Public Comment No. 105-NFPA 99-2022 [Section No. 1.1.12]

1.1.12* Hyperbaric Facilities.

Chapter 14 establishes criteria for design and operation of hyperbaric chambers and facilities. Chapter 14 covers electrical, fire, pressure, and gas hazards associated with hyperbaric facilities that are used, or intended to be used, for medical and experimental procedures at gauge pressures from ~~0 kPa~~ 34.5 kPa to 690 kPa (~~0 psi~~ 5 psi to 100 psi) and/or average oxygen concentrations greater than 23 .5%.

Statement of Problem and Substantiation for Public Comment

Note: This PC conflicts with PCs 103 and 104 due to different approaches. This PC proposes to exempt low hazard chambers while PCs 103 and 104 create specific requirements. Either this PC or PC 103 and 104 should be accepted, but not both.

This change creates a lower threshold of applicability in terms of easily measurable physical parameters (Pressure and oxygen concentration). The concept of an applicability threshold is well established in fire codes (HAZMAT, high pile storage, sprinkler requirements to name a few) but does not exist in Chapter 14 currently. This change adds two thresholds so that the requirements of Chapter 14 that are needed for higher pressure and oxygen concentration hyperbaric facilities are not excessively applied to low pressure low concentration hyperbaric chambers that do not pose fire risks at the same level as medical chambers.

Restore is a national company that provides low pressure/low oxygen concentration therapy for clients as well as other non-medical therapies. Chapter 14 is not intended to apply in its entirety to these low hazard chambers, but it does if taken literally. Many AHJs have done just that and prevented installation of these chambers. Conversely, many AHJs have allowed these installations without NFPA 99 Chapter 14 compliance and several have required and approved equivalencies. The regulatory situation is inconsistent. Adding lower thresholds, provides clear requirements.

NFPA 99 CH 14 is intended to apply to medical and experimental procedures. The services offered by wellness centers such as Restore, are therapeutic not medical therefore NFPA 99 should not apply.

Pressure – The lower threshold of 5 psig allows a reasonable lower threshold that is above the achievable pressure most commercially available soft side inflatable therapeutic (non-medical) chambers that NFPA 99 Chapter 14 is not intended to apply to. 5 psig does not represent a significant pressure hazard in the configuration of these chambers. 5 psig is similar to the pressure at 10 feet of depth underwater in a swimming pool.

23.5% Oxygen Concentration – This level agrees with the NFPA 99 definition of an oxygen enriched atmosphere per 3.3.137 Oxygen-Enriched Atmosphere (OEA).
For the purposes of this code, an atmosphere in which the concentration of oxygen exceeds 23.5 percent by volume.

Related Item

• FR 997

Submitter Information Verification

Submitter Full Name: Martin Gresho
Organization: FP2Fire, Inc.
Affiliation: Restore

Street Address:
City:
State:
Zip:
Submittal Date: Tue May 31 15:05:44 EDT 2022
Committee: HEA-FUN

Committee Statement

Committee Action: Rejected but held

Resolution: The revision is deemed to be new material at the second draft stage and will be held for the next revision cycle.

Public Comment No. 2-NFPA 99-2022 [Section No. 1.3.2.3]

1.3.2.3

An existing system that ~~isnoncompliant~~ is noncompliant with the requirements of this code shall be permitted ~~to be~~ for continued ~~in~~ use, unless the authority having jurisdiction has determined that ~~such use constitutes~~ continued use of the existing system poses a distinct hazard to life.

Statement of Problem and Substantiation for Public Comment

The intent of the change to the section during the First Draft Meeting is still intact but a space has been added where it was missing previously and the syntax has been altered to provide better clarity and readability.

Related Item

• FR-971

Submitter Information Verification

Submitter Full Name: Joe Scibetta
Organization: BuildingReports
Street Address:
City:
State:
Zip:
Submittal Date: Mon Mar 07 12:33:42 EST 2022
Committee: HEA-FUN

Committee Statement

Committee Action: Accepted
Resolution: SR-1005-NFPA 99-2022
Statement: The intent of the change to the section during the First Draft Meeting is still intact but a space has been added where it was missing previously and the syntax has been altered to provide better clarity and readability.

Public Comment No. 51-NFPA 99-2022 [Section No. 1.3.4.2]

1.3.4.2 Anesthesia.

It shall be the responsibility of the health care facility's governing body to designate **all** anesthetizing locations.

Statement of Problem and Substantiation for Public Comment

This change is proposed as part of the task group evaluation of code language regarding anesthetizing locations. It clarifies that the designation is not optional.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 49-NFPA 99-2022 [New Section after 3.3.4]	

Related Item

- Public Input No. 279-NFPA 99-2021

Submitter Information Verification

Submitter Full Name: David Lyons
Organization: University of Rochester
Affiliation: American Society of Anesthesiologists
Street Address:
City:
State:
Zip:
Submittal Date: Sat May 07 10:29:41 EDT 2022
Committee: HEA-FUN

Committee Statement

Committee Action: Accepted
Resolution: SR-1007-NFPA 99-2022
Statement: This change is proposed as part of the task group evaluation of code language regarding anesthetizing locations. It clarifies that the designation is not optional.

Public Comment No. 99-NFPA 99-2022 [Section No. 2.2]

2.2 NFPA Publications.

National Fire Protection Association, 1 Batterymarch Park, Quincy, MA 02169-7471.

NFPA 10, *Standard for Portable Fire Extinguishers,* 2018 edition.

NFPA 13, *Standard for the Installation of Sprinkler Systems,* 2019 edition.

NFPA 14, *Standard for the Installation of Standpipe and Hose Systems,* 2019 edition.

NFPA 20, *Standard for the Installation of Stationary Pumps for Fire Protection,* 2019 edition.

NFPA 25, *Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems,* 2020 edition.

NFPA 30, *Flammable and Combustible Liquids Code,* 2021 edition.

NFPA 31, *Standard for the Installation of Oil-Burning Equipment,* 2020 edition.

NFPA 37, *Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines,* 2018 edition.

NFPA 45, *Standard on Fire Protection for Laboratories Using Chemicals,* 2019 edition.

NFPA 54, *National Fuel Gas Code,* 2021 edition.

~~NFPA 55, *Compressed Gases and Cryogenic Fluids Code,* 2020 edition.~~

NFPA 58, *Liquefied Petroleum Gas Code,* 2020 edition.

NFPA 70®, *National Electrical Code®,* 2020 edition.

NFPA 72®, *National Fire Alarm and Signaling Code®,* 2019 edition.

NFPA 82, *Standard on Incinerators and Waste and Linen Handling Systems and Equipment,* 2019 edition.

NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems,* 2021 edition.

NFPA 91, *Standard for Exhaust Systems for Air Conveying of Vapors, Gases, Mists, and Particulate Solids,* 2020 edition.

NFPA 96, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations,* 2021 edition.

NFPA *101®*, *Life Safety Code®,* 2021 edition.

NFPA 110, *Standard for Emergency and Standby Power Systems,* 2019 edition.

NFPA 111, *Standard on Stored Electrical Energy Emergency and Standby Power Systems,* 2019 edition.

NFPA 170, *Standard for Fire Safety and Emergency Symbols,* 2018 edition.

NFPA 211, *Standard for Chimneys, Fireplaces, Vents, and Solid Fuel–Burning Appliances,* 2019 edition.

NFPA 259, *Standard Test Method for Potential Heat of Building Materials,* 2018 edition.

NFPA 260, *Standard Methods of Tests and Classification System for Cigarette Ignition Resistance of Components of Upholstered Furniture,* 2019 edition.

NFPA 261, *Standard Method of Test for Determining Resistance of Mock-Up Upholstered Furniture Material Assemblies to Ignition by Smoldering Cigarettes,* 2018 edition.

NFPA 286, *Standard Methods of Fire Tests for Evaluating Contribution of Wall and Ceiling Interior Finish to Room Fire Growth,* 2019 edition.

NFPA 418, *Standard for Heliports,* 2016 edition.

NFPA 400, *Hazardous Materials Code,* 2019 edition.

NFPA 495, *Explosive Materials Code,* 2018 edition.

NFPA 701, *Standard Methods of Fire Tests for Flame Propagation of Textiles and Films,* 2019

edition.

NFPA 750, *Standard on Water Mist Fire Protection Systems,* 2019 edition.

NFPA 853, *Standard for the Installation of Stationary Fuel Cell Power Systems,* 2020 edition.

NFPA 1600®, Standard on Continuity, Emergency, and Crisis Management, 2019 edition.

NFPA 2001, *Standard on Clean Agent Fire Extinguishing Systems,* 2018 edition.

NFPA 5000®, Building Construction and Safety Code®, 2021 edition.

Statement of Problem and Substantiation for Public Comment

NFPA 55 is intended for industrial uses and contains a lot of requirements that are not appropriate for health care including Maximum Allowable Quantities that would limit the use of medical gases in buildings over 5 storied.

Related Public Comments for This Document

Related Comment	Relationship
Public Comment No. 72-NFPA 99-2022 [Section No. 5.1.3.3.2.4]	Removed references to NFPA 55 from chapter 5
Public Comment No. 73-NFPA 99-2022 [Section No. 5.1.3.3.2.1]	Removed references to NFPA 55 from chapter 5

Related Item

- PI-69

Submitter Information Verification

Submitter Full Name: Chad Beebe
Organization: ASHE-AHA
Street Address:
City:
State:
Zip:
Submittal Date: Tue May 31 11:46:41 EDT 2022
Committee: HEA-FUN

Committee Statement

Committee Action: Rejected
Resolution: References to NFPA 55 have been retained in other sections of the Code.

Public Comment No. 47-NFPA 99-2022 [Section No. 2.3.6]

2.3.6 ASTM Publications.

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

ASTM A269/A269M, *Standard Specification for Seamless and Welded Austenitic Stainless Steel Tubing for General Service*, 2015a.

ASTM A312/A312M, *Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes*, 2018a.

ASTM B32, *Standard Specification for Solder Metal*, 2008, reapproved 2014.

ASTM B88, *Standard Specification for Seamless Copper Water Tube*, 2016.

ASTM B103/B103M, *Standard Specification for Phosphor Bronze Plate, Sheet, Strip, and Rolled Bar*, 2015.

ASTM B280, *Standard Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service*, 2018.

ASTM B819, *Standard Specification for Seamless Copper Tube for Medical Gas Systems*, 2018.

ASTM B828, *Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings*, 2016.

ASTM D5/D5M, *Standard Test Method for Penetration of Bituminous Materials*, 2019.

ASTM D1785, *Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, and 120*, 2015e1.

ASTM D2466, *Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 40*, 2017.

ASTM D2467, *Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe Fittings, Schedule 80*, 2015.

ASTM D2665, *Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings*, 2020.

ASTM D2672, *Standard Specification for Joints for IPS PVC Pipe Using Solvent Cement*, 2014.

ASTM D2846/D2846M, *Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Hot- and Cold-Water Distribution Systems*, 2019.

ASTM D4359, *Standard Test Method for Determining Whether a Material Is a Liquid or a Solid*, 1990, reapproved 2019.

ASTM E84, *Standard Test Method for Surface Burning Characteristics of Building Materials*, ~~2019a~~ 2021a .

ASTM E136, *Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C*, ~~2019~~ 2019a .

ASTM E1537, *Standard Test Method for Fire Testing of Upholstered Furniture*, ~~2016~~ 2022 .

ASTM E1590, *Standard Test Method for Fire Testing of Mattresses*, ~~2017~~ 2022 .

ASTM E2652, *Standard Test Method for Assessing Combustibility of Materials Using a Tube Furnace with a Cone-shaped Airflow Stabilizer, at 750°C*, 2018.

ASTM E2965, *Standard Test Method for Determination of Low Levels of Heat Release Rate for Materials and Products Using an Oxygen Consumption Calorimeter*, 2017.

ASTM F438, *Standard Specification for Socket-Type Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 40*, 2017.

ASTM F439, *Standard Specification for Chlorinated Poly (Vinyl Chloride) (CPVC) Plastic Pipe Fittings, Schedule 80*, 2013.

ASTM F441/F441M, *Standard Specification for Chlorinated Poly(Vinyl Chloride) (CPVC) Plastic Pipe, Schedules 40 and 80*, 2015.

ASTM F493, *Standard Specification for Solvent Cements for Chlorinated Poly(Vinyl Chloride)*

(CPVC) Plastic Pipe and Fittings, 2014.

Statement of Problem and Substantiation for Public Comment

update dates of fire tests

Related Item

• PI211

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler
Organization: GBH International
Street Address:
City:
State:
Zip:
Submittal Date: Tue Apr 26 18:41:57 EDT 2022
Committee: HEA-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-1017-NFPA 99-2022
Statement: Reference publication update.

Public Comment No. 83-NFPA 99-2022 [Section No. 2.3.10]

2.3.10 CGA Publications.

Compressed Gas Association, ~~14501 George Carter Way~~ 8484 Westpark Drive , Suite ~~103~~ 220 , ~~Chantilly~~ McLean , VA ~~20151-2923~~ 22102 .

CGA C-7, *Guide to Classification and Labeling of Compressed Gases*, ~~2014~~ 2020 .

CGA G-4, *Oxygen*, 2015.

CGA G-4.1, *Cleaning Equipment for Oxygen Service*, ~~2009~~ 2018 .

CGA G-6.1, *Standard for Insulated Liquid Carbon Dioxide Systems at Consumer Sites*, 2013.

CGA G-6.5, *Standard for Small Stationary Insulated Carbon Dioxide Supply Systems*, ~~2013~~ 2022 .

CGA G-8.1, *Standard for Nitrous Oxide Systems at Customer Sites*, 2013.

CGA M-1, *Standard for Medical Gas Supply Systems at Health Care Facilities*, 2018.

CGA P-2.5, *Standard for Transfilling of High Pressure Gaseous Oxygen Used for Respiration*, ~~2011~~ 2018 .

CGA P-2.6, *Standard for Transfilling of Liquid Oxygen Used for Respiration*, ~~2011~~ 2018 .

CGA P-18, *Standard for Bulk Inert Gas Systems at Consumer Sites*, ~~2013~~ 2020 .

CGA V-1, *Standard for Compressed Gas Cylinder Valve Outlet and Inlet Connections* (ANSI B57.1), ~~2013~~ 2021 .

CGA V-5, *Standard for Diameter Index Safety System (Noninterchangeable Low Pressure Connections for Medical Gas Applications)*, ~~2008, reaffirmed 2013~~ 2019 .

CGA V-6, *Standard Bulk Refrigerated Liquid Transfer Connections*, 2021.

CGA E-7, *Standard for Medical Gas Pressure Regulators, Flowmeters, and Orifice Flow Selectors* , 2018.

Statement of Problem and Substantiation for Public Comment

Updating CGA address, publication dates, and adding CGA E-7, which was referenced by HYP under A.14.2.1.3.3.

Related Item

• FR-985

Submitter Information Verification

Submitter Full Name: Thomas Deary
Organization: Compressed Gas Association
Street Address:
City:
State:
Zip:
Submittal Date: Thu May 26 14:42:20 EDT 2022
Committee: HEA-FUN

Committee Statement

Committee Action: Rejected but see related SR

Resolution: SR-1021-NFPA 99-2022

Statement: Reference publication update.

Public Comment No. 6-NFPA 99-2022 [Section No. 16.1.2]

16.1.2

An existing system that is ~~not in strict compliance~~ noncompliant with the ~~provisions~~ requirements of this code shall be permitted to be continued in use, unless the authority having jurisdiction has determined that such use constitutes a distinct hazard to life.

Additional Proposed Changes

File Name	Description	Approved
NFPA_99_CCN_1.pdf	NFPA 99 CCN_1	

Statement of Problem and Substantiation for Public Comment

NOTE: The following CC Note No. 1 appeared in the First Draft Report on First Revisions No. 971, and is also related to Public Input No. 20.

Consider the affirmative comment of B. Abell and revise 16.1.2 for consistency with the revisions to 1.3.2.3.

Related Item

• FR-971 • PI-20

Submitter Information Verification

Submitter Full Name: CC on HEA-AAC
Organization: NFPA
Street Address:
City:
State:
Zip:
Submittal Date: Fri Mar 18 06:37:34 EDT 2022
Committee: HEA-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-1047-NFPA 99-2022
Statement: The revision responds to CCN-1 and revises 16.1.2 for consistency with revisions to 1.3.2.3.

Correlating Committee Note No. 1-NFPA 99-2022 [Section No. 1.3.2.3]

Submitter Information Verification

Committee: HEA-AAC
Submittal Date: Thu Jan 20 15:20:30 EST 2022

Committee Statement

Committee Statement: Consider the affirmative comment of B. Abell and revise 16.1.2 for consistency with the revisions to 1.3.2.3.

First Revision No. 971-NFPA 99-2021 [Section No. 1.3.2.3]

Ballot Results

✔ **This item has passed ballot**

16 Eligible Voters
4 Not Returned
12 Affirmative All
0 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

Ashby, H. Shane
Brooks, Bruce D.
Dagenais, David A.
Hijazi, Robert

Affirmative All

Beebe, Chad E.
Burrill, Gordon D.
Ferrari, Keith
Finnegan, Daniel P.
Gagnon, Robert M.
Galloway, Ronald E.
Gilyeat, Sharon S.
Kennedy, Chad
Reiswig, Rodger
Rosenbaum, Eric R.
Sontag, Robert

Versteeg, Joseph H.

First Revision No. 971-NFPA 99-2021 [Section No. 1.3.2.3]

1.3.2.3

An existing system that is ~~not in strict compliance~~ noncompliant with the ~~provisions~~ requirements of this code shall be permitted to be continued in use, unless the authority having jurisdiction has determined that such use constitutes a distinct hazard to life.

Submitter Information Verification

Committee: HEA-FUN
Submittal Date: Thu Jul 15 12:44:01 EDT 2021

Committee Statement and Meeting Notes

Committee Statement: The term 'distinct' in regard to hazard to life is commonly used in NFPA codes and standards.
Response Message: FR-971-NFPA 99-2021

Public Input No. 20-NFPA 99-2020 [Section No. 1.3.2.3]

Ballot Results

This item has passed ballot

26 Eligible Voters
8 Not Returned
16 Affirmative All
2 Affirmative with Comments
0 Negative with Comments
0 Abstention

Not Returned

Brooks, Bruce D.
Dahozy, Roger N.
Day, Richard L.
Lyman, Dale L.
Peterkin, James S.
Reno, Pamela
Van Overmeiren, Frank L.
Vann, Joshua

Affirmative All

Beckstrand, Gary A.
Beebe, Chad E.

Burrill, Gordon D.

Crowley, Michael A.

Ferlitch, Jr., Carl J.

Finnegan, Daniel P.

Grogan, Shaine M

Klein, David P.

Lathrop, James K.

Martin, Bret M.

Puchovsky, Milosh T.

Scarlett, Kevin A.

Schmitt, Dennis L.

Scibetta, Joe

Sontag, Robert

Stone, Michael C.

Affirmative with Comment

Abell, Bruce L.

Make the same change to the contents of Section 16.1.2. Presently, the contents of Section 1.3.2.3 and Section 16.1.2 are identical.

Mucia, Michele

Agree there needs to be a change but feel it should read: An existing system that is non compliant with the requirements of this code shall be permitted for continued use, unless the Authority Having Jurisdiction has determined that continued use of the existing system poses a distinct hazard to life.

Editorial Comment

Click here

Public Comment No. 48-NFPA 99-2022 [Section No. D.1.2.6]

D.1.2.6 ASTM Publications.

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

ASTM E119, *Standard Test Methods for Fire Tests of Building Construction and Materials,* ~~2018ce1~~ 2020 .

ASTM F2213, *Standard Test Method for Measurement of Magnetically Induced Torque on Medical Devices in the Magnetic Resonance Environment*, 2017.

ASTM F2503, *Standard Practice for Marking Medical Devices and Other Items for Safety in the Magnetic Resonance Environment*, 2013.

ASTM G63, *Standard Guide for Evaluating Nonmetallic Materials for Oxygen Service*, 2015.

ASTM G72/G72M, *Standard Test Method for Autogenous Ignition Temperature of Liquids and Solids in a High-Pressure Oxygen-Enriched Environment*, 2015.

ASTM G88, *Standard Guide for Designing Systems for Oxygen Service*, 2013.

ASTM G93, *Standard Practice for Cleaning Methods and Cleanliness Levels for Material and Equipment Used in Oxygen-Enriched Environments*, 2003, reapproved 2011.

ASTM G94, *Standard Guide for Evaluating Metals for Oxygen Service*, 2005, reapproved 2014.

Statement of Problem and Substantiation for Public Comment

update date of fire test

Related Item

• pi212

Submitter Information Verification

Submitter Full Name: Marcelo Hirschler
Organization: GBH International
Street Address:
City:
State:
Zip:
Submittal Date: Tue Apr 26 18:45:44 EDT 2022
Committee: HEA-FUN

Committee Statement

Committee Action: Rejected but see related SR
Resolution: SR-1036-NFPA 99-2022
Statement: Reference publication updates.