dona Ana Road Las Cruces, NM 88007-5953</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Title</td>
<td>Address</td>
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</tr>
<tr>
<td>Stephen D. Reimers</td>
<td>Principal</td>
<td>Reimers Systems, Inc. 8210 Cinder Bed Road, Suite D Lorton, VA 22079-1136</td>
<td></td>
</tr>
<tr>
<td>John M. Skinner</td>
<td>Principal</td>
<td>Medical Equipment Technology, Inc. 5338 Palmero Court Buford, GA 30518</td>
<td></td>
</tr>
<tr>
<td>Wilbur T. Workman</td>
<td>Principal</td>
<td>Undersea &amp; Hyperbaric Medical Society 14607 San Pedro Avenue, Suite 270 San Antonio, TX 78232</td>
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<tr>
<td>Mark Chipps</td>
<td>Alternate</td>
<td>Life Support Technologies Group Inc. 314 West 2nd Street West Islip, NY 11795 Principal: Michael W. Allen</td>
<td></td>
</tr>
<tr>
<td>Michael P. Powers</td>
<td>Alternate</td>
<td>OxyHeal Health Group Hartford Hospital 80 Seymour Street, CB 105 Hartford, CT 06102 Principal: W. T. Gurnée</td>
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<tr>
<td>Rachael Sheets</td>
<td>Principal</td>
<td>The Linde Group 575 Mountain Avenue Murray Hill, NJ 07974</td>
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</tr>
<tr>
<td>Deepak Talati</td>
<td>Principal</td>
<td>Sechrist Industries, Inc. 4225 East LaPalma Avenue Anaheim, CA 92807</td>
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<tr>
<td>Justin Callard</td>
<td>Alternate</td>
<td>Hyperbaric Technicians &amp; Nurses Association Inc. Pow Hospital, Randwick Sydney, NSW 2031 Australia Principal: Peter Atkinson</td>
<td></td>
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<tr>
<td>Kevin I. Posey</td>
<td>Alternate</td>
<td>International ATMO, Inc. 414 Navarro Street, Suite 502 San Antonio, TX 782905 Principal: Robert B. Sheffield</td>
<td></td>
</tr>
<tr>
<td>Jonathan Hart</td>
<td>Staff Liaison</td>
<td>National Fire Protection Association 1 Batttemarch Park Quincy, MA 02169-7471</td>
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<tr>
<td>Name</td>
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## Distribution by %

### HEA-HYP Hyperbaric and Hypobaric Facilities

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<td>Total Voting Number</td>
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1. **Call to Order.** The meeting was called to order at 8:00 am on Monday August 20, 2012 by Committee Chair, Robert Sheffield.

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:

<table>
<thead>
<tr>
<th>Name</th>
<th>Representing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sheffield, Robert – Chair</td>
<td>International ATMO, Inc.</td>
</tr>
<tr>
<td>Barry, Richard – Principal</td>
<td>Diversified Clinical Services &amp; National Healing</td>
</tr>
<tr>
<td>Bell, James – Principal</td>
<td>Intermountain Healthcare</td>
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<tr>
<td>Bryant, W. Robert – Principal</td>
<td>Perry Baromedical Corporation</td>
</tr>
<tr>
<td>Ferrari, Keith – Principal</td>
<td>Praxair, Inc.</td>
</tr>
<tr>
<td>Fuqua, Angela – Principal</td>
<td>Chubb Group Insurance Companies</td>
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<tr>
<td>Gurnée, W. – Principal</td>
<td>OxyHeal Health Group</td>
</tr>
<tr>
<td>Reimers, Stephen – Principal (web)</td>
<td>Reimers Systems, Inc.</td>
</tr>
<tr>
<td>Skinner, John – Principal (web)</td>
<td>Medical Equipment Technology, Inc.</td>
</tr>
<tr>
<td>Hart, Jonathan – Staff Liaison</td>
<td>NFPA</td>
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<tr>
<td>Bielen, Richard – NFPA Staff</td>
<td>NFPA</td>
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<tr>
<td>Brown, Barry – Guest</td>
<td>Airgas</td>
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<tr>
<td>Garay, Adrian – Guest</td>
<td>OxyHeal Health Group</td>
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<tr>
<td>Powers, Mike – Guest</td>
<td>OxyHeal Health Group</td>
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</table>
3. **Chairman Comments:** Robert Sheffield spoke to the agenda for the meeting and provided opening comments.

4. **Minutes Approval:** The minutes of the HEA-HYP October 14, 2010 ROC Meeting were approved as distributed in the Agenda Package with amendments to add 4 additional attendees and to correct the spelling of the name of one of the attendees.

5. **Staff Liaison Presentation:** Jon Hart introduced himself and proceeded to give the staff presentation for the meeting which included general meeting procedures, a review of the Annual 2014 revision cycle, and an introduction to NFPA’s new revision process.

6. **Development of First Draft:** The committee reviewed all public input (PI) under their jurisdiction for NFPA 99 and NFPA 99B and resolved it 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 on each document.

7. **Old Business:** There was no old business.

8. **New Business:** There was no new business.

9. **Next Meeting:** TBD in the late May or June 2013 timeframe.

10. **Meeting Adjourned:** The meeting was adjourned at 1:00 pm on August 21, 2012.
Hyperbaric Operations defined.

3.i.i.i Hyperbaric Operations. Procedures conducted on the patient receiving hyperbaric treatment to include: (a) therapy inside a hyperbaric chamber, (b) changing clothes, (c) vital signs, (d) non-invasive transcutaneous oxygen monitoring, (e) clinical and medical assessments, and (f) minor dressing changes. [Debridement or other surgical procedures, application of casting material, application of skin substitutes, and application of bio-engineered grafts are not permitted in the chamber room.] (HYP)

A.14.2.1.1.7. Precautions should be in place for monitoring of items used to prepare a patient or staff member for entry into the hyperbaric chamber to prevent the entry of prohibited items into the hyperbaric chamber.

Statement of Problem and Substantiation for Public Comment

Defining Hyperbaric Procedures affords the AHJs and end users an understanding of the activities allowed in the hyperbaric room.

Submitter Information Verification

Submitter Full Name: Richard Barry
Organization: Diversified Clinical Services
Submittal Date: Mon Apr 29 10:44:32 EDT 2013

Copyright Assignment

I, Richard Barry, 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 Richard Barry, 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.
14.2.2.5.1 * *
The interior finish for Class A chambers shall be one of the following:

(1) A material that meets Class A interior finish rating in accordance with NFPA 101, Life Safety Code.

(2) A noncombustible material in accordance with 3.3.112 - finish that meets or exceeds ASTM E84, BS476 part 6 for Flame and Smoke or equivalent.

Additional Proposed Changes

<table>
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<tr>
<th>File Name</th>
<th>Description Approved</th>
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<tr>
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<td>Amerlock_2_400.pdf</td>
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<td>Chamber_Paint_-_Carboline_890_Product_Data_Sheet.pdf</td>
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<td>W47093.pdf</td>
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<td>W53818.pdf</td>
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Statement of Problem and Substantiation for Public Comment

The definition 3.3.112 for Noncombustible seems to be extreme for the conditions clinical chambers are exposed to. The USN specifies Carboline 890H which meets ASTM E84 and at least on manufacturer uses Ameriloc which meets NFPA 101 class A for flame spread and smoke development. The British Standard BS476 part 6 demonstrates 20 minutes of flame at 230c with no flame propagation.

3.3.112 Noncombustible (Material).
A material that, in the form in which it is used and under the conditions anticipated, will not ignite, burn, support combustion, or release flammable vapors, when subjected to fire or heat. Materials that are reported as passing ASTM E 136, Standard Test Method for Behavior of Materials in a Vertical Tube Furnace at 750°C, shall be considered noncombustible materials. (HYP)

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Wed May 01 16:41:24 EDT 2013

Copyright Assignment

I, James Bell, 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 James Bell, 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.
Battery-operated devices shall meet the following requirements:

1. Batteries shall be fully enclosed and secured within the equipment enclosure.
2. Batteries shall not be damaged by the maximum chamber pressure to which they are exposed.
3. Batteries shall be of a sealed type that does not off-gas during normal use.
4. Batteries or battery-operated equipment shall not undergo charging while located in the chamber.
5. Batteries shall not be changed on in-chamber equipment while the chamber is in use.
6. The equipment electrical rating shall not exceed 12 V and 48 W.
7. The use of lithium and lithium ion batteries shall be prohibited in the chamber during chamber operations, unless the product has been accepted or listed for use in hyperbaric conditions by the manufacturer, or a nationally recognized testing agency, or has been subjected to a risk analysis conducted by a qualified person and approved by the Safety Director, or the manufacturer.

**Additional Proposed Changes**

<table>
<thead>
<tr>
<th>File Name</th>
<th>Description</th>
<th>Approved</th>
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</thead>
<tbody>
<tr>
<td>rflithiumionbatterieshazard.pdf</td>
<td>Fire Protection Association Final report, Lithium-Ion Batteries Hazard and Use Assessment</td>
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**Statement of Problem and Substantiation for Public Comment**

The committee, in my opinion, acted correctly prohibiting Lithium ion batteries in the chamber. There is currently no test of pressure applied to these types of batteries and the risk of fire from a failure of the battery is higher than a similar sized battery.

The technology surrounding Lithium Ion batteries is changing rapidly. There does not seem to be any standard test we could apply to batteries that would insure safety. To “just say no” does not seem appropriate either. It is a matter of energy density or potential, pressure the battery is exposed to, type of battery and proximity to an atmosphere of increased oxygen partial pressure. A hearing aid battery inside brass housing for hands free sink...
Tap operation is much different to a hearing aid battery inside an ear in an Oxygen hood or a large rechargeable battery pack. As technology changes so will the risk. We need flexibility now and in the future and risk mitigation is an auditable way forward.

### Submitter Information Verification

<table>
<thead>
<tr>
<th>Submitter Full Name</th>
<th>James Bell</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization</td>
<td>Intermountain Healthcare</td>
</tr>
<tr>
<td>Submittal Date</td>
<td>Thu Apr 18 17:16:00 EDT 2013</td>
</tr>
</tbody>
</table>

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**Copyright Assignment**

I, James Bell, 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 James Bell, 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.
14.3.1.5.4.2

(1) Garments fabricated of 100 percent cotton or a blend of cotton and polyester fabric, containing no more than 50 percent polyester, shall be permitted in Class A chambers equipped with fire protection as specified in 14.2.5.

(2) Garments fabricated of 100 percent cotton or a blend of cotton and polyester fabric, containing no more than 50 percent polyester, shall be permitted in Class B chambers.

Statement of Problem and Substantiation for Public Comment

The code already requires that the facility approve the textiles allowed in the chamber. The risks are different for the monoplace v multiplace. In my experience we are able to re-cloth the patients easily enough, it is finding a >50% cotton blend for staff in the multiplace that becomes an issue. Healthcare organizations are requiring color codes for staff with further limits the available garments. The current language will be difficult to meet and leave the MD and SD in a liability zone...

I could find no fire standards for textiles, such as linen, pillowcases, washcloths, towels and the like. There are standards for pediatric gowns, hanging drapes and upholstery.

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Thu Apr 18 17:45:47 EDT 2013

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14.3.1.5.4.2
Garments fabricated of 100 percent cotton or a blend of cotton and polyester fabric, containing more or less than 50 percent polyester, cotton, shall be permitted in Class A chambers equipped with fire protection as specified in 14.2.5 and in Class B chambers.

Additional Proposed Changes

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Statement of Problem and Substantiation for Public Comment

No percentage currently listed, so one could use 99% poly and 1% cotton. This fixes the issue of knowing how much is okay.

Submitter Information Verification

Submitter Full Name: Richard Barry
Organization: Healogics (a/k/a Diversified Clinical Services)
Submittal Date: Wed May 08 11:30:33 EDT 2013

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14.3.1.5.4.5

The fire performance of mattresses, pillows, and cushions shall be tested to one of the following:


4. **16 CFR Part 1633**

Statement of Problem and Substantiation for Public Comment

I find no standard that applies to pillows and cushions. It is common for monoplace operators to use 100 cotton pillows or down filled pillows. Multiplace facilities may be using the standard hospital supplied pillows. I find no standard that applies to the pillows unless applied by the manufacturer such as Sechrist for their pillows. The US consumer product safety commission approved a new federal mattress standard 16 CFR Part 1633

NFPA 260 and 261 are tests for cigarette burns and I wonder if they are applicable unless we are considering a smoldering action from some piece of equipment.

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Thu Apr 25 15:32:37 EDT 2013

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The fire performance of mattresses, pillows, and cushions shall be tested to one of the following:


What technical criteria belongs with the new testing options for mattresses, pillows, and cushions?

### Additional Proposed Changes

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<td>Cover Sheet</td>
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</tr>
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</table>

### Statement of Problem and Substantiation for Public Comment

Add CAL TB 113 to 14.3.1.5.4.5 for allowing linen, pillows and mattresses in a chamber.

### Submitter Information Verification

**Submitter Full Name:** Richard Barry  
**Organization:** Healogics (a/k/a Diversified Clinical Services)  
**Submittal Date:** Wed May 08 11:23:10 EDT 2013

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Correlating Notes
Correlating Committee Note No. 20-NFPA 99-2012 [Section No. 1.3.2 [Excluding any Sub-Sections]]

Submitter Information Verification

Submitter Full Name: [Not Specified]
Organization: [Not Specified]
Submittal Date: Tue Dec 11 15:02:23 EST 2012

Committee Statement and Meeting Notes

Committee Statement: The Correlating Committee on Health Care Facilities directs each technical committee to evaluate their applicability clause to clarify what sections apply to existing facilities without creating a circular argument to Section 1.3.

Ballot Results

✓ This item has passed ballot

18 Eligible Voters
1 Not Returned
17 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned
, Jensen, Michael S.

Affirmative All
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Correlating Committee Note No. 1-NFPA 99-2012 [ Section No. 3.3.9 ]

Submitter Information Verification

Submitter Full Name: [ Not Specified ]
Organization: [ Not Specified ]
Submittal Date: Tue Dec 11 08:39:04 EST 2012

Committee Statement and Meeting Notes

Committee Statement: The Correlating Committee on Health Care Facilities directs that each technical committee evaluate where the term "anesthetizing location" is used within their Chapter(s) and remove the term and replace it with whichever levels as defined in 3.3.63 are applicable.

Ballot Results

✓ This item has passed ballot

18 Eligible Voters
1 Not Returned
17 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned
Jensen, Michael S.

Affirmative All

, , , , , , , , , , , , , , , , , ,
Correlating Committee Note No. 2-NFPA 99-2012 [Section No. 3.3.112]

Submitter Information Verification

Submitter Full Name: [Not Specified]
Organization: [Not Specified]
Submittal Date: Tue Dec 11 08:50:14 EST 2012

Committee Statement and Meeting Notes

Committee Statement: The Correlating Committee on Health Care Facilities directs the technical committee on Hyperbaric and Hypobaric Facilities (HEA-HYP) to re-evaluate PI 312 based on the FUN TC action in Chapter 4. See NFPA 101, 3.3.169.4 for an example.

Ballot Results

This item has passed ballot

18 Eligible Voters
1 Not Returned
17 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned
Jensen, Michael S.

Affirmative All


Committee Statement and Meeting Notes

The Correlating Committee on Health Care Facilities directs the technical committees on Piping Systems, Medical Equipment, and Hyperbaric and Hypobaric Facilities to re-assess where the term "working pressure" is used and determine where it is still applicable rather than the new definition for "operating pressure." Understand that the 200 lb limit has removed from working pressure.

Ballot Results

This item has passed ballot

18 Eligible Voters
1 Not Returned
17 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned
Jensen, Michael S.
The Correlating Committee on Health Care Facilities directs each of the technical committees to assess text, both in the Chapters and in definitions, where "room," "space," or "vicinity," are used and determine the applicability based on the definitions of each. See FR 92.

This item has passed ballot

18 Eligible Voters
1 Not Returned
17 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned
Jensen, Michael S.

Affirmative All

Submitter Full Name: [ Not Specified ]
Organization: [ Not Specified ]
Submittal Date: Tue Dec 11 09:04:27 EST 2012
Correlating Committee Note No. 14-NFPA 99-2012 [Section No. 14.1.3]

Submitter Information Verification

Submitter Full Name: [Not Specified]
Organization: [Not Specified]
Submittal Date: Tue Dec 11 14:11:16 EST 2012

Committee Statement and Meeting Notes

Committee Statement: The Correlating Committee on Health Care Facilities directs the technical committee on Hyperbaric and Hypobaric Facilities to FCR-28 to re-assess how their Chapters uses Risk Categories in relation to what is provided in Chapter 4 and align those as close as possible.

Ballot Results

✅ This item has passed ballot

18 Eligible Voters
1 Not Returned
17 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned
Jensen, Michael S.

Affirmative All

...
Correlating Committee Note No. 6-NFPA 99-2012 [Section No. 14.2.2.5]

Submitter Information Verification

Submitter Full Name: [Not Specified]
Organization: [Not Specified]
Submittal Date: Tue Dec 11 11:18:43 EST 2012

Committee Statement and Meeting Notes

Committee Statement: The Correlating Committee on Health Care Facilities directs the technical committee on Hyperbaric and Hypobaric Facilities to coordinate the language with NFPA 101 (remove "rating"), and to consider the reference to NFPA 99 Chapter 3 based on the FUN action of including the requirements for "non combustible (material)" in Chapter 4.

Ballot Results

✔ This item has passed ballot

18 Eligible Voters
1 Not Returned
17 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned
Jensen, Michael S.

Affirmative All
,
Correlating Committee Note No. 8-NFPA 99-2012 [ Section No. 14.3.1.5.4.5 ]

Submitter Information Verification

Submitter Full Name: [ Not Specified ]
Organization: [ Not Specified ]
Submittal Date: Tue Dec 11 11:27:47 EST 2012

Committee Statement and Meeting Notes

Committee Statement: The Correlating Committee on Health Care Facilities directs the technical committee on Hyperbaric and Hypobaric Facilities to address the specific requirements or criteria and also consider adding NFPA 261 to the list. Section 10.3 of NFPA 101 might be used as an example or starting point.

Ballot Results

✓ This item has passed ballot

18 Eligible Voters
1 Not Returned
17 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned
Jensen, Michael S.

Affirmative All
, , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , , ,...,5/2/2013 5:03 PM
NFPA 99B
3.3.7 * – Flame Resistant (Hypobaric).
A substance meeting the flame propagation performance criteria contained in Test Method 1 or Test Method 2, as appropriate, of NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films*, for the chamber atmosphere.

Limited- Combustable (Material).

see NFPA 99 4.4.1.2

Statement of Problem and Substantiation for Public Comment

NFPA 701 small scale test does not exist and this change would bring us in line with the current language in NFPA 99

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Wed May 01 18:11:01 EDT 2013

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3.3.20 Qualified Person.

A person who, by possession of a recognized degree, certificate, professional standing, or skill, and who, by knowledge, training, and experience, has demonstrated the ability to perform the work, competent and capable person or company that has met the requirements and training for a given field acceptable to the authority having jurisdiction.

Statement of Problem and Substantiation for Public Comment

Qualified person is not used in any other NFPA document. The word "Qualified" is used in other documents, and it's description is quite similar.

Please consider this suggestion - Jack McNamara - Glossary of Terms Committee

Submitter Information Verification

Submitter Full Name: Jack McNamara
Organization: Bosch Security Systems
Affiliation: GOT Committee (Glossary of Terms)
Submittal Date: Fri Mar 08 16:31:21 EST 2013

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All construction and finish materials shall be flame-resistant (hypobaric) or noncombustible under standard atmospheric conditions.

Statement of Problem and Substantiation for Public Comment

Limited combustable (Materials) 99 is the accepted language

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Fri May 03 11:50:11 EDT 2013

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Flooring of Class D and E chambers shall be antistatic and flame resistant (hypobaric), limited combustable (materials 99).

Statement of Problem and Substantiation for Public Comment

limited combustable is the current language

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Fri May 03 11:54:13 EDT 2013

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4.2.3
High-quality epoxy or
The interior of Class D and E chamber shells shall be unfinished or treated with an OEA-compatible finish as follows:

- Inorganic zinc-based

  (1) A material that meets Class A interior finish rating in accordance with NFPA 101 Life Safety Code

  (2) A finish that meets or exceeds ASTM E84, BS476 part 6 for flame and smoke or equivalent

Statement of Problem and Substantiation for Public Comment

This change will bring 99B in line with 99

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Fri May 03 11:56:11 EDT 2013

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4.2.4 If sound-deadening materials are employed within a hypobaric chamber, they shall be flame resistant (hypobaric), limited - combustable (materials 99)

### Statement of Problem and Substantiation for Public Comment

This change brings us in line with the current language

###Submitter Information Verification

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<th>James Bell</th>
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<td>Intermountain Healthcare</td>
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4.3.6
Gasket material used in lamp fixtures shall be flame resistant (hypobaric) of be Limited - Combustable (Materials 99) of, a type that allows for thermal expansion and rated for the temperature and vacuum attainable within the chamber.

Statement of Problem and Substantiation for Public Comment

This changes uses the current language for flame resistant

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Fri May 03 12:29:55 EDT 2013

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4.3.9.3

If portable spot illumination is used, the flexible cord shall be manufactured of flame of Limited - resistant Combustible (hypobaric Material 99) materials, rated for use in 100 percent oxygen at normal atmospheric pressure.

Statement of Problem and Substantiation for Public Comment

This change uses the current language for flame resistant

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Fri May 03 12:33:02 EDT 2013

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4.4.3.5 When installed in Class E chambers, flame-resistant (hypobaric) packing, Limited Combustible (Materials 99) packing, and OEA-compatible lubricants shall be used on the fan shaft.

Statement of Problem and Substantiation for Public Comment

This change uses the current language for flame resistant

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Fri May 03 12:38:23 EDT 2013

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Public Comment No. 12-NFPA 99B-2013 [ Section No. 4.7.2.1 ]

4.7.2.1 *

All electrical equipment installed or used in a Class E hypobaric chamber or lock shall be approved for use in Class I, Division 1, Group C locations and flame resistant (hypobaric) in and limited combustible (materials 99) in 100 percent oxygen at normal atmospheric pressure or be designated intrinsically safe for the atmosphere.

Statement of Problem and Substantiation for Public Comment

This change uses the current language for flame resistant

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Fri May 03 12:46:19 EDT 2013

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All electrical equipment installed or used in a Class D hypobaric chamber shall comply with the requirements of 20.2.7, Electrical Systems, of NFPA 99, Standard for Health Care Facilities Code, as a minimum.

Statement of Problem and Substantiation for Public Comment

no longer chapter 20

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Fri May 03 12:49:20 EDT 2013

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4.7.2.5 *

All power and lighting electrical circuits contained within a Class E chamber shall be supplied from an ungrounded electrical system, fed from isolating transformers located outside of the chamber, and equipped with a line isolation monitor with signal lamps as specified in Chapter 46, "Electrical Systems," of NFPA 99, Standard for Health Care Facilities Code.

Statement of Problem and Substantiation for Public Comment

No longer chapter 4

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Fri May 03 13:54:11 EDT 2013

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Public Comment No. 15-NFPA 99B-2013 [ Section No. 4.8.1.1 ]

4.8.1.1
All intercommunications equipment for Class D hypobaric chambers shall be certified as intrinsically safe, rated for aviation use, or, as a minimum, meet the requirements in 2014.2.8 “Communications and Monitoring” of NFPA 99, Standard for Health Care Facilities Code.

Statement of Problem and Substantiation for Public Comment

no longer chapter 20 or a standard

Submitter Information Verification

Submitter Full Name: James Bell
Organization: Intermountain Healthcare
Submittal Date: Fri May 03 13:56:36 EDT 2013

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5.1.4.4.3

During chamber operations with human occupant(s) in the chamber, the operator shall be physically present and shall maintain visual or audible contact with the control panel or the chamber occupants.

Statement of Problem and Substantiation for Public Comment

Requiring a chamber operator to be present during long research projects is not necessary. When humans are in the chamber there should be an operator present.

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5.1.7.5 Fabric used in Class E chambers shall meet the flame propagation requirements contained in Test Method 1 or Test Method 2, as appropriate, of NFPA 701, Standard Methods of Fire Tests for Flame Propagation of Textiles and Films be 100% cotton or a cotton/poly blend of no less than 50% cotton.

Statement of Problem and Substantiation for Public Comment

There is no small scale test and the 100% cotton or 50/50 blend of poly cotton has been listed in 99 for hyperbaric.

I wonder if this is redundant and necessary, should it be deleted?

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5.1.7.6 Items such as seating covers, sheets, drapes, and blankets used in Class E chambers shall be made of flame resistant combustible material that meet the requirements of 5.3.1.3.7.5.

Statement of Problem and Substantiation for Public Comment

There is no small scale test

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